

UK RESEARCH AND INNOVATION ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL

NOTE OF THE 10th EPSRC SCIENCE ENGINEERING AND TECHNOLOGY BOARD (SETB) MEETING, HELD ON 24 MAY, AS A HYBRID MEETING IN POLARIS HOUSE AND VIA ZOOM

In attendance: (In Person)	Graham Niblo (University of Southampton) Andy Wright (BAE Systems, Council member) Phil Taylor (University of Bristol) Avinash Aithal (Energy Networks Associations) Charlotte Williams (University of Oxford) Paul Winstanley (University of Glasgow)
In attendance: (online):	Jane Jiang (University of York, Council and SETB member) Alison Nobel (University of Oxford) Susan Rosser (University of Edinburgh) m.c. Schraefel (University of Southampton) Miles Elsdon (University of York) Leigh Lapworth (Rolls-Royce) Jeremy Burroughes (CDT Ltd) - pm only
Apologies	Su Taylor (Queens University Belfast) Tim Softley (University of Birmingham) Adrian Mulholland (University of Bristol)
EPSRC Staff:	Jane Nicholson (Director, Research Base, SETB Chair) Andrew Bourne (Director, Partnerships) – am only Kedar Pandya (Director, Cross Council) Diane Howard (Senior Manager, Managing our Portfolio and Priorities) Sarah Harman (Head of Managing our Portfolio and Priorities) Rob Felstead (Deputy Director, Cross Council) Kathryn Magnay (Deputy Director, Cross Council) Ruth Kelman (Deputy Director, Partnerships) Mark Gaskarth (Head of Digital Security and Resilience) Ellie Gilvin (Head of International)
Secretary:	Jessica Bonham (Senior Manager, Governance and Planning) Hayley Cook (Executive Assistant, Governance and Planning)

1. Welcome, EPSRC update and UKRI update

- 1.1 The SETB chair (Jane) welcomed everyone to the meeting, formally opened the meeting. This is the first meeting with our new SETB members and new council representative and attendees introduced themselves. Apologies had been received from Su Taylor, Tim Softley and Adrian Mulholland.
- 1.2 SETB agreed to update point 4.3 in the February minutes but otherwise approved the minutes from the previous meeting.
- 1.3 Jane reviewed the action log:

Action			
07-02	EPSRC to produce a paper on top tips for setting up an institute and encourage institutes to learn from each other, including those in other councils.	Rachel Bishop	Work in progress
09-01	Andrew to invite Alex vs to present at a future SETB meeting, giving an update on the February discussion on defence and security	Andrew Bourne	Complete – this will be scheduled for Feb 23
09-04	EPSRC to review how to utilise SETB, especially on larger investments / institutes.	EPSRC	Complete – Council now has a re-occurring agenda item to discuss topics for SETB to review and EPSRC have also identified some additional topics for SETB to discuss, including the infrastructure fund bids.

1.4 Jane gave an update on the UKRI Strategy and SETB asked about how EPSRC can fund programmes which go beyond the spending review period, and about training programmes in EPSRC and UKRI.

2. Prioritising Big Ideas

2.1 Sarah Harman introduced the session, and invited SETB to review the 11 Big Ideas in the ideas bank and prioritise them based on relevance and achievability. The aim is to prioritise ideas that EPSRC could run an activity on in the near term. Any ideas that are prioritised will need additional work to develop the idea further with the community, especially as some of the ideas were submitted several years ago.

2.2 SETB commented that it is difficult to compare ideas that are very different to each other, not just in scientific content but also in the detail provided in the idea. EPSRC clarified that we are looking for ideas that we might not normally fund via standard channels and we would look to identify additional funding for ideas where possible, including through the UKRI cross cutting funding and working with other councils. SETB were encouraged to not think about funding mechanisms but instead focus on the science behind the idea and what is relevant to fund now.

2.3 After the prioritisation, SETB had prioritised 3 ideas to be considered for funding opportunities. SETB agreed that it would be best to allocate funding to only one idea rather than allocate a small amount of funding to multiple ideas but encouraged EPSRC to identify additional funding opportunities if possible. EPSRC will review the ideas prioritised, including other relevant activity in the portfolio and report back to SETB at the next meeting.

3. Science Priorities across UKRI

3.1 Jane introduced the 5 UKRI strategic themes and invited SETB to identify how EPSRC can help contribute to these themes. SETB reviewed each priority and also identified overlaps between the priorities. Jane explained that it is not fully clear how the UKRI themes will be driven in practice but there is a budget set aside for these thematic areas. A summary of the discussion is as follows:

- The UKRI themes focus on long term impact

- There is no clear role for mathematics here and EPSRC need to emphasise that all these themes require maths, and that is it embedded in everything we do. Being able to make good decisions in the face of uncertainty is really important for some of these
- SETB agreed that EPSRC need to draw out the science and engineering, maths and AI in each of these themes. **ACTION – EPSRC to create a table matching engineering, science, maths and AI challenges to each of the UKRI strategic themes and bring back to a future SETB meeting.**
- Engineering and physical sciences are the foundation of all the councils and EPSRC need to link with all the themes
- We need to make sure that solutions are designed with the community and users rather than for them
- Need to understand the risks and then create mitigations and solutions for these themes.

4. Big Ideas – update on previous ideas

4.1 Diane introduced this session and the updated idea to be discussed.

4.2 SETB discussed the updated idea. The Big Idea discussed along with the overall SETB recommendations are listed below:

Ideas reference	Title	Submitted by	Recommendation	Next Steps
BIG 21-02	Closed-loop interpretable AI for biological systems design and engineering	Geoff Baldwin	SETB advised that, whilst the submitters had addressed much of the previous feedback, overall, the Big Idea did not meet the requirements to be entered into the Ideas Bank.	The idea will not be added to the Ideas Bank, however, it will be used to feed into the development of the UKRI Engineering Biology Programme and EPSRC will take this forward.

5. Big Ideas – New Ideas

5.1 Diane introduced the session and the new idea to be discussed. m.c. Schraefel and Phil Taylor left the room due conflicts. Graham Niblo declared a soft conflict but did not leave the room.

5.2 SETB discussed the updated idea. The Big Idea discussed along with the overall SETB recommendations are listed below:

Ideas reference	Title	Submitted by	Recommendation	Next Steps
BIG 22-01	FOCUS – The Future of Work	Ian Craddock University of Bristol	SETB determined that this submission did not meet the requirements to be	The Idea will not progress further through EPSRC’s Big Ideas initiative, however, SETB did advise further discussion with ESRC colleagues, to

			taken any further through EPSRC’s Big Ideas initiative.	determine how the idea’s premise can be used to inform future UKRI strategies. EPSRC will take this forward with the relevant teams in ESRC.
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6. International Discussion

6.1 Ruth and Ellie introduced the discussion and invited SETB members to consider where international collaborations can support the delivery of EPSRC’s priorities. A summary of the discussion is as follows:

- SETB discussed the challenges of working with Australia as there is no UKRI equivalent in Australia and therefore no way to set up joint calls, although this is an area that EPSRC are keen to pursue.
- SETB discussed the centre 2 centre calls and how they bring together whole centres rather than individuals to create long lasting collaborations.
- Sandpits are very good for developing collaborations as they provide a platform to meet people you don’t usually meet and give time and space to develop relationships with other attendees. EPSRC are aiming to run more of these, including internationally.
- SETB discussed the different international schemes currently available and how they are communicated to the community. EPSRC confirmed that we cannot pay for international staff on grants but can pay for their travel and time when they are in the UK. **ACTION – Ruth to create a chart of the different international schemes currently available.**
- Ensuring that the UK has access to national laboratories and specialist facilities is very valuable, especially for more bespoke facilities that are more difficult for researchers to access.
- There is a G7 group looking at data sharing agreements with different countries as this is a very complicated matter but would be beneficial for international collaborations, especially in areas like healthcare.
- SETB discussed how internationally collaborations works alongside the drive for Net Zero and how we can facilitate collaborations whilst also travelling less.
- SETB also contributed ideas for international collaborations via a padlet board that was collected during the meeting.

7. Digital Security and Resilience

7.1 Mark and Kathryn joined the meeting and introduced the new EPSRC theme, Digital Security and Resilience (DS&R) with SETB and covered the following topics: Advice on the new theme and key areas it should focus on, advice on the Digital Twins programme and advice on the future of the internet and areas that should be developed with EPSRC support.

ACTION – Paul to link Mark and Kathryn up to relevant stakeholders in the Digital, security and Resilience space.

8. AOB and Close

Summary of actions:

Action	Description	Owner	Status
10-01	Diane to share the completed version on the Digital Chemistry Big Idea with SETB.	Diane Howard	
10-02	Paul to link Mark and Kathryn up to relevant stakeholders in the Digital, security and Resilience space.	Paul Winstanley	
10-03	Ruth to create a chart of the different international schemes currently available.	Ruth Kelman	
10-04	EPSRC to create a table matching engineering, science, maths and AI challenges to each of the UKRI strategic themes and bring back to a future SETB meeting.	EPSRC	