**SSAC Meeting Thursday 20 March 2014**

**Conference Room 2**

**Victoria Quay**

**Edinburgh**

**Attendees:** Professor Muffy Calder (Co-Chair)

 Dr Chris Masters (Co-Chair)

 Professor Nigel Brown

 Professor David Cumming

 Mr Stuart Farmer

 Professor Jim Hough

 Professor Julian Jones

 Mrs Angela Mathis

 Professor Jon Oberlander

 Professor Jason Reese

 Professor Marian Scott

 Professor George Salmond

Mrs Anna Milne SSAC Secretariat

Ms Clare Hicks Office of the Chief Scientific Adviser

**Apologies:** Professor Ian Boyd, Dr John Brown, Professor Ian Diamond, Professor Andrew Morris and Professor Louise Heathwaite.

**1. Welcomes and apologies:**

1. Professor Calder welcomed SSAC members to the meeting and gave apologies from Professors Boyd, Diamond, Heathwaite and Morris and Dr Brown.

**2. Big Data Update**

2. Professor Calder confirmed that the SSAC paper Big Data and Data Science in Scotland: An SSAC Discussion Document has now been published on the SSAC website. She commented that the paper had been well received and had proved particularly helpful to the Scottish Government Data Management Board (DMB).

3. Professor Calder highlighted the announcement in the Budget Statement of the new Alan Turing Institute, which will focus on new ways of collecting, organising and analysing large sets of data. UK Government will provide £42m over five years for the project.

4. Professor Calder noted that SSAC members had had a very lively discussion, the previous evening, with Gavin Starks, Chief Executive of the Open Data Institute on the opportunities and Challenges of an open data culture and that they had heard about a number of the projects that ODI had been involved in to date. Professor Oberlander reviewed the main points raised during discussion.

5. SSAC members discussed a number of issues surrounding scientific data in an open data culture. SSAC agreed that there is likely to be an increasing policy push to release scientific data funded by the public money and suggested that there could be a role for SSAC to look at this area in more detail in order that they can inform discussion.

**3. GM Report Council for Science and Technology (CST)**

6. Professor Calder highlighted the recent report on GM Science that was presented by the Council for Science and Technology (CST) to the Prime Minister. SSAC members briefly discussed the report.

**4. Synthetic Biology Workstream Update**

7. Professor Calder welcomed Dr Morrison, who is coordinating the research on the Synthetic Biology workstream, to the meeting.

8. Dr Morrison updated the Council on the recent activities of the Synthetic Biology working group. He noted that the group had hosted a further stakeholder workshop on 3 February, which focused on the more societal issues associated with synthetic biology. He explained that the event was an opportunity to meet with a number of stakeholder groups and NGOs to better understand the range of opinions on synthetic biology, and what scientific evidence these opinions are based on. He further noted that in addition to the two stakeholder events Professor Brown and himself had gathered further evidence by interviewing key individuals with an interest in Synthetic Biology. To date they had interviewed seventeen individuals.

9. Dr Morrison then went on to provide a summary of the key findings from his research. He concluded his presentation with a summary of the completed SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of Synthetic biology in Scotland. The four key areas examined were e.g. Synthetic Biology as a platform technology, Synthetic Biology in Health and Medicine, Synthetic Biology in Agriculture, Synthetic Biology in Energy and Synthetic Biology in Environmental applications.

**Discussion**

10. SSAC members then went on to have a wide-ranging discussion around some of the points raised in the presentation. The SSAC Co-Chairs concluded the discussion by summarising the next steps for the workstream. It was agreed that based on the evidence provided through Dr Morrison’s research the working group would prepare a draft report for Scottish Government. It was agreed that the working group would present the final report at the June SSAC meeting for sign-off.

**5. Unconventional Oil and gas Update**

**Dr Chris Masters**

11. Dr Masters provided colleagues with an update of progress with the work of the Independent, Expert Scientific Group on Unconventional Oil and Gas.

**6. Science and Innovation Collaboration with China**

12. Professor Calder explained that she had been asked to contribute to a piece of work going on across UK Government aimed at understanding the risks and benefits of science and innovation collaboration with China. The intention of the work is to ensure that collaboration is smart and of overall benefit to the UK. She noted that SSAC members had been invited to consider this issue in advance of the meeting. Professor Calder opened a discussion on the subject and SSAC members contributed their own thoughts and experiences in this area. Professor Calder thanked members for their input.

**7. SSAC Membership**

13. Dr Masters reminded colleagues that a number of the SSAC membership would be stepping down in January 2015 (nine members in total) as their term of membership had come to an end. In order for SSAC to continue to deliver on its remit the SSAC Secretariat would be starting the process of recruiting new members in spring 2014. Dr Masters asked members to consider which key areas of expertise we might want to consider going forward. He further noted that although it was a fair and open recruitment exercise he asked SSAC members to encourage colleagues who may be interested to apply. Members had a short discussion and agreed that we need a spread of skills and expertise but SSAC was currently weak on industrial representation specifically in science-based businesses.

**8. SSAC Minutes 4 December 2013**

14. The SSAC agreed and approved the minutes of the last SSAC meeting held on the 4 December 2013.

**9. Matters Arising**

15. No matters arising.

**10. Chair’s Updates.**

16. Professor Calder confirmed that she had agreed to be Chair of the Future and Emerging Technology Advisory Group, which was part of the Excellent Science programme of Horizon 2020. She suggested that this group would have significant impact and she would be interested to hear from SSAC members about their experiences of the new Horizon 2020 calls.

**11. Members Updates**

17. Members updated colleagues on topics of interest from their areas.

**12. Future Work Programme - Scientific Infrastructure Introduction**

18. Professor Calder reported that the Co-Chairs had recently asked members to consider topics for the SSAC future work programme and noted that a number of suggestions had been received. She noted that one suggestion had been received from Professors Hough and Cumming on Scientific Infrastructure.

19. Professor Calder reported that in parallel to this exercise Dr Allan, Minister for Learning Science and Scotland’s Languages had written to the Co-Chairs to invite SSAC to consider the current Scientific Infrastructure and Scotland’s needs and requirements for the future. This request follows a recent House of Lords Select Committee on Science and Technology report on Scientific Infrastructure published in November 2013. She suggested that the work would inform policy-makers and others and would provide evidence for the Scottish Government to respond to a UK consultation on future scientific infrastructure. She commented in the long term it was vital that we had a strategy in place to ensure that our scientists have access to the best infrastructure available to enable them to do their jobs.

20. SSAC considered the request and the specific questions posed by Dr Allan and agreed to proceed with a piece of work. It was agreed that Professor Julian Jones and Professor David Cumming would lead the working group. Other group members were agreed as Professor Jim Hough, Professor Jason Reese and Professor Marian Scott (agreed following the meeting).

21. The SSAC discussed the definition of Scientific Infrastructure and agreed to use the definition used by the House of Lords Science and Technology Committee. Members further agreed to include mid-range scientific infrastructure and the research institutes in the scope of the work. It was agreed that the work should be concluded by the end of June to help inform Scottish Government’s response to the UK Government consultation on future scientific infrastructure.

22. It was agreed that SSAC would need to consult with the science and engineering community and use their networks in order to gather the necessary evidence to respond to the Ministers request. The working group agreed to consider how best to do this.

23. The working group agreed to produce a first draft of a report for the June SSAC meeting for consideration.

**13. Presentation from Professor Paul Hagan, SFC**

24. Professor Calder welcomed Professor Hagan to the meeting. Professor Hagan described the current funding landscape for science infrastructure in Scotland.

25. Professor Hagan then went on to describe the opportunities provided by “joining up” and highlighted initiative such as research pooling and innovation centres. He highlighted in particular the successful research pool, SULSA. He noted that these initiatives promoted excellence, improved critical mass and supported competitiveness and leverage. Professor Hagan then summarised the major sources of research funding in Scotland. The meeting discussed whose responsibility it should be to prioritise investment in science infrastructure in the future.

26. Professor Calder thanked Professor Hagan for his input to discussion and his presentation.

**15. Any other Business**

27. Members discussed speakers for the following SSAC dinner on 11 June.

**16. Date of the Next Meeting**

28. The next SSAC meeting would take place on 11-12 June in Glasgow.