

EPSRC Strategy Secretariat  
EPSRC  
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From the Physical Secretary and Vice-President Sir John Pethica FEng, FRS

5 September 2014  
Our ref: JBP/FF

Dear Sir or Madam

I am pleased to respond to your consultation about the EPSRC's draft revised Strategic Plan on behalf of the Royal Society. The revision of the Strategic Plan offers an opportunity for the EPSRC to strengthen relations with its research community and articulate and develop its distinct role in the wider funding landscape. The Royal Society would be happy to facilitate interactions and communications between the EPSRC and its various stakeholder communities, and encourages the EPSRC to be bold in making its case, which is important for the nation.

### **Refreshing the EPSRC Strategic Plan**

The Society welcomes the EPSRC's intention to update its strategy to take into account the developments since 2010, including the EU Horizon 2020 programme, the Government's Industrial Strategy, the 'Eight Great Technologies', and the Government's development of a Science & Innovation Strategy. Although the revised Strategic Plan mentions some of the 'Eight Great Technologies', it does not yet include a clear statement of how the EPSRC intends to address these. A simple, comprehensive statement along those lines would be a useful addition. The Strategic Plan should also make an explicit reference to the importance of capital and infrastructure and their place in EPSRC's long-term plans, as this is one of the key components of the Government's forthcoming Science & Innovation Strategy. Please find enclosed copies of the joint UK national academies responses to the recent Government consultations on the Science & Innovation Strategy and capital.

### **Excellence as the primary guiding principle**

Excellence should remain the primary guiding principle when deciding which projects and scientists to fund and should be at the heart of the Strategic Plan. It is the essential requirement for the UK to maintain its leading position and calibre of researchers. The Society recognises that the EPSRC is subject to different demands from different stakeholders, including Government, and could help in facilitating the process of balancing the demands. How to meet these demands while maintaining the 'Haldane Principle' with its associated benefits, is an important challenge.



President Sir Paul Nurse  
Executive Director Dr Julie Maxton

Founded in 1660, the Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science.

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It is important to support a balanced portfolio of disciplines to adapt to an evolving research landscape. Many scientific problems involve multiple disciplines, and it is difficult to predict which, if any, of these disciplines are going to be most important in the future. While the draft Strategic Plan mentions working with other funders and disciplines, the Society would like to see greater commitment to this type of working, particularly given the complex multi-funder landscape. Such collaborative working may help EPSRC better define and maintain its core mission by partnering in other areas such as those covered by InnovateUK (formerly the Technology Strategy Board). Mathematics, physics, chemistry, computer science, and engineering underpin much other research, and the EPSRC's prominent and vital role in the UK's research and innovation system could be highlighted more clearly.

The Strategy seeks to maximise both academic excellence and the economic and social impact from the EPSRC's research and training portfolio. However, there are limitations to the use of impact as a measure of success, such as the difficulty and complexity of attributing the contribution of particular 'basic' research to commercial impact. An input from industry sectors where the UK is strong or growing, as well as an analysis of potential needs, will help identify areas where basic research is missing or requires reinforcement. This process will benefit from advice from InnovateUK. However, the EPSRC should ensure it has distinct goals and remit, and the freedom to pursue and support excellence broadly.

The Strategy discusses the need to tackle future challenges and to capitalise on new opportunities for the UK. Establishing well-defined priorities, which leverage a broad research base maintained by a long-term flexible framework, can be a useful means by which to push research towards shared goals without prescribing a specific route. This would allow flexibility with direction. Identifying broad strategic challenges protects the space for free enquiry by asking the scientific community to identify solutions that meet societal needs. The Society also welcomes the commitment to actively engage with the public, and suggests the Strategic Plan make it clearer that public engagement requires a continuing dialogue that the Council will facilitate.

Ultimately, it is essential that the EPSRC be ambitious in its vision, and the Society welcomes the EPSRC's plans to encourage adventurous research projects and scientists.

### **Skills and people**

As emphasised in the academies' response to the government's consultation on their Science & Innovation Strategy, it is important that the UK develop, attract and retain highly skilled people. This is essential both to perform high quality research, and also to supply other innovative and important sectors. To support its commitment to maintain a balanced skills portfolio, the EPSRC should say how it will identify skills shortages. A highly skilled research workforce requires highly skilled research leaders. The Society welcomes the inclusion of a section 'building leadership' in the Strategy, and believes that greater cross-sector permeability will contribute to the development of people who can be leaders in and across different sectors.

The Strategic Plan should not only mention the EPSRC's commitment to diversity and equality in the research base, but also explain how it will ensure the most talented individuals can access research careers, regardless of gender, ethnic origin, socio-economic background or nationality. The Society is also aware of concerns that recent changes in UK immigration policy have made it challenging to retain overseas students and postdocs trained in the UK, impairing the UK high quality skills base.

Overall the Society welcomes the EPSRC's revised Strategic Plan and, in particular, the commitment to maintain dialogue and communication with the scientific community. The Society will be happy to provide any advice in the future.

For further information please contact my colleague Franck Fourniol who leads for the Society on this project, on +44 (0) 20 7451 2552 or [franck.fourniol@royalsociety.org](mailto:franck.fourniol@royalsociety.org)

Yours faithfully

A handwritten signature in black ink, appearing to read 'John Pethica', with a long horizontal flourish extending to the right.

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