

Update to the Code of Practice for Scientific Advisory Committees

Department for Innovation, Universities and Skills

Introduction

The Royal Academy of Engineering is pleased to contribute to updating the Code of Practice for Scientific Advisory Committees (SACs). This response has been compiled using contributions from Fellows of the Academy, many of whom have served on SACs and SAC sub-committees, particularly the Defence Scientific Advisory Council (DSAC).

The Academy is satisfied for its input into this consultation to be made public and would be pleased to provide supplementary evidence if required.

Responses to specific questions in the consultation document

1. **To be effective, SACs need access to a variety of experts. Access can be through formal membership of the committee or through other devices and practices. What role should lay members have and how should that be represented? Is 'lay member' an appropriate term to use for this type of committee member?**
 - 1.1 The presence of lay members on SACs enables the inclusion of relevant social, ethical and economic considerations in SAC outputs and scientific advice. The Academy believes that the role of lay members should be tightly defined and their objectives should include the requirement for intelligibility, clarity and viable recommendations.
 - 1.2 The term 'lay member' is useful for distinguishing those who are not scientist members. The term implies that lay members are representative of the general public by being more distanced from scientific, engineering or technical (SET) issues. However we believe that 'lay member' is an inappropriate term for this type of committee member as it also wrongly implies a lack of knowledge and expertise. A lay member's knowledge and expertise will usually reside in a domain outside of the main core activities of a SAC.
 - 1.3 Fellows of The Academy have proposed two possible options for lay member representation:
 - Lay members could have continuity of membership and be co-opted onto committees. They could then negotiate with the Chair which meetings they need to attend.
 - SACs could appoint non-scientific experts as 'special advisors' rather than as committee lay members. The core committee would only include relevant scientific experts, with non-scientific special advisors appointed on continuous or short-term appointment as required. This would simplify core committee membership.We believe either method would ensure the valuable contributions of non-scientific experts to SACs are retained. Lay member representation depends on the nature of the SAC and the circumstances.
 - 1.4 The Defence Science Advisory Council (DSAC) maintains an updated register of scientific experts who represent a wide range of disciplines. The register is necessary because of the requirement for security clearances. Members of this register are called upon to give advice when required. These experts are termed 'independent members' although the term 'register member' could also be used. Although the DSAC experts are not strictly lay members a

similar register system could be adopted by other SACs to source lay members.

- 1.5 In conclusion, the Academy recommends replacing the term 'lay member'. The most appropriate term will depend on the capacity in which non-scientific experts are appointed. Suggested replacements for the term 'lay member' are 'independent member', 'register member', 'special advisor' or 'non-scientific special advisor'.
2. **When might it be appropriate to use secondees or co-opt appropriate experts, either to the SAC or its Secretariat? Where should they be drawn from – NGOs, business, academia, overseas? On what terms? How can Government/ Office of Science and Innovation guard against bias?**
 - 2.1 Secondees and co-opted experts are useful and necessary because SACs often cover a breadth of issues and are very unlikely to have in-depth scientific expertise available to them on all relevant topics from within the core SAC membership.
 - 2.2 The appointment terms should be consistent with those used for other SAC members and with equivalent terms employed elsewhere in government (the need for additional expertise is not unique to SACs).
 - 2.3 Secondees and co-opted members should generally be drawn from wherever the best scientific expertise exists and a variety of sources should be encouraged. They could be drawn from industry (to address practical application), academia (to ensure breadth and depth) and any other relevant bodies such as scientific/engineering institutions and NGOs (excluding special interest groups). While academia is a source of good scientific advice the experience and expertise of industrial companies (including SMEs) should not be underestimated. One method of identifying candidates is to maintain an updated register of experts in different fields, which is not a trivial task.
 - 2.4 Secondees should hold senior or prominent positions in their respective fields and suitability should be verified via scrutiny of their CVs with consideration of political or business affiliations. Interviews by the chair and a lay member should be part of the selection process. This would ensure the secondee has the desired technical knowledge with the ability to communicate complex issues to the committee and lay members.
 - 2.5 It is appropriate to co-opt relevant experts when a particular issue arises that is peripheral to the main brief of the committee, where the committee believes it would be inadequate simply to call for expert evidence, (for example where the additional information would need to be debated over several meetings) or when the committee is insufficiently independent.
 - 2.6 If a sub-group containing co-opted experts is formed it should be led by a core SAC committee member. Whether co-opted sub group members are required to act as individuals or representatives of their organisation must be clarified at an early stage. The Academy believes that co-opted sub group members should be chosen on the basis of their skills and knowledge rather than their organisation or sector, and should therefore contribute as individuals.

- 2.8 Bias is not normally a problem if the issues are scientific and unrelated to business decisions. Bias can be avoided by:
- adhering to a code of conduct that requires members to declare their interests and any conflicts of interest
 - appointing a chair who is able to manage proceedings and is aware of any possibility and likelihood of bias
 - clarifying whether SAC members are acting as individuals or representatives of an organisation
 - appointing individuals to SACs only if there is a strong body of opinion (including amongst existing members) that the individual is of suitable integrity
 - recruiting individuals with different or contrasting backgrounds; diversity of sources minimises the risk of bias
 - recruiting individuals who have less of a directly vested interest in the outputs of SACs (e.g. from outside the UK).
- 2.9 As well as these measures the government should use its normal mechanisms (declaration of interest, Nolan principles, peer review) to guard against bias.
- 3. There may be a risk of "double counting" of views of non-members (lay or secondees) expressed to a SAC and then taken into account in a public consultation. Is this a significant risk and how might it be managed?**
- 3.1 The Academy does not believe that double counting of non-members' views (i.e. expressed to a SAC and then included again in a public consultation) poses a significant risk. The value of the focused input from non-members outweighs any risk of double counting. SACs should evaluate opinion and not count opinions in any numeric sense.
- 3.2 In practice, if double counting is an issue of concern it could be mitigated by:
- having a strong chair (or sub-group chair) and the optimum balance of skills within the SAC membership; it is within their remit to ensure that double counting does not happen
 - all SAC members declaring their interests where appropriate
 - making clear to lay members that as part of the conditions of lay membership they cannot participate in public consultations following from actions of the SAC that they contributed to
 - ensuring lay members who are leading a study use their judgement to balance information effectively.
- 4. It is important to recognise that a balance must be drawn between openness and the need to protect sensitive information. Since the Code was first published in 2001, there have been several developments that now need to be referenced. The Government/ Office of Science and Innovation have already identified the importance of the Freedom of Information Act and the Environmental Information Regulations as potential references for inclusion in the revised Code. Are there any other codes, regulations or legislation that might affect the ability of SACs to deliver their roles effectively in support of departmental and**

wider government policy-making? Can these objectives be adequately met through referencing external resources? For example, the [Treasury's Risk Portal](#)

- 4.1 As well as the Freedom of Information Act and the Environmental Information Regulations the following may affect the operation of SACs and could be included as references in the revised Code of Practice for SACs:
 - The Data Protection Act 1998
 - Security issues such as the MoD's security clearances and checks
- 4.2 The Academy believes that the objectives of openness and the protection of sensitive information can be adequately met through referencing external resources. All members on a SAC should be aware of these objectives.
5. **Who is best placed to ensure implementation of the Code by SACs? The range of possible key stakeholders with an interest includes the individual SAC Chairs, departmental Chief Scientific Advisers, departmental Management Boards, the Chief Scientific Advisers Committee, and the Government Chief Scientific Adviser. How frequently might this process be applied? How should the Chair, Ministers, departmental Chief Scientific Advisers and Management Boards interact?**
 - 5.1 SACs should be assessed by individuals or preferably small teams. A Management Board (or similar) is probably too large. The SAC chair and the Departmental Chief Scientific Adviser (DCSA) should both be tasked with ensuring implementation of the Code and could form part of a small assessment team. Individual members should be made aware at induction that they are responsible for alerting the chair and DCSA to any deviation from the Code. The Chief Scientific Advisers Committee (CSAC) should have some overarching responsibility for assessment.
 - 5.2 Departmental clients receiving output from SACs should have no responsibility for assessment. If it is believed that DCSAs or individual SAC chairs are too closely involved to perform assessments, a full-time funded science ombudsman independent of government or members of independent advisory bodies (such as the Council for Science and Technology or the Technology Strategy Board) could occasionally review SACs.
 - 5.3 Assessment could take place once a year for 'light touch' monitoring and then more rigorously every two to five years (we suggest every three years is adequate), unless there is a particular concern that necessitates a review. Assessing implementation of the Code could form part of the regular appraisal of a SAC and its members, without the need for additional processes.
 - 5.4 The Chief Scientific Adviser (CSA) or Management Board should meet the SAC chair or committee every 6 months and then report to the Minister annually (regular access to the Minister is important). Sometimes it will be appropriate for the chair of a SAC to interact directly with a Minister where there is a significant concern, but this would be rare. Discussions on the operation of SACs are better dealt with through meetings rather than correspondence and as SACs are established to provide advice when required by recipients, DCSAs and ministers should also be prepared to meet on an ad hoc basis.

6. How should SACs express and monitor their publication policies?

- 6.1 Science makes the greatest progress when it is published openly and peer reviewed. The SACs should resist pressure to treat information in confidence unless there is a clear public interest argument for confidentiality; the applicable legislation and regulations allow such exceptions on the grounds of demonstrable public interest. This is consistent with the draft Code.
- 6.2 The publication policy of SAC reports must be clearly stated at the time that evidence is collected, because a requirement to publish in the public domain may affect the evidence that is received from third parties. Where necessary reports could be available to the public as separate, edited documents with sensitive information removed.
- 6.3 The code of practice emphasises the need to provide advice in a manner that is understandable by the general public. This may not be a problem for SACs providing advice on public policy but often reports will be highly technical in nature. In these cases, non-technical executive summaries should be produced.
- 6.4 Wherever possible, publications and outputs should be in the public domain; available from SAC websites and as hard copy documents where appropriate. Members should review and monitor websites annually, particularly publication downloads as these indicate levels of interest. Questionnaires and telephone canvassing are not recommended.

7. How might good practice be captured and spread across the community of SACs? (E.g. OSI workshops, publications or other devices) How might SACs be peer reviewed?

- 7.1 In order to spread good practice:
 - SAC chairs should meet annually (or on a similarly regular basis) to discuss operation of their SACs. SACs could then communicate with each other via advice to the chair
 - SAC secretariats could meet and share best practice. Civil service secretariats are often very useful to ensure that SACs are run in accordance with best practice
 - an independent observer or member of the secretariat could attend different SAC meetings
 - joint SAC meetings or events could occasionally take place
 - the CSAC could also help disseminate good practice.
- 7.2 Lay members should not be expected to spend significant effort sharing good practice if the time they dedicate to SACs is relatively limited.
- 7.3 Review of the scientific quality of advice provided by a SAC may not be appropriate since the SAC itself is often performing a peer review of government science or policy, using external experts. Also, SACs are peer reviewed internally to some extent because the members are independent. SAC membership should change regularly and changes should be published (and therefore open to scrutiny). Changes in membership are an informal mechanism for peer review.

- 7.4 SAC findings could be reviewed by an appropriate international appointee, equivalent overseas bodies or senior industrialists and academics. The Council for Science and Technology, the Technology Strategy Board, and organisations such as the Royal Society, The Royal Academy of Engineering and The Academy of Medical Sciences could be involved in peer review (but the process should not be too academically focused). Reviewers should have the right level of experience and be willing to commit time to undertake such a rigorous task.
- 7.5 A good measure of the long-term effectiveness of SACs is the extent to which their advice is adopted by government departments; this can be audited by government. In addition SACs could benchmark their processes and protocols against those used by others, e.g. the US Senate.
8. **The current Code has been widely adopted across Whitehall. However, some SACs remain outside the Code. Some have been excluded because they manage funds/disburse grants and this could be seen as potentially biasing advice. Should there be a stronger policy statement in support of Code compliance or can the Government/ Office of Science and Innovation rely on the Code remaining "a material consideration" (of good practice) if the activities of a non-signatory SAC are brought into question? Is there a need for clarity on linkages or separations between a SAC's advisory responsibilities and spending or policy priorities of a department? Should the definition of SACs that are required to comply with the Code be clarified? If so, what type of committees should comply with the Code?**
- 8.1 There should be a stronger policy statement supporting Code compliance as this would encourage consistency in its application.
- 8.2 SACs that act like an arm of the respective department (because they have a departmental budget for departmental business) require additional independent oversight. There is a definite need for clarity and guidance on linkages or separations between a SAC's advisory responsibilities and the spending or policy priorities of a department. Spending issues and advisory responsibilities require different decision makers and procedures therefore they need to be treated differently. Clarifying the relationship would help justify linkages and separations. Advisory responsibilities are more rigorously appraised in the interests of the SAC achieving positive deliverables.
- 8.3 The Academy does not believe that some SACs should be exempt from the Code; a key feature of the Code is that it should apply to all SACs. All committees should comply with the code, particularly those that review the work/priorities of the Department and make consequent recommendations (unless some special case can be made and defended in public). If not all SACs are required to comply, this should be clarified. SACs that manage funds may need a different Code of Practice and perhaps should not be defined as SACs.
- 8.4 Government should avoid imposing additional rules unless necessary. It is important to avoid a heavy-handed approach otherwise SAC members could feel too constrained. Extra rules require more auditing and compliance. A system of guidance and checklists is adequate unless there are particular reasons for concern over non-compliance. The scopes and levels of

specialisation of SACs are very diverse so different approaches may be needed.

- 9. Since its introduction in 2001, the implementation of the Code has been largely successful. However, the Government/ Office of Science and Innovation would welcome any further ideas on how the operation of SACs might be developed or improved further through the Code. The Government/ Office of Science and Innovation would also welcome updates to the list of SACs at Annex1.**
- 9.1 The most important aspect of any committee is selection of a good chair who can provide leadership by eliciting the views of the other members, lead debate and draw conclusions that are accepted by all concerned. The chair should not over influence the debate with personal bias. It is equally important that the membership of the committee is balanced in terms of skill and experience and has good secretariat support.
- 9.2 The Academy believes it is appropriate to appoint people to SACs for a fixed term (e.g. three years) with a continuation review after every term. This allows the SAC and the individual member a regular opportunity to terminate the appointment if appropriate. Only in exceptional circumstances should someone serve on a SAC for more than six years; a healthy turnover ensures the committee is refreshed whilst maintaining continuity.
- 9.3 Committees should target recognised leaders in science and engineering through pro-active approaches made to organisations such as The Royal Academy of Engineering, The Royal Society and The Academy of Medical Sciences. These organisations could help facilitate the process of appointing members.
- 9.4 All government policy related to science and engineering should be accompanied by publication of the evidence and advice that has been considered in formulating that policy.
- 9.5 Experts on SACs should demonstrate that their knowledge and experience is current. While historical context is extremely valuable, the pace of change in engineering, science and business is rapid, demanding contemporary knowledge and context from SAC members.
- 9.6 Regarding paragraph 9 of the draft Code: Members should be chosen not as a representative of a sector but on the basis of their relevant scientific expertise alone.
- 9.7 Regarding paragraphs 74 and 75 of the draft Code: the minutes of meetings (with annexes) should be complete enough to constitute an 'audit trail' of the evidence considered and the reasoning leading to the final conclusions and advice.
- 9.8 Regarding Annex 4 (List of Scientific Advisory Committees): the Scottish Science Advisory Committee should be included in the list.

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