

Chapter 1 Background to the review

The Research Assessment Exercise

60. The Research Assessment Exercise (RAE) provides ratings of the quality of research conducted in universities and higher education colleges in the UK to inform the selective allocation of funds in accordance with the quality of the work undertaken.

61. The system was designed to maintain and develop the strength and international competitiveness of the research base in UK institutions, and to promote high quality in institutions conducting the best research and receiving the largest proportion of grant. The outcomes of the exercise are published to provide public information on the quality of research in higher education throughout the UK. The results of the RAE may also be used to inform policy development.

62. The first RAE was undertaken in 1986, introducing an explicit and formalised assessment process to standardise the information received from existing subject-based committees. Further exercises held in 1989 and 1992 were markedly more transparent and comprehensive. The fourth exercise in 1996 considered the work of over 50,000 staff designated by higher education institutions (HEIs) as research active. It determined the allocation of over £4 billion over five years. Its costs (including opportunity costs) have been variously estimated at between £27 million and £37 million (estimated as 0.8% of the total funds distributed on the basis of the exercise).

63. The most recent RAE in 2001 was the most rigorous and thorough exercise to date. It had by then become the principal means by which institutions assured themselves of the quality of their research. It had also evolved into an intense competition in which HEIs strived not only for funding but also for prestige.

How the present system works

64. The RAE is essentially a peer review process. Research is divided into 68 subject areas or units of assessment. Assessment panels are appointed to examine research in each of these areas.

65. HEIs are invited to make submissions, in a standard format. There is no limit on the number of units of assessment an institution can submit to, nor is there any limit on the number of staff submitted. Each panel produces and publishes a set of assessment criteria and working methods, to which it is bound to adhere. Panels score each submission on a 7 point scale according to how much of the work is judged to reach national or international levels of excellence. A full guide to the 2001 RAE is at Annex C.

66. The 2001 RAE was strengthened in a number of respects to address some of the concerns previously expressed about aspects of the exercise, including issues of publication

behaviour, interdisciplinary research, consistency of scores, equal opportunities, and staff movement.

67. Each funding body uses RAE ratings to allocate research funding by formula to the institutions it funds. The RAE supports the policy goal of selectivity, ensuring that scarce resources are directed towards those with the capacity to produce research of the highest quality. The RAE makes it possible for funding bodies to discriminate in their funding (this is done in a transparent way by formulae related to quality and volume). At present, the principle which underpins research funding is that of selectivity based on quality, wherever it is located, not explicit concentration of funds in a selected number of institutions.

Strength of UK research

68. On current measures of performance, research in UK universities is in excellent health. The results of the RAE, supported by other evidence, demonstrate that research in the UK continues to improve and to do so relative to other industrialised countries, despite increasing competition.

69. Substantial improvements are reflected in the results of the 2001 RAE itself. In 1996 32% of staff that were submitted to the RAE as research active were in departments rated 5 and 5*. In 2001 the figure was 55%. This improvement was validated by the opinion of overseas experts.

70. This achievement is further validated by new research which shows that the UK's share of the most cited 1% of research papers has increased from 11% to 18% over the assessment period. The average citation rate of UK papers relative to the rest of the world has improved by 12% over the period. UK researchers are now cited at a rate 38% higher than the global average.

Reviewing research assessment policy

71. By any measure, the RAE has been extremely successful. It has evolved from a quality assurance process to a competition for funding, while successfully retaining its original function of driving up standards through reputational incentives. At the same time it has enabled funds to be concentrated in those departments best able to produce research of the highest quality. It has helped to drive up research quality, transformed the management of research within institutions, and gained the acceptance of the research community and its stakeholders. In 2000 HEFCE asked all interested parties to respond to a consultation on its research policy. Faced with the proposition that there should continue to be a research assessment process based on peer review, building on the foundations of the RAE, 98% of respondents agreed.

72. The RAE evolved over the years to take account of changing circumstances. Following the outcome of the 2001 RAE, the funding bodies moved towards the view that change may be needed to ensure the continued fitness for purpose of the RAE. The following reasons were identified:

- a. effect of the RAE upon the financial sustainability of research
- b. an increased risk that as HEIs' understanding of the system becomes more sophisticated, games-playing will undermine the exercise
- c. administrative burden
- d. the need to properly recognise collaborations and partnerships across institutions and with organisations outside HE
- e. the development of researchers
- f. the need fully to recognise all aspects of excellence in research (such as pure intellectual quality, value added to professional practice, applicability, and impact within and beyond the research community)
- g. the ability to recognise, or at least not discourage, enterprise activities
- h. concern over the disciplinary basis of the RAE and its effects upon interdisciplinary and multidisciplinary research
- i. lack of discrimination in the current rating system, especially at the top end with a ceiling effect.

73. In June 2002 a review of research assessment was launched, owned by the four UK HE funding bodies and led by Sir Gareth Roberts, President of Wolfson College, Oxford. A steering group of 12 members was established, selected on the basis of personal knowledge, experience and standing in the HE and research communities. The group's membership and terms of reference are at Annex A.

Chapter 2 The review process

The review structure

74. The review of research assessment has been led by Sir Gareth Roberts, administered and informed by a review team resourced from HEFCE, and supported by other funding body officers and outside experts. The review team worked closely with Sir Gareth in developing alternative approaches to research assessment for consideration by the steering group.

75. Throughout the review process the funding bodies sought to consult widely on the issues being addressed. An early consultation was published identifying issues to stimulate debate, inviting interested parties to discuss the issues and contribute to the review. Respondents were encouraged to convene focus groups or workshops and to submit the formal record of their discussions. The chair and review team held a series of public meetings across the English regions and devolved administrations, commissioned workshops within institutions, and met with individual stakeholder groups. Towards the end of the process the team also visited a selection of institutions to discuss the emerging model.

76. Each funding body was responsible for consulting its relevant governmental stakeholders and ensuring that these views were reflected in the process. To facilitate this communication, a government stakeholder group, chaired by Sir Gareth, was established and met through the course of the review.

77. In order to ensure the review remained fully transparent and to enable the community to participate in the discussion, a dedicated website was established (www.ra-review.ac.uk). This made available the workplan for the review, reports of key meetings, and progress on the models being developed. All other evidence considered within the course of the review will be published on completion.

Development of research assessment models

78. The review provided distinct approaches to assessment systems for the steering group's consideration. As these models were developed they were made available to the wider research community, the funding bodies and stakeholders for discussion. From this process the steering group identified one preferred model to be presented as an option for consultation.

Assessment of research quality: the context

79. Research assessment may in principle be straightforward, but in order to arrive at the best possible assessment process the review has considered both the philosophical questions, such as 'what is meant by quality in research', and practical issues to do with designing a system that will provide a fair and accurate assessment of quality while minimising burden on all concerned.

80. From the outset the review made certain assumptions:
- a. The dual support system for research will continue. This is the system whereby public funding for research in HEIs comes from two funding streams. The first forms part of the block grant from the UK HE funding bodies, based on past performance as measured by the RAE. The second comes through project grants allocated to particular researchers by the research councils, in response to proposals for programmes to carry out future work. The HE funding bodies have an ongoing need for a method of allocating funds selectively. Research assessment of some description will continue to be used for this purpose.
 - b. Block grant funding to institutions will continue. Within the block grants system, institutions are free to allocate funding according to their own priorities.
 - c. The quality of research will continue to be considered in a global context. It will therefore need to be assessed at a national and international level.
 - d. The regional dimension will be considered separately both by the devolved administrations and other regional agencies, including the research funding model's implications for regional policy.
81. Other relevant factors were also considered:
- a. There needs to be emphasis upon the 'people dimension' – that is, the contribution made by institutions to the supply and development of researchers.
 - b. Alongside research funding, there are now public funds available to universities and colleges to support knowledge transfer activities. Work is under way to develop measures of excellence in those activities, many of which involve research services to external partners.
 - c. Competition for research funding is increasingly keen and the costs of research in many subjects are increasing. Funding bodies need to consider whether targeted help is required to enable new subjects and new fields to develop. It may (or may not) fall to the research assessment process to identify suitable candidates for any such assistance.

Chapter 3 The evidence base

Sources

82. In the course of the review, we reviewed four major strands of evidence:
- a. 420 responses to our public invitation to contribute
 - b. an operational review of RAE2001 undertaken by Universitas higher education consultants
 - c. a report on international approaches to research assessment (update of a 1999 study), undertaken for the review by the Science Policy Research Unit at the University of Sussex ('Report on responses')
 - d. a programme of nine workshops with practising researchers undertaken for the review by RAND Europe.
83. Each of these strands produced a report¹. These reports are available on our website www.ra-review.ac.uk. Most of the responses we have received are also available on the site.
84. In addition we held an extensive programme of meetings, which provided valuable insights into the views of the community:
- a. 44 informal consultative meetings with key stakeholders
 - b. open public meetings in Sheffield, Birmingham, Edinburgh, London, Cardiff and Belfast.

Key themes

85. A number of themes emerged strongly:
- a. the importance of expert peer review
 - b. the need for a clearer link between assessment outcomes and funding
 - c. the need for greater transparency, especially in panel selection
 - d. the need to ensure consistency of practice across assessment panels, including the trade-off between comparability of grades across subjects and the flexibility for assessors to develop methods appropriate to their subject
 - e. the need for a continuous rating scale
 - f. the need for a properly resourced administration.

The importance of expert peer review

86. Almost all those who have made their opinions known to us have argued that only expert peer review can identify the best research. It is generally accepted that proxies can

¹ These reports have been produced externally for the review, with the exception of the analysis of responses to the 'Invitation to Contribute'. This was produced by a member of the team whose sole responsibility within the review was to report on the responses to the invitation. Other members of the review did not input into this report.

properly be used by reviewers to help them arrive at judgements about the quality of research. It is clear, however, that any assessment not based ultimately upon the judgements of experts would lack credibility and legitimacy.

87. Support for expert peer review is accompanied by a willingness to accept the burdens imposed upon researchers by the current system. As RAND Europe has noted in its report:

'The overwhelming majority of the academics and research managers who took part in the study felt that research should be assessed using a system based on peer review by subject-based panels...The participants also indicated that these panels should be informed by metrics and self-assessment, with some input from the users of research.'

The need for a clear link between assessment outcomes and funding

88. In theory, assessment and funding are entirely separate issues: the credibility of an assessment process should rest upon the reliability of its results rather than the way in which they are translated into funding decisions by the HE funding bodies.

89. In practice, the RAE is the mechanism by which institutions earn research funds from the funding councils. Although it is not a competition for funding in a direct sense, it needs to have many of the characteristics of such a competition – principally transparency in its own process and an explicit link between assessment and funding outcomes.

90. We began this process insisting that assessment and funding were separate issues – and indeed it is not any part of our purpose to suggest what the funding policies of the funding councils ought to be. However, it has become clear to us that the link between assessment and funding needs to be clarified in advance of the next assessment, if the assessment process is to retain credibility and consent. As the report on the responses to the 'Invitation to contribute' has noted:

'Of the (unsolicited) comments recorded, a majority focus on funding problems generated by the (post RAE) financial settlement. There is strong support among HEIs in particular for the next round of assessment to make the financial outcome of attaining a particular grade explicit before the exercise is run.'

The need for greater transparency

91. The operational review found that many institutional RAE contacts believed that the RAE had achieved its goal of transparency. However, the very high value placed upon this dimension by the community is reflected in the outcomes of the workshops and the 'Invitation to contribute', both of which suggest that further progress could be made. The report on responses notes that:

'...there is strong support for the workings of the assessment panels to be made more transparent, including:

- a. the selection procedures of UK and international panel members
- b. the panels' weighting of the various assessment criteria
- c. cross-referral processes
- d. the definition of international, national and sub-national standards of research excellence.'

92. A similar picture emerges from the workshops, with the same emphasis upon the selection of panels and the need for greater international input:

'There was a strong desire for a system with clear rules, and transparent procedures that were established and not modified during the assessment process. The appointment of panels and the selection of the criteria they used were thought to be critical areas for transparency. Participants in the study considered that the panels themselves should be professionalised, and that there should be increased and earlier involvement of international members. They suggested that chairs from outside the subject area with more experience of facilitation should be used.'

The need to ensure consistency of practice across panels, including the need to balance comparability and flexibility

93. All our consultative exercises have revealed concern about the comparability of RAE grades across subjects. It is acknowledged to be very difficult to guarantee that a given grade in one subject is equivalent to the same grade in another, especially where there is little overlap between those subjects.

94. The operational review found that a majority of institutional RAE contacts felt that RAE2001 had failed to achieve its goal of comparability (the only one of its goals that the exercise was deemed to have failed to achieve). Respondents to the 'Invitation to contribute' also expressed concern about comparability.

95. The academic community recognises that comparability, although important, can conflict with other imperatives to which it attaches even greater importance. In its workshops, RAND Europe explored the priority to be given to various features of the exercise. It found that there was strong support for allowing panels more freedom to define their own criteria and information requirements, even if this led to divergent practice.

96. A consensus position could be defined as follows:

- a. there is scope to improve the comparability of RAE scores
- b. it may not be possible to achieve absolute comparability, and the limitations of the system should be recognised by policymakers
- c. comparability should not necessarily take precedence over the freedom for panels to adopt assessment methods appropriate to the subject area

- d. every effort should be made to achieve comparability consistent with the above.

The need for a continuous rating scale

97. The RAE awards submissions one of seven grades. The grades are wide and there is scope for submissions of a rather different quality to receive the same grade. For example, a submission rated 5 could be deemed to display international excellence in anywhere between 11% and 49%² of its research activity.

98. The rating scale is seen as artificially raising the stakes of participation in the RAE by imposing a step-change in the prestige (and inevitably the funding) of university departments. There is a consensus that the rating scale needs reform. The preferred option is to adopt a system that allows for continuous grading. As RAND Europe has noted:

'Suggestions (for change) seemed to arise from the concerns regarding the step-changes in funding in the current system...Most...preferred a move to a continuous scale in which a submission's score was the sum of the scores of the individuals included in the submission.'

The need for a properly resourced administration

99. It was generally agreed that the administration of RAE2001 was under-resourced. The operational review found that, although the RAE team performed well in very challenging circumstances, the pressures on the system gave rise to significant risks:

'The pressures imposed by the timetable for the assessment phase, the workload on key players (panel members and secretaries, and the RAE team), and the demand for several of the supporting services, ran a high risk of major disruption, though none in fact occurred. The same degree of dedication and commitment which all those involved showed cannot be assumed for any similar further exercise. More staff (or funds to outsource services) would be required; and all inputs should be realistically costed and paid for.'

² In fact, if the submission had a tail of 'sub-national' work, this proportion could be even higher.

Chapter 4 Our approach

Issues of importance to the research community and HEIs

100. In Chapter 3, we described how our consultative processes have demonstrated:
- a. the importance of expert peer review
 - b. the need for a clearer link between assessment outcomes and funding
 - c. the need for greater transparency especially in panel selection
 - d. the need for balance between comparability of grades across subjects and the flexibility for assessors to develop methods appropriate to their subject
 - e. the need for a continuous rating scale
 - f. the need for a properly resourced administration of the RAE.
101. We have taken all of these into account in developing our proposals.

Purposes of the RAE

102. The RAE has two principal aims: to support the resource allocation models of the funding councils and to provide comprehensive and definitive information on the quality of UK research in each subject area.

103. The two aims are not identical, and occasionally we have found them in conflict. This conflict can be illustrated by imagining the kind of process that would emerge if we pursued only one aim to the exclusion of the other.

104. If the RAE is primarily a means of informing funding allocations by the funding councils, it follows that it must be designed to enable allocations to reflect the policy aims of the councils. In recent years, the funding councils have placed emphasis on the need to stimulate competition and to encourage institutions to focus on those areas of research in which they can excel. This is considered to be the best way in which the assessment and funding processes can act as a driver of excellence. It also reflects a particular concept of excellence: the funding councils are not interested in maximising the quantity of research that exceeds a fixed quality threshold; they are concerned with ensuring that the best research in the UK continues to keep pace with the best in the world.

105. In order primarily to underpin financial allocations, it follows that the RAE:
- a. should be constituted as a competition with clear linkages between assessment and funding outcomes
 - b. should not provide incentives for institutions to behave in a way that conflicts with the policy aims of the relevant funding council
 - c. need assess only those parts of the system which the funding councils have a mission to support
 - d. need only provide results that enable the funding councils to fund institutions fairly

- e. should concentrate assessment effort on those decisions with the greatest implications for funding
- f. should have the highest standards of transparency and consistency in the application of its own rules.

106. If, on the other hand, the primary aim of the RAE is providing a service to a wider constituency than the funding councils – for example to inform the HE sector and its stakeholders of the quality of research in each subject – then it follows that it should:

- a. be constituted as an assessment process that funding councils and others can use alongside other evidence to inform funding decisions
- b. assess the entire research system, including activities or staff which may not be deemed fundable by the funding councils
- c. provide results that give a definitive and fine-grained picture of the distribution of UK research strength in each subject area
- d. be primarily an evaluation rather than an instrument of policy, prioritising fairness and caring less about any behaviours it might itself encourage
- e. give equal priority to the assessment of all units that might wish to submit, without reference to the implications of assessment decisions upon funding
- f. provide a true picture of research quality in each subject area.

107. In practice it is hard to find anyone who advocates pursuing one of the aims of the RAE to the exclusion of the other. However, we have in most cases come to regard the first (informing funding) as more important than the second (providing quality information for a wide variety of stakeholders).

108. This is a pragmatic view, driven by the increasing costs of assessment and of research itself. Assessing research to meet the limited requirements of the funding councils is a demanding enough task for both the assessors and the assessed. Given the strains on the system, its costs, and the importance of its decisions for the allocation of public funds, we lean towards the view that the research assessment process should focus upon providing the information the funding councils require to allocate those funds in a way that is fair, transparent and efficient.

Other principles

109. In developing our proposals we have also sought to ensure that the process:

- a. does not create, encourage or facilitate discrimination on the grounds of age, sexual orientation, political belief, disability, gender, race or religion
- b. does not create any unnecessary legal risks for the funding councils or the panel members
- c. does not create excessive or unnecessary burdens upon panel members, institutions or the funding councils.

110. We will be seeking professional advice relating to each of these points in the months following the publication of this report. Legal advice will remain confidential; other advice will be publicly available for at least six weeks before the closure of the funding councils' consultation on these proposals.

Our proposals

111. Taken together, these considerations have led us to retain a system similar in many ways to the RAE. In Chapter 5 we set out an extensive package of reforms to the existing process. We have however retained many of the key features of the existing process:

- a. a UK-wide system
- b. reliance upon expert peer review to identify the best research
- c. recruitment of panel members from within the research community (but not necessarily UK-based academics)
- d. peer review informed by performance indicators but grades not dictated by them
- e. assessment organised on the basis of disciplinary panels
- f. panels establishing their own assessment criteria in consultation with the research community
- g. transparency, including panel criteria and working methods published well in advance of the process
- h. panels provide information on the quality and volume of research
- i. a process designed to encourage institutions to make strategic choices about the areas of research they prioritise
- j. the assessed control their input into the process: submissions are put together by institutions.

112. The proposed reforms are explained in detail in Chapter 5. Principal reforms are:

- a. the burden of assessment for institutions and assessment panels linked to the amount of funds the institution is competing for
- b. separate assessment of competences such as the development of young researchers
- c. greater transparency, especially in panel selection
- d. greater involvement of non-UK researchers
- e. credible structures to ensure consistency of practice between panels.
- f. flexibility for assessors to develop methods appropriate to their subject
- g. grade bands abolished in favour of a profile of the research strength of each submission, providing for a continuous rating scale
- h. controls on the scores awarded, to prevent grade inflation
- i. a clear link between assessment outcomes and funding
- j. a properly resourced administration.

Chapter 5 Proposed model

Centrality of expert review

113. Two factors determine the reliability of a research assessment process: its rigour and its frequency. The same two factors determine its power to distort behaviour and divert attention and resources away from the business of doing research.

114. A process that is both rigorous and frequent will offer reliability at a prohibitive cost; whereas one that is both light-touch and infrequent may do little harm but will offer little assurance to funders and institutions.

115. It is clear from the responses to the 'Invitation to contribute' that the academic community understands these factors very well. It is equally clear that the community believes that the best way to achieve reliability is by ensuring that the assessment process is rigorous rather than by making it more frequent.

116. Some believed, at the outset of the review, that there might be scope for assessing research solely on the basis of performance indicators, thereby dispensing with the need for a complex and labour intensive assessment process. While we recognise that metrics may be useful in helping assessors to reach judgements on the value of research, we are convinced that the only system that will enjoy both the confidence and the consent of the academic community is one based ultimately upon expert review. We are also convinced that only a system based upon expert judgement is sufficiently resistant to game-playing to prevent distorting the nature of research activity.

Recommendation 1

Any system of research assessment designed to identify the best research must be based upon the judgement of experts, who may, if they choose, employ performance indicators to inform their judgement.

Frequency of the assessment

117. There are two powerful arguments for less frequent assessment, one pertaining to the funding strategies of the funding councils and the other to the views and ethos of the academic communities.

118. The RAE2001 results are responsible for driving the allocation of £1,159 million of quality-related research funding (QR) in 2002-3, the first year in which they have been used. If we assume that they continue to be used by the funding councils until at least 2007-8, it is reasonable to suppose that they will ultimately dictate the allocation of six times this amount of public funds across the UK. HEFCE estimated that the total cost of the 1996 RAE (including the opportunity costs for English HEIs) amounted to 0.8% of the funds distributed

in England on the basis of its results³. However, because of the in-built advantage enjoyed by established units and the reluctance of policymakers to allow the resources available for the most successful institutions to diminish, the impact of the RAE upon funding is less dramatic than this suggests⁴.

119. The willingness of the funding councils to permit such redistribution is surely relevant to the frequency of research assessment. If stability is the goal, there is no point in operating very frequent assessments in order to enable regular adjustments to funding levels.

120. The academic community has demonstrated its commitment to a form of assessment which is acknowledged to be both more onerous and more reliable than any available alternative. This, in itself, testifies to its commitment to the pursuit and proper recognition of quality. A profession which itself demands rigorous quality audit is one which can make a strong case for less frequent external assessment on the grounds that its own culture is sufficiently demanding and self-critical to maintain standards.

121. Research is an activity that requires a stable environment in which to flourish. The merits of research often become apparent over many years and there is a very strong ethic among researchers, which leads them to strive for and respect work of the highest quality. All of these factors strongly suggest a credible (and relatively onerous) expert review assessment conducted at relatively long intervals.

122. With these considerations in mind, we have seriously considered a significant extension in the assessment period, from between three and five years to eight or even ten years. In the end, however, we have to be mindful of the right of government, as the ultimate funder of research, to invest on the basis of up-to-date quality information. We recognise that there is a need for reliable information on the performance of the research base if government is to compare its claims for support with those of other public service areas.

123. Therefore we propose only a small increase in the assessment period, to six years. We also propose that, at the mid-point of the cycle, the funding councils should monitor volume indicators. The purpose of this monitoring would not be to re-assess research but rather to pick up changes in the level of activity which might indicate that a department had been closed or its research activity dramatically scaled back. Where this appeared to have occurred, the funding council would have the option of investigating further⁵. We would not

³ HEFCE 00/37 'Review of research'.

⁴ HEFCE estimates that, allowing for increases in the funding available for research, 9% of its research grant changed hands as a result of RAE2001, though this figure conceals more dramatic changes affecting particular institutions. This reflects, in large measure, the unwillingness of policymakers to permit major perturbations in the system.

⁵ This need not result in increased volatility. The effects will vary between territories; however, to take one example, HEFCE varies its grant levels on an annual basis on the basis of changes in PGR and research assistant numbers (and income from charities). What we propose is a mechanism to ensure that numbers of research staff inform whatever changes in grant levels are permitted between assessment exercises. At present, the most reliable way for institutions to increase their research grant between RAEs is to increase their number of postgraduate and

recommend that the funding councils make any revisions to grant levels unless there is evidence of a very significant fall-off in research activity which could only be accounted for by significant disinvestment.

124. An alternative might be to increase the length of the cycle to eight years. In this scenario, the mid-point monitoring would have to be sufficient to reassure government about the performance of the research base. We suggest that, if an eight-year cycle is employed, the mid-point monitoring should include a mechanism for reliably establishing the performance of the UK sector (but not the relative performance of its constituent institutions). Under this model, therefore, the performance of the sector as a whole would be evaluated every four years, and the performance of individual institutions and units, every eight years.

Date of the next assessment

125. The Chief Executive of at least one of the funding councils has indicated that there will be a five-year gap between the publication of proposals for the next research assessment and the date of the next assessment. This promise was intended to reassure HEIs that they would have time to adjust to any major overhaul in the system. We have heard a number of divergent views on the subject: some claiming that delay is necessary to enable institutions to prepare for the next assessment; and others complaining that a long delay disadvantages institutions which, for whatever reason, underperformed in RAE2001, by prolonging the consequences of that underachievement. Moreover, it might be considered that, so long as discipline-based expert review remains the means by which the best research is identified, there may be sufficient continuity to justify an earlier assessment.

126. We believe that the funding councils would benefit from hearing the views of their communities on this subject. We therefore offer for consultation the proposal that the next assessment should begin in 2007 – that is, four years after the publication of this report.

Recommendation 2

- a. There should be a six-year cycle.
- b. There should be a light-touch 'mid-point monitoring'. This would be designed only to highlight significant changes in the volume of activity in each unit.
- c. The next assessment process should take place in 2007-8.

Assessment of research competences

127. Submissions to RAE2001 included a statement of the unit's research strategy and environment (known as RA5). Panels were asked to produce a single grade reflecting not only the quality of research output but also the features that underpin a unit's performance and its ability to continue to perform – such as its staffing policy, treatment of young

postdoctoral researchers. We do not envisage that the level of volatility in grant levels between assessment exercises would increase. There may even be a case for restricting the extent to which volume shifts are allowed to influence funding.

researchers, and long-term financial planning as reflected in that statement. This was intended to ensure that these competences were recognised as vital to the research process (and, in the case of the development of young researchers, as an output of comparable importance to research publications).

128. The mechanism has proved only partially effective. RAE grades are, in most cases, presumed to reflect the quality of research output⁶. Where grades are driven largely by the quality of research outputs, which is subject to intense scrutiny, it is difficult for panels to decide what weight to give to what is essentially an unverified self-assessment of institutional competences.

129. We propose to separate the assessment of these competences from the assessment of research quality in order to make it more visible and more credible. Assessment of competences would be based upon sets of objective criteria related to specific actions. We suggest that these criteria would be grouped under four headings and assessed where possible by officers of the funding councils or the RAE administration. The proposed headings are:

- a. research strategy⁷ (the coherence of an institution's research strategy including an assessment of the credibility of its targets for obtaining funding)
- b. development of researchers (including PGRs⁸, postdoctoral researchers and junior research and teaching staff)
- c. equal opportunities (this would relate to an institution's policies for ensuring equality of opportunity for all its staff, not just those in research roles)
- d. dissemination of research beyond the academic peer group (this would cover an institution's policy on encouraging a spectrum of activities, ranging from collaboration with organisations outside HE, through the use of research to enhance teaching, and work promoting the public understanding of research topics).

130. We gave specific consideration to the use of research to inform teaching. It is self-evident that one of the ways in which research organisations can attempt to ensure that their work has a positive impact upon the practice of others is by including it in their own teaching or communicating it in a form that helps others to do the same. Therefore, if we are concerned with encouraging a broader view of the dissemination of academic research, it would be unreasonable to exclude links with teaching.

⁶ The engineering panels, unusually, stipulated the weighting to be given to each part of the submission.

⁷ For units submitting to the Research Quality Assessment, the main assessment panels would, however, as part of their submissions, be asked to comment on a research strategy specific to each unit of assessment. This consideration would be complementary to the consideration of the institutional research strategy. Panels would also have sight of the institutional strategy to enable them to ensure that the unit strategy is consistent with it.

⁸ The Joint Funding Councils Review of Research Training has proposed a quality regime for research degree programmes, which will be separately audited, possibly by the QAA. It should be possible for the competences assessment to accept accreditation under those arrangements as sufficient proof of satisfactory performance against criteria relevant to PGRs.

131. Where possible, the funding councils' normal institutional monitoring arrangements would be used to establish whether the criteria for competences were met⁹. This assessment would take place either three years or two years before the main assessment, in order to give institutions the opportunity to improve if they were found to be failing in any respect. To prevent unnecessary assessment burden, it would be made at the level of the institution rather than of the unit of assessment.

132. It would rest with the funding councils to decide what sanctions to take against an institution failing the competence assessment. Should they wish to adopt a common approach, we would propose that an institution failing its assessment against any one of the competences would be allowed to enter the next research assessment, but would not receive funding on the basis of its performance in that assessment until it had demonstrated a satisfactory performance. Given a two-year period between the competences assessment and the main assessment, and a further year between the assessment and the incorporation of its results into funding formulae, this would provide the institution with a three-year period in which to improve before sanctions would be enforced.

133. This process might also identify exemplars of good practice to which the rest of the sector might look for guidance. We do not envisage that exemplars should attract significant additional funding, although funding councils may wish to offer small amounts sufficient to meet the costs of sharing best practice with other institutions. A possible research competences checklist is shown in figure 2.

Recommendation 3

- a. There should be an institution-level assessment of research competences, undertaken approximately two years before the main assessment.
- b. The competences to be assessed should be institutional research strategy, development of researchers, equal opportunities, and dissemination beyond the peer group.
- c. An institution failing its assessment against any one of the competences would be allowed to enter the next research assessment but would not receive funding on the basis of its performance in that assessment until it had demonstrated a satisfactory performance.

Assessment burden in proportion to reward

134. We have already discussed the scope for reducing the frequency and intensiveness of assessment. There is another way in which we might seek to bear down on the assessment burden. At present all institutions and units are assessed in the same way. It may be that the full weight of research assessment ought not to be brought to bear on all research, and that

⁹ This will place an additional burden on the funding councils which will have to be reflected in the resourcing of the relevant functions.

a lighter-touch process may be appropriate for less research intensive institutions and units with less to gain or to lose from the assessment process.

135. Some will argue that research assessment is not only about funding. We recognise that the assessment of research is a valuable service which institutions use to benchmark their progress. However, we believe it is increasingly difficult to justify this service where there is no realistic prospect of funding.

136. We have two reasons for reaching this conclusion. The first concerns pressure on the assessment system. We know that RAE2001 panels felt overburdened and are sceptical about the ability of the system to cope with any increase in the assessment load¹⁰.

137. The second reason concerns the policy aims of the funding councils. If it were the aim of the system to encourage most institutions to aspire to the condition of the most research intensive, it would make sense to assess all research in the same way, so that the less competitive institutions could benchmark themselves against the most competitive. We have assumed, however, that the intention of the funding councils is to encourage institutions to invest principally in those areas where they have a comparative advantage. This is not consistent with the notion of the RAE grade scale as a ladder of improvement. Instead it suggests that the reputational incentive provided by research assessment should be available only to those who have a realistic prospect of receiving significant funding.

138. We therefore propose a three-track assessment process:

- a. option of a separate approach for the least research intensive institutions
- b. assessment by proxy measures against a threshold standard (Research Capacity Assessment or RCA) for the less competitive departments in the remainder of institutions
- c. expert review assessment similar to the previous RAE for the most competitive departments (Research Quality Assessment or RQA).

139. A key feature of our proposals is that institutions would be asked to take decisions on the work they wish to submit for the full RQA at the level of the subject area rather than the individual. This means that, in submitting to RQA they would forfeit the right to submit staff from that area to the RCA – and any funding consequent upon RCA results.

140. The RAE defines the population of eligible researchers in a unit of assessment and uses this to publish information on the proportion of staff submitted. Under our proposals it will be important to ensure that this information is reliable, and to minimise the scope for artificially defining less research active staff as belonging to a unit of assessment with which they have little to do. This may well require stronger audit procedures.

141. This is illustrated in figure 1.

¹⁰ 'An operational review of the 2001 RAE' Universitas 2003.

Assessment of the least research intensive institutions

142. As noted above, we consider that the least research intensive institutions might best be assessed other than by discipline-based assessment.

143. One crude measure of research intensity is the proportion of an institution's funding council grant for teaching (T) and research (R) which is received for research: $R/(T+R)$. It is beyond the remit of the review to consider whether the funding councils should use this or any other metric as a means of categorising institutions; and we have certainly not presumed that they will¹¹. We have used it to explore the efficiency of research assessment as it affects institutions that are least dependent upon funding council research grant to support their activities.

144. In 2002-3 there were 40 out of 132 English HEIs for whom $R/(T+R)$ came to less than 2%. These institutions received a total of £566 million in teaching funding and only £6.7 million in research funding. They made 240 submissions to RAE2001 which yielded an average of £27,580 in funding in 2002-3, compared to an average across the exercise of over £455,000 per submission. For these institutions, therefore, and for the panels and administrators tasked with their assessment, the RAE is over 16 times less efficient than the norm. This seems to us to make a strong case for assessing such institutions in a different way.

145. The threshold we have used for this analysis is arbitrary but the phenomenon it describes is real. In each territory of the UK there are a number of institutions for whom research assessment is not an efficient means of determining entitlement to research funds. We propose therefore that such institutions enter into a dialogue with the relevant funding council to discuss their research aspirations and their relationship with other activities. Funding decisions could be made on the basis of this strategic interaction.

146. Where such institutions had pockets of research excellence, these would be eligible for inclusion in collaborative submissions involving institutions more closely engaged in research.

147. It would be a matter for the funding councils to determine whether this facility would be optional or whether it would be the sole assessment option available to some institutions. As regards the nature of the assessment itself, this would almost certainly vary between territories, given the differences between the HE sectors in England, Scotland, Wales and Northern Ireland.

¹¹ The review team recognises that $R/(T+R)$ will underestimate the research intensity of specialist institutions in subjects with high undergraduate numbers. This suggests that if the funding councils wish to categorise institutions (which we do not propose) they should seek a more sensitive measure. This observation does not in any way undermine the general point we have used the metric to explore: that research assessment is much less efficient when applied to institutions which are less dependent upon research funding.

Research Capacity Assessment

148. As noted above, we consider that much of the work in institutions not assessed by consultation with funding bodies might best be assessed through a process less intensive than the previous RAE.

149. RCA would be a light-touch assessment, based upon performance indicators. It would derive its results from detailed evaluation of the work of individuals or groups; it would use proxies to assess whether the overall productivity and impact of a unit of assessment exceeded a minimum threshold.

150. It is clearly desirable that every effort is made, in every discipline, to develop indicators capable of winning the confidence of the community and we do not consider it unlikely that this will be achievable. However, we recognise that RCA may not be appropriate for subjects in which it proves impossible to develop sufficiently reliable proxies. It has been suggested that, in these subjects, the funding councils may wish to route all eligible work through the full RQA (although this would have serious implications for panel workload). An alternative would be simply to distribute whatever funding was available to those opting out of RQA on the basis of staff numbers with no quality assessment.

151. The main features of RCA would therefore be as follows:

- assessment for those departments opting out of full Research Quality Assessment
- based entirely on proxy measures
- a pass/fail assessment
- those departments successful in the assessment may qualify for funding
- in subjects where proxy measures are unreliable, the assessment might not take place. In these subjects, any funding available for those opting out of RQA might be distributed on the basis of staff numbers.

Research Quality Assessment

152. In broad terms, our proposed RQA is similar to the old RAE. It is a discipline-based expert review system undertaken by assessment panels with the assistance of sub-panels and expert reviewers.

Which research would be assessed through the RQA?

153. We envisage that it would be for institutions to decide which subject areas to submit for RCA and RQA. Institutions would make this choice on the basis of information provided by the funding councils regarding their funding intentions. We assume that they would wish to fund qualifying research submitted to RCA more generously than research submitted to RQA that was not well regarded by the panels. This is discussed more fully in the context of the system proposed for scoring work submitted to RQA (see paragraph 164 and figure 4).

154. Institutions would not be allowed to submit some of the research in a given subject area to RCA and some to RQA. To do so would transform RCA into a light-touch assessment for those staff the institution chose not to include in the main assessment – an outcome we would not commend to the funding councils.

155. We have heard an alternative proposal for ensuring that the amount of work passing through RQA is manageable. Rather than confronting institutions with the risk of forfeiting funding if they submit to RQA and perform poorly, the funding councils could levy an entry fee (or deposit). An entry fee would be more consistent with the notion of the assessment process as a service provided to institutions, whose outputs they could use to lobby for funding. It would be less consistent with our preferred model – that of a competition in which the relationship between assessment and funding is clearly specified.

Recommendation 4

- a. There should, in principle, be a multi-track assessment enabling the intensiveness of the assessment activity (and potentially the degree of risk) to be proportionate to the likely benefit.
- b. The least research intensive institutions should be considered separately from the remainder of the HE sector.
- c. The form of the assessment of the least research intensive institutions would be a matter for the relevant funding council.
- d. The less competitive work in the remainder of institutions should be assessed by proxy measures against a threshold standard.
- e. The most competitive work should be assessed using an expert review assessment similar to the old Research Assessment Exercise.

Outputs of the RQA

156. In RAE2001 panels produced grades on a seven point scale (1 to 5*)¹². The system was, we believe, a qualified success. The grades commanded great respect and helped to drive improvement in UK research, which has helped to maintain the UK's position as one of the leading research nations.

157. However, in recent years, doubts have begun to be expressed about the grading system. Concerns include the following:

- a. The consequences of gaining or losing a grade are so great that institutions have an incentive to play games in order to ensure that they fall the right side of the grade boundary.

¹² The same seven point grading scale was used in the previous exercise in 1996. Earlier exercises used shorter scales.

- b. It is extremely difficult to ensure that grades are comparable across subject areas, especially subject areas between which there is little overlap.
- c. There is a risk that the grade improvement seen in 2001 may create an expectation of improvement from one exercise to the next, which might itself drive grade inflation.
- d. Grades attempt to capture the absolute performance of departments, although funding must of necessity be dependent upon relative performance. The outcry provoked by the funding councils' inability to fund the results of the 2001 RAE shows how this can create a gap between expectation and reality.
- e. Grades attempt to express in a single metric the strength of research across a unit. This means that great attention has to be paid to mediocre research and its effect upon overall quality. The task of assessment ought to be to identify the strongest research wherever it is found, not merely to give an indication of the average quality of research throughout a department or faculty.
- f. There is a perception that the grade awarded to a submission provides a guide to the quality of the individuals working in the relevant university departments. In reality all large departments contain individuals with very different research records. Grades have tended to stigmatise good researchers working in relatively weak departments.
- g. 80% of the researchers whose work was assessed were in submissions receiving one of the three top grades (4, 5, and 5*), while 55% were included in submissions receiving one of the top two grades (5 and 5*). The amount of discrimination provided by the exercise is therefore less than the length of the rating scale would suggest.

158. We propose an alternative system which we believe offers a solution to these problems.

159. For each submission the panel would produce a 'quality profile' as shown in figure 3. Each box would display a number reflecting full-time equivalent (FTE) research staff. Each FTE (or group) would be awarded one, two, or three stars (or would be ungraded if their work did not merit a star). This system emphasises that the focus of the assessment is to discriminate between very good research and the very best, wherever it is found. It also provides what is, in effect, a continuous grading scale, avoiding the problems associated with grade boundaries.

160. In RAE2001 panels were asked to set grades on the basis of the proportion of research activity (not just research output) deemed to be of 'international' and 'national' quality. A 5* grade, for example, was defined as being appropriate where more than half the research activity was of international standard and the remainder of national standard. We envisage a system focused very much upon the best research. As a rough guide we would suggest that star ratings be defined so that three star research is broadly equivalent to the top half of the research considered 'international' in RAE2001, two star research to the bottom half of 'international' research, and one star to the top half of 'national' research.

161. Each funding council could, in principle, decide independently how to recognise one star, two star and three star research in funding. Hopefully, however, they would adopt a common approach. Equally the level of selectivity could be varied by subject.

162. It is inevitable that the data within the quality profile would be used to create institutional league tables, even if these were not used by the funding councils themselves. There is a case for the funding councils producing their own official league tables in order to pre-empt those who may employ spurious methodologies. The means by which these tables are produced should be developed in consultation with those who had served on RQA panels, to ensure that the data were being put to appropriate use. One obvious metric is the 'grade point average' – the mean star rating achieved by staff submitted for RQA in a given unit or institution.

163. We do not propose that panels formally attach a score to named individuals. It should be a point of principle that we should not report on individuals' performance on the basis of an assessment which they cannot choose whether or not to enter and which considers a sample of their work which they do not themselves select. If a panel chooses to use 'researcher-level' analysis to inform its judgement, we suggest that such analyses should not in any circumstances be retained or disclosed. If it is not possible to avoid retaining and disclosing such analyses, we suggest that they should not form a part of any panel's working methods¹³. Research assessment should remain an assessment of institutional research quality within a subject area, rather than a review of the performance of individuals.

Advance notice of funding intentions

164. Institutions would have to decide whether to route their research through RQA or RCA. It would be difficult for them to do so without a clear indication of their funding council's willingness to support one star, two star and three star research.

165. We take the position that, valuable though it is as a source of information, the RAE is primarily the means by which institutions compete for research funding from the funding councils. It is therefore of the first importance that there is a clear and predictable relationship between assessment outcomes and funding.

166. We envisage the funding councils providing a guide to funding weights (which might vary between subject areas) of the type shown in figure 4.

167. It would also be difficult for the funding councils to offer such an indication unless panels are constrained in the amount of research they can score at one star, two star and three star. This has the undoubted advantage of emphasising that institutions would be funded on the basis of their relative performance rather than their absolute performance.

¹³ In RAE2001 panels were asked to give grades based upon the proportion of international, national and (by default) sub-national research in a submission. The system we propose presents panels with what is essentially the same task (assigning research to quality bands) but does not ask them to translate their findings into grading decisions.

168. To enable institutions to be advised in advance of the funding weights to be employed by each funding council, to prevent grade inflation and to guarantee the integrity of ratings, we propose that panels should be given guidelines on the proportions of three star, two star and one star ratings which should be awarded, in the absence of evidence that the subject outperformed other subjects when measured against international benchmarks. For example, the funding councils might decide that x% of the work submitted should be rated as three star work. These guidelines should be the same for each unit of assessment. A moderation process would be built into the panel structure to establish whether a panel should be able to depart from the guidelines. This process is developed in the paragraphs below.

169. There is another argument for this system, which does not relate to the need to provide a clear indication of the relationship between assessment results and funding. The RAE is not considered to be a particularly reliable mechanism for comparing the quality of research in different disciplines. We believe there is compelling evidence to show that the general improvement in UK research quality indicated by the RAE is real.

170. Nevertheless, the system is clearly showing signs of strain. The operational review highlighted that comparability in assessment is the one aim of the process that institutions did not consider to have been achieved. There is scepticism about whether a given grade in one subject is equivalent to the same grade awarded in another. If confidence in comparability collapses, the integrity of the system will inevitably come under strain as panels feel pressure to compete to award high marks. We are also concerned that recent funding decisions have made academics more conscious of the potential impact of the distribution of grades upon the reputation and resourcing of their subjects. If institutions and panellists are not confident that others will play by the rules, the pressure to inflate grades will increase. All of this suggests that the tendency towards grade inflation is likely to be stronger in any future exercise than it was in RAE2001, unless controls are put in place.

171. We believe it is best to provide a reliable record of the relative strength of UK units, and then to moderate the results to reflect the differences between disciplines. The alternative is to trust that mechanisms designed to benchmark grades against a standard of international excellence will be sufficiently robust to prevent grade inflation and the collapse of the credibility of the assessment process.

Recommendation 5

- a. The output of the Research Quality Assessment should be a quality profile indicating the quantum of 'one star', 'two star' and 'three star' research in each submission. It will not be the role of the assessment to reduce this profile to summary metrics or grades.
- b. As a matter of principle, star ratings would not be given to named individuals, nor would the profile be published if the submission was sufficiently small that individual performance could be inferred from it.

- c. Panels would be given guidelines on expected proportions of one star, two star, and three star ratings. These proportions should be the same for each unit of assessment. If a panel awarded grades which were more or less generous than anticipated in the guidelines, these grades would have to be confirmed through moderation.
- d. The funding councils should provide institutions with details of the relative value, in funding terms, of one star, two star, and three star research, and of research fundable through the Research Capacity Assessment, in advance of the assessment. These ratios might vary between disciplines.

A panel structure designed to ensure consistency

172. In RAE 2001, UK academic research was split into 68 subject areas or units of assessment. It was assessed by 60 panels, most of whom were responsible for a single unit of assessment (though some units of assessment were jointly assessed by a single overarching panel).

173. The chairs of these panels sat on one of five umbrella panels, whose role was to enable the chairs to ensure consistency of practice between their panels.

174. Some panels were able to draw upon the assistance of one or more of the 26 sub-panels which supported the main panels. Some of these sub-panels awarded grades which were published alongside the grades of the main panels. In all cases, however, it was the grades awarded by the main panels which were allowed to count for funding.

175. Panels were also able to draw upon the support of qualified members of other panels and upon nominated 'specialist advisers', who could be called upon to provide an opinion on the quality of work which the panel did not consider it had the expertise to assess. There were 464 specialist advisers in total.

176. In general we found that the panel structure worked well, notwithstanding some administrative problems connected with the procuring of specialist advice, which are addressed in the operational review report. However, we concluded that the umbrella panels covered too large an area, met too infrequently and were too peripheral to the process to be effective in ensuring consistency of practice between panels in cognate subjects. Problems included:

- a. differing interpretation of grade descriptors
- b. differing interpretations, formalised in panel criteria, of the concept of 'international excellence' against which all grades were benchmarked
- c. a perception that panels operated differing standards, which led to pressure upon panel members to inflate grades to prevent the discipline being disadvantaged
- d. a perception that some panels marked more generously than others, leading to games-playing as HEIs attempted to submit work to the most generous panel to which it could be presented as relevant.

177. The panel structure has to accomplish two things:

- a. provide a mechanism for ensuring consistency of practice between panels and sub-panels
- b. ensure that appropriate expertise is brought to bear on the assessment of submissions.

Ensuring consistency of practice

178. We have proposed above that panels be given guidelines as to the distribution of 'star ratings' they might normally expect to award. This, however, falls a long way short of imposing a distribution on each panel, and there remains a need for credible moderation to ensure that panels depart from the anticipated distribution of ratings only where there is reason to think such a departure justified.

179. There is also a need for a mechanism to ensure consistency of practice in order to ensure that:

- a. panel criteria are allowed to diverge, where there is a rationale for them to do so, and are consistent, where this has a bearing upon the integrity of the assessment
- b. panels adhere to their own criteria.

180. The most effective means of ensuring consistency of practice between cognate subjects is to group them together under a single panel with responsibility for signing off all decisions. We envisage a dramatic reduction in the number of units of assessment (probably to 20-25). However, in keeping with the community's strong preference for expert review, we recognise that these larger units of assessment would need to be supported by a comprehensive sub-panel structure to ensure that all submissions were reviewed by properly qualified people.

181. We anticipate that the number of sub-panels would be somewhere close to 60 (the number of panels in RAE2001). However, we do not envisage that the current configuration of units of assessment would survive unchanged in the new sub-panel structure. In particular there may be scope for introducing a small number of 'thematic' panels which would provide a focus for interdisciplinary communities which have become established within the sector.

182. We do not claim that reducing the number of units of assessment in this way would reduce the intensiveness of the assessment. It would not, as most of the work currently undertaken by RAE panels would be devolved to sub-panels. It would, however, provide a powerful mechanism for ensuring consistency of approach. To strengthen this feature we propose that, in addition to an expert chair (who would in most cases be an academic researcher), each panel should have a moderator who would sit on each sub-panel with a brief to ensure consistency of practice.

183. The moderators of four or five adjacent panels should sit on a 'super-panel' chaired by a senior moderator, who would be seconded to or employed by the funding councils. The role of the senior moderator is discussed in detail in paragraphs 258-263.

184. All decisions would be the ultimate responsibility of a chair of the assessment panel.

The role of the components of the panel structure (see also figure 6)

The role of the assessment chair

The chair would be the ultimate arbiter of the exercise. He or she would need to be a figure commanding enormous respect in the community.

The role of the 'super-panels'

There would be four or five 'super-panels'. They would be responsible for confirming (or reversing) any deviations from the anticipated distribution of star ratings (see recommendation 5) as well as overseeing the setting of each panel's criteria.

The role of the 'main' panels

There would be 20-25 main panels. The ultimate responsibility for decisions on the quality of research should rest with the panels, though in most cases the advice of the sub-panels would carry considerable weight.

The panels would also receive and review both the institution's research strategy and the research plans of the unit. They would have the task of certifying that the aspirations of the unit's research strategy were consistent with the priorities set out in the institutional strategy.

The role of the sub-panels

There would be perhaps 60-70 sub-panels. The greater part of the assessment activity would be co-ordinated at sub-panel level. The sub-panels would have to produce their own quality profiles (see paragraph 159 and figure 3) which would be considered by the main panel.

Appropriate expertise

How would subjects be grouped in panels

185. There are two ways to identify subjects that might be grouped together in larger units of assessment. One would be to group adjacent subjects with a large number of research agendas in common. The other would be to look at the assessment methods appropriate in each subject and to group together subjects amenable to similar assessment methods. In this scenario subjects which (for example) placed faith in citations as a proxy for research excellence might be grouped together, even if there was little overlap between them.

186. The units of assessment, and the sub-panels supporting them, would need to be identified between two and three years before the assessment begins in order to enable institutions to plan for the exercise.

Interdisciplinary and multidisciplinary research

187. We are aware of a widespread concern that previous RAEs have disadvantaged multidisciplinary research. However, we are not persuaded that RAE panels have proved unable to assess the research submitted to them. Analysis of the results of the 1996 RAE failed to find that multidisciplinaryity had any effect upon RAE decisions¹⁴. However, the mere perception that multidisciplinary work may be disadvantaged risks impeding the development of new research agendas in UK HE.

188. It is perhaps inevitable that an assessment structured around units of assessment should give rise to such perceptions. We consider units of assessment to be indispensable in ensuring consistency of assessment practice within a discipline, and also regard them as the most effective means of organising the application of specialist knowledge to the assessment task. We also believe that by reforming the panel structure, much can be done to allay concerns about the impact of the RAE upon interdisciplinary and multidisciplinary work.

189. It is important to strike the right balance. We are not interested in rewarding collaboration for its own sake; we wish only to put in place measures to ensure that, where collaboration adds value, the added value is recognised. Therefore our proposals are designed to ensure that appropriate expertise is brought to bear on the assessment of interdisciplinary and multidisciplinary work, and not to provide a premium for collaborative work irrespective of its quality.

190. The reduction in the number of units of assessment would mean that, in many cases, interdisciplinary work which used to cross panel boundaries could be assessed by a single panel.

191. In some circumstances it might be that the configuration of the sub-panels reflected newer thematic disciplines rather than traditional subject boundaries. This would be appropriate in cases where there is already a large volume of work reflecting the new discipline. However, we see little merit in using the unit of assessment structure as a lever to create new disciplines where this volume of work does not currently exist.

192. We also propose that sub-panels should be supported by colleges of assessors with experience of working in designated multidisciplinary 'thematic' areas. This would ensure that the accepted definitions of excellence in a discipline do not prevent contributions to excellent multidisciplinary projects from being properly recognised. The areas of research covered by this facility would be identified through a bibliometric analysis of data on research collaborations. This would provide a mechanism for ensuring the value added through interdisciplinary and multidisciplinary work is properly recognised.

¹⁴ RAE 1/99.

International representation

193. In RAE2001 there was what is acknowledged to have been a weak procedure for using international experts to validate RAE grades. The experts were nominated by the panels themselves. They were not asked to review the submissions but to provide a credibility check on the panel's grades.

194. The operational review of RAE2001 established that the mechanisms designed to ensure comparability between RAE grades awarded in different units of assessment were only partially effective. Of all the aims of the exercise, comparability was one which institutions were least likely to believe had been achieved.

195. There is a consensus that a future exercise requires a greater input from international experts in order to provide:

- a. a better picture of where the UK stands in each subject area
- b. a further safeguard against 'grade drift'.

196. However, we recognise that it will prove difficult (and expensive) to persuade overseas academics to act as full panel members with the huge commitment involved.

197. Therefore, we propose an approach that recognises both that international representatives have a vital role to play and that they are unlikely to be able to guarantee the integrity of gradings on their own. We propose that the funding councils should ensure a significant international presence on each sub-panel and panel at the point at which it takes its decisions. The international members would not have to be present at the panel's earlier meetings and might have to undertake less of the detailed assessment work. They should have prior experience of the UK system (in some cases this might involve participation in research council reviews). Where possible they should have the opportunity to meet informally to form a provisional view on the overall quality of UK research in the subject area before beginning their work alongside the panel.

Recommendation 6

- a. There should be between 20 and 25 units of assessment panels supported by around 60 sub-panels. Panels and sub-panels should be supported by colleges of assessors with experience of working in designated multidisciplinary 'thematic' areas.
- b. Each panel should have a chair and a moderator who would sit on each sub-panel. The role of the moderator would be to ensure consistency of practice across the sub-panels within the unit of assessment.
- c. Each panel should include a number of non-UK based researchers with experience of the UK research system.
- d. The moderators of adjacent panels should meet in five or six 'super-panels' whose role

would be to ensure consistency of practice between panels. These 'super-panels' should be chaired by senior moderators who would be individuals with extensive experience in research.

Respecting disciplinary differences

Publication limits

198. In RAE2001, institutions were allowed to submit a maximum of four research outputs (usually publications) per individual¹⁵. This limit was set centrally and was therefore common to all units of assessment.

199. In our view, this represents an example of unnecessary standardisation. The amount of work represented by a typical research output varies enormously between disciplines. Therefore the common limit, far from ensuring that assessment practices are equivalent, enforces divergent assessment practice.

200. We therefore propose that RQA panels should have the freedom to define their own limits on the number and/or size of research outputs associated with each researcher or group.

Recognition of applicable and practice-based research

201. The case of applicable and practice-based research is similar to that of those disciplines ill-served by performance indicators used in previous assessment exercises. Panels have been obliged to assess all research by common criteria. These criteria are often alleged to reflect the characteristics of good basic research or mainstream scholarship.

202. We are concerned that this perception may impede the development of applicable and practice-based research, as institutions allow for what they believe to be the preferences of the panels.

203. We believe that panels should be asked to ensure that their criteria statements enable them to guarantee that practice based and applicable research are assessed according to criteria which reflect the characteristics of excellence in those types of research, where these may differ from the characteristics of excellence in basic research or mainstream scholarship.

¹⁵ In many disciplines the four publications came to be seen not as a maximum but as a norm. One of the most remarkable features of the RAE process is the extent to which it is still believed that 'four publications' is a minimum rather than a maximum for each research active member of staff submitted to the RAE. It is reasonable to suppose that this reflects the way in which it is treated within many academic departments.

204. It should be stressed that we do not envisage that such research would be rated more highly as a result of this change of emphasis, only that panels would be better able to identify the best examples of such work.

Recommendation 7

- a. The rule that each researcher may only submit up to four items of research output should be abolished. Research Quality Assessment panels should have the freedom to define their own limits on the number and/or size of research outputs associated with each researcher or group.
- b. Research Quality Assessment panels should ensure that their criteria statements enable them to guarantee that practice-based and applicable research are assessed according to criteria which reflect the characteristics of excellence in those types of research in those disciplines.

Use of performance indicators

205. At present RAE panels receive standardised information relating to research income and postgraduate researchers. The scope for panels to develop performance indicators from these datasets which reflect the particularities of their disciplines is very limited. On the other hand, obliging all panels to use a limited set of 'one-size-fits-all' metrics, which are more applicable in some disciplines than in others, would not enhance the comparability of RAE grades.

206. We propose to work alongside research communities to develop sets of discipline-specific performance indicators which could form the basis of indicative bandings. We believe such indicators will be of use to the research councils, and we would encourage the funding councils to seek to undertake this task in partnership with them.

207. These bandings would be produced at least one year before the assessment. They would inform institutions' strategic choices about submission. They would also inform the decisions of the panels but would not bind the panels in any way.

208. The number of bands would be allowed to vary between subjects, reflecting the extent to which different subject communities were prepared to accept performance indicators as a reliable indicator of quality.

209. The indicators themselves, and the way in which they were to be collected, would need to be developed not less than two years before the assessment.

210. It is likely that the new performance indicators would make use of data on PGR completions and external research income. Indeed there would be a need to collect these sorts of volume indicators in order to undertake the mid-term monitoring described in

paragraph 123. Nevertheless, other measures, such as esteem indicators or bibliometric measures, might also be incorporated where they were more closely approximate to quality.

211. These indicators would form the basis of the Research Capacity Assessment.

212. We recognise that reliable quantitative performance indicators may prove hard to develop in some disciplines, especially the arts and humanities. The process we propose is sufficiently flexible to ensure that, where the subject community has less confidence in performance indicators, the indicators would not be over-influential in determining the outcome of the assessment.

213. The extent to which these performance indicators influenced the eventual results would depend entirely on how much confidence the panel was prepared to place in them. We anticipate that this would vary between subject areas, and we consider such variation a healthy reflection of the genuine differences between disciplines.

Recommendation 8

- a. The funding councils should work alongside the subject communities and the research councils to develop discipline-specific performance indicators.
- b. Performance against these indicators should be calculated a year prior to the exercise, and institutions advised of their performance relative to other institutions.
- c. The weight placed upon these indicators as well as their nature should be allowed to vary between panels.

Submission rules

Choice between Research Capacity Assessment and Research Quality Assessment

214. We anticipate that the funding councils will wish to fund work submitted to both the RQA and the RCA processes. Each institution would have to decide which subject areas it wished to be assessed and funded on the basis of the genuinely excellent research they contain (RQA), and which on the basis of headcount, subject to a quality threshold (RCA).

215. To make this choice meaningful, it will be necessary to exclude from the RCA all staff associated with sub-units of assessment submitted to RQA. The RAE defines the population of eligible researchers in a unit of assessment and uses this information to publish information on the proportion of staff submitted. Under our proposals it will be important to ensure that this information is reliable, and to minimise the scope for artificially defining less research active staff as belonging to a unit of assessment with which they have little to do. This may well require stronger audit procedures.

Group submission

216. The RAE has always struggled to assess the work of researchers who have played a supporting role in large research projects. Where significant and important contributions do not give rise to outputs which are credited to the individual, that individual's institution is unlikely to be rewarded for enabling them to make those contributions. This provides institutions with an incentive to prevent their staff, especially their junior staff, from using their research time to engage in large collaborative projects. Whilst we recognise and applaud the willingness of HEIs to resist perverse incentives, that is hardly an argument for allowing those incentives to persist.

217. In the past, panels had a limited discretion to reflect the contribution of such individuals in making grading decisions. However, in any transparent process it is impossible for panels to reflect circumstances which are not substantiated within the submission they are asked to review. The abolition of grades would remove the very limited scope panels currently have to recognise this kind of contribution.

218. It would therefore be necessary to provide a facility by which, where appropriate, the work of groups comprising staff qualified for inclusion in the assessment could be assessed as the output of the group, without credit having to be attributed to individuals. A collective output might be submitted as the work of a number of FTEs rather than being entered in the name of the individuals concerned.

219. The task of a panel in assessing a group would be first to establish whether its output is equivalent to that which would be expected given the number of FTEs claimed; and then to score the work in the usual way (giving zero, one, two or three stars or a combination of those marks). It would be irrelevant if the work of five people were produced in the name of a single individual, so long as the panel was satisfied that the output was of appropriate weight to be considered the work of at least five researchers.

220. Where groups included individuals from more than one institution, it would be necessary for the institutions involved to agree on their 'shares' in the output of the group. We recognise that this would pose difficulties which might prevent some group submissions, but see no reason not to promote the facility for those able to establish workable arrangements.

Joint submissions

221. We note that for many researchers working in less research intensive departments, the only route into the RQA would be as part of the submission from another institution. It is therefore vital that institutions are encouraged to put together joint submissions. We would not favour financial incentives, which run the risk of creating bogus collaborations, but we would urge the funding councils to consider what measures could be taken to make joint submission more straightforward for institutions. Joint submission should, in all cases, include tangible evidence of established collaboration between researchers from different institutions listed in the same submission.

Proportion of staff submitted

222. In RAE2001 there was no lower limit on the proportion of staff an institution could submit as 'research active'¹⁶ although this proportion was monitored and reported upon.

223. This is a source of some controversy. Institutions can, by excluding their weaker researchers, obtain higher grades than they would otherwise do. Such institutions gain prestige at the expense of those who have attempted to preserve the assessment as a true reflection of the overall strength of their research.

224. When decisions are taken about who to include and who to exclude from research assessment at the level of the individual, this can be extremely divisive. It has also been argued that it offers scope for discriminatory behaviour against individuals, as such decisions are exceedingly difficult to interrogate.

225. To counter this, some have suggested that an institution should face a stark choice: either submit all staff contracted to undertake research in a subject, or do not submit at all.

226. This is superficially attractive. However, there is a real risk that institutions would respond with an even more damaging form of games-playing – removing references to research from the contracts of large numbers of teacher-researchers. In a healthy research-led department, we would expect to find a proportion of staff whose main strengths lie in teaching rather than research. We do not wish to propose measures which would exclude teaching staff in research-led institutions from any engagement with research.

227. For this reason we believe that it would be more prudent to stipulate that, where an institution makes a submission to the RQA, at least 80% of the staff contracted to undertake research must be included in that submission. The remainder would be ineligible for RCA¹⁷.

228. The consequences of this are much less significant than they would have been had an 80% minimum been introduced in RAE2001. In that exercise, the presence of less well regarded researchers in the submission could depress the grade awarded. It would therefore affect the recognition – and potentially the funding – received by the strong researchers present in the submission. With the introduction of the quality profile this will not happen. The amount of high quality research in the submission will be clearly visible and we anticipate that the funding councils will wish to reward this irrespective of the amount of less excellent work contained in the same submission.

229. The larger units of assessment we propose are a device to ensure consistency of practice across cognate disciplines. There would be around 60 sub-units of assessment

¹⁶ Research active staff were those identified by the institution for inclusion in the assessment of research output. Staff not submitted as research active were not counted for funding purposes by the funding councils.

¹⁷ There would be no lower limit on the proportion of staff submitted for research capacity assessment.

corresponding to the current units. We propose that the 80%¹⁸ lower limit on the proportion of staff submitted for assessment should apply at the level of the sub-units of assessment, not at the larger unit level. This would make it possible to submit strong subject groups, without including staff in cognate subjects which may be weaker.

Submission of research assistants

230. In RAE2001 research assistants were eligible for inclusion as research active staff only under exceptional circumstances. The purpose of this regulation was to ensure that research assistants did not attract funding intended to support academic staff and infrastructure.

231. We considered carefully the case for removing any distinction between research assistants and other staff employed to do research. This would ensure that the research assessment process could not act as a driver of artificial stratification within the research workforce.

232. We note that recent changes in the law are likely to undermine the rationale for employing researchers on fixed-term contracts, and by doing so will remove one of the major features distinguishing research assistants from other staff. We would not wish to do anything to encourage the establishment of a new stratification dividing one group of 'permanent' staff from another.

233. We are, however, conscious of the potential to greatly increase the workload of assessment panels by allowing research assistants to be assessed on the same basis as more senior academic staff. We also note that the primary purpose of research assessment is to inform funding, and that the funding councils have a remit to support academic staff and infrastructure rather than research assistants.

234. We propose therefore that the eligibility criteria for research assessment should relate straightforwardly to the principal purpose of research assessment. In the spirit of the dual support system, those staff eligible to apply for research council grants should be eligible for research assessment. Other staff should not be¹⁹.

¹⁸ Of those both contracted to undertake research and eligible for inclusion in the assessment.

¹⁹ The funding councils might wish to consider allowing other staff to submit as members of research groups but not in their own right, if they can satisfy themselves that such a move would not have major implications for panel workload.

Recommendation 9

- a. Where an institution submits to Research Quality Assessment in a sub-unit of assessment, all staff in that sub-unit should become ineligible for the Research Capacity Assessment, even if they are not included in the Research Quality Assessment submission.
- b. The funding councils should establish and promote a facility for work to be submitted as the output of a group rather than an individual where appropriate.
- c. The funding councils should consider what measures could be taken to make joint submission more straightforward for institutions.
- d. Where an institution submits a sub-unit of assessment for Research Quality Assessment, no fewer than 80% of the qualified staff contracted to undertake research within the sub-unit of assessment must be included in the submission.
- e. All staff eligible to apply for grants from the research councils should be eligible for submission to Research Quality Assessment.

Research strategy

235. In RAE2001 panels had the opportunity to consider statements on the research strategy and environment underpinning each submission.

236. Under our proposals, the elements contained within that statement would be covered in the research competences assessment.

237. Notwithstanding the institutional competences assessment, however, we anticipate that panels would benefit from receiving a research strategy statement. This would indicate the institution's plans for research at unit level. Panels would be able to see the institutional research strategy and to confirm whether the two documents were consistent with one another.

238. Panels would be asked to report on the strategies, indicating any they considered inadequate or exemplary. It would be left to the funding councils to decide whether to act on these reports.

Recommendation 10

Each panel should consider a research strategy statement outlining the institution's plans for research at unit level.

Supporting emerging units

239. We also propose to allow institutions to nominate a limited number of 'emerging units'. These would typically be slightly weaker than the best in their fields but with the potential – and the support from the institution – needed to catch up with the leaders in the field ('rising 4s' in current parlance).

240. In the case of these units – and only these units – panels would be asked to produce not only a quality profile but also a prospective assessment. Guided by the institution's research strategy, they would be asked to certify whether these units' aspirations to catch up with leading units were credible. A review of the progress of these units would be made at the mid-point of the assessment period.

241. An emerging unit would, minimally, have to contain 80% of the staff in a sub-unit of assessment. In this sense the submission rules would not be different from those for other units submitted to the RQA.

242. The facility to identify emerging units would provide the funding councils with the option of funding a limited number of emerging units on the basis of potential rather than past achievements.

Recommendation 11

There should be a facility for institutions to identify emerging units and a mechanism for evaluating their progress after three years.

Other assessment processes associated with RQA

243. We suggest to the funding councils that the results of the RQA could be used to identify suitable candidates to compete for monies made available for the following purposes:

- a. partnerships of excellence
- b. third stream activities.

Partnerships of excellence

244. We have suggested in our discussions that the funding councils might wish to consider funding the units most successful in RQA for the value added by sharing their excellence with other excellent research groups, especially those outside the sector. This would enable them to provide a stimulus for collaboration.

245. This suggestion has attracted a great deal of comment. We recognise that any process to identify such 'partnerships of excellence' should be separate from the main research assessment process. Each funding council would be responsible for deciding on

whether and how to proceed with partnerships of excellence. However, if they choose to adopt such a process, strong RQA results might be a qualifying criterion for participating in such a scheme.

Third stream activities

246. We also note that RQA and RCA data might be useful to identify those units which, whilst not producing research of the highest class, could play a role in the translation of research into business and the wider community. It might therefore be the case that data produced by RQA and RCA could help to identify units which might be encouraged to specialise in this sort of activity.

Recommendation 12

The funding councils should consider the extent to which data produced by the research assessment process can be used to inform other funding processes, including third stream funding and partnerships of excellence.

Chapter 6 Implementation

Panel recruitment

247. In RAE2001, panels were selected in the following way:

- a. panel chairs were elected by members of the outgoing (1996) panels from among their number
- b. HEIs were invited to identify organisations suitable to nominate panel members
- c. nominating bodies were asked to nominate prospective panel members
- d. panels were chosen by the chairs from the list of nominated individuals.

248. This was widely seen as one of the less transparent parts of the process. We agree in principle that the best way to identify panel members would be by advertising all posts and selecting candidates on the basis of clear criteria. However, we are concerned about the burden which this would place upon the system. We have therefore developed proposals which we believe balance the competing imperatives of transparency and proportionality:

- a. Full job descriptions and person specifications should be produced for RQA panel and sub-panel members, chairs and moderators. These should be published before steps are taken to fill the posts. Those responsible for drawing up the job descriptions should be trained in equal opportunities or take appropriate advice from qualified people.
- b. Nominations of panel members should be sought from stakeholders in the same way as in RAE2001.
- c. The chairs and moderators of the main RQA panels should be advertised, and candidates chosen by a selection panel.
- d. Sub-panel chairs should be elected by the membership of the outgoing panels from a shortlist not necessarily confined to previous RAE panel members.
- e. Panel members and sub-panel members should be chosen by sub-panel chairs and panel co-chairs on the basis of their fit with the published job description and person specification.

Recommendation 13

- a. Job descriptions and person specifications should be produced for Research Quality Assessment panel and sub-panel members, chairs and moderators as well as senior moderators and the chair of the exercise. These should be published before steps are taken to fill the posts.
- b. Nominations of panel members should be sought from stakeholders in the same way as in RAE2001.
- c. The chairs' and moderators' posts for the main Research Quality Assessment panels should be advertised, and candidates should be chosen by a selection panel as should the senior moderators.

- d. Sub-panel chairs should be elected by the membership of the outgoing panels, from a shortlist not necessarily confined to previous RAE panel members.
- e. Panel members and sub-panel members should be chosen by sub-panel chairs, panel chairs and moderators on the basis of their fit with the published job description and person specification.
- f. The funding councils should monitor and report upon the gender balance of sub-panel members, sub-panel chairs, panel chairs, moderators and senior moderators.

Changes necessary to run the administration to the same specification as RAE2001

249. The full cost of the 1996 RAE (the last for which figures are available) has been variously estimated at between £27 million and £37 million. Of this, only £3 million was accounted for by the direct costs of the exercise, as opposed to the opportunity costs borne by HEIs and the funding bodies.

250. It is probable that the costs of the central administration would have to rise considerably. The reasons for this are set out below. Many of the costs result not from new activity but from the need to make proper provision for activities inadequately resourced in RAE2001.

251. New activities associated with our recommendations are addressed separately in **annex H**.

Administrative capacity

252. The operational review of the RAE has found that the RAE team itself performed strongly. However, it could justly be said that the planning of the administrative support for RAE2001 failed to anticipate the demands it would face.

253. The review's conclusion is stark. Resources for RAE2001 were inadequate. Even if there were no changes to the exercise, the central administration would require increased resources.

'The pressures imposed by the timetable for the assessment phase, the workload on key players (panel members and secretaries, and the RAE team) and the demand for several of the supporting services, ran a high risk of major disruption, though none occurred. The same degree of dedication and commitment which all those involved showed cannot be assumed for any similar further exercise. More staff (or funds to outsource services) would be required; and all inputs should be realistically costed and paid for.'

254. It follows that to provide an adequate and safe service to the same specification as RAE2001 would require more resources in real terms than the £5-6 million devoted to the office costs of RAE2001.

255. Furthermore, we believe that there is scope to relieve the burden on the rest of the sector by providing a more comprehensive service from the centre. We believe that the research assessment administration ought to be in a position to provide the following services, many of which were not available in 2001:

- full-time panel secretaries
- senior moderators
- funds for specialist advice.

Full-time panel secretaries

256. Many panel secretaries have commented on the amount of time they spent liaising with the RAE team and with one another. It has also been observed that the time required to learn the role exceeded the time required to discharge it. If panel secretaryships were professionalised, with full-time secretaries serving several panels, the burden of both of these tasks would be much reduced. In addition, it would be much easier to provide qualified cover in the event of illness or staff turnover, and the quality of service would benefit from the secretaries' closeness to the RAE process.

257. It would be a mistake to regard this as a new cost. In our view it represents the elimination of a false economy, making proper provision for a previously hidden cost.

Senior moderators

258. We have already mentioned the role of senior moderators in chairing the super-panels, whose task would be to ensure consistency of practice between panels.

259. We believe these posts should be professionalised. Unlike panel chairs, the postholders should be accountable for the administrative success of the exercise as well as the integrity of the results. They should also be employees of the funding councils. The reason for this is that we consider there is ample work for suitably qualified individuals to do in addition to their role in the moderation process.

260. Senior moderators would:

- a. take the lead in advising panels on the setting of their criteria, ensuring that the academic, legal, policy and administrative imperatives are all served
- b. oversee the panel secretaries and assist in cases where the secretary's lack of specialist knowledge made it hard for him or her to advise or service the panel appropriately
- c. take the lead in explaining the assessment process to panels and subject communities to ensure that misunderstandings and myths are not allowed to develop

- d. act as the voice of research within the RAE team, ensuring that bureaucratic concerns do not give rise to regulations which impede the proper exercise of academic judgement or distort academic behaviour.

261. In addition they would be invaluable in managing three novel strands of work implied by our recommendations. They would:

- a. chair the 'super-panels' consisting of the moderators of the main panels
- b. provide a link to the community on such technical issues as the refinement and use of discipline-specific metrics
- c. in consultation with the community, set the threshold levels used in the RCA.

262. There were five umbrella panels in RAE2001. To appoint a respected researcher to cover each would be a non-trivial expense. However, the availability of suitably qualified staff able to act as a bridge between the administration, the panels and the communities is a necessity if the new process is to be properly understood.

263. The operational review has noted the strain which the RAE placed upon the resources of the funding councils, and the risks for other processes. It also noted the role played by HEFCE in providing such services as institutional liaison and monitoring, audit, statistical support and computing support and office space. It is important that the resource for these tasks is guaranteed and that it can be provided without compromising other functions. It is therefore essential that, to whatever extent a future exercise is to rely on the resources of one or more of the funding councils, proper provision is made to support the burdens placed upon them.

Funds for specialist advice

264. Were the system unchanged, it is likely that greater resource would be required for specialist advice than was made available in 2001. The availability of such advice was an irritant in relations between the panels and the RAE team, and it is inevitable that panels will place heavy pressure on administrators to secure whatever advice they feel is necessary. The system therefore requires some budgetary flexibility, and the presence of individuals within the RAE administration with the expertise to prioritise requests for additional specialist input.

Recommendation 14

- a. The research assessment administration should employ full-time panel secretaries who would each work with several panels.
- b. The senior moderators (see recommendation 6) should not be external to the RAE administration in the same way as RAE panel chairs. They should be accountable for the successful administration of the exercise as well as for its results, should be employed by the funding councils, and should be in post at an early stage in the process.

- c. The funding councils ought to consider the burden imposed upon their staff and resources by the need to support the RAE and ensure this is properly accounted for. In some cases this may involve embedding functions within the RAE administration itself.
- d. The funding councils should recognise that the cost of specialist advice is likely to be greater in a future exercise than it was in RAE2001.

Further work

265. When the funding councils present their own proposals for research assessment for consultation, these will need to be accompanied by a full assessment of their impact upon equality of opportunity for all groups of staff, and the burden of the assessment upon institutions, assessors and their own administrative capacity. The funding councils will also need to assure themselves that proposals do not require panel members of the funding councils and their employees to accept any unnecessary legal risks. There will, in addition, be a need to investigate the behavioural consequences of our proposed reforms.

266. The strands of work mentioned above are necessary in order to enable the funding councils to take fully informed decisions on the adoption of our recommendations once a full public consultation has taken place. In addition, there are strands of work relating to the implementation of the recommendations, which, while less relevant to that decision point, need to be progressed urgently if, as some have suggested, the next assessment is to take place in 2007. In particular, the funding councils may wish to move quickly to identify units of assessment, to develop discipline-specific metrics, and to develop templates for our proposed assessment of research competences.

Recommendation 15

The funding councils should undertake or commission further work in parallel with the consultation on these proposals to ensure that proposals for research assessment taken as a whole:

- a. do not create, encourage or facilitate discrimination on the grounds of age, sexual orientation, political belief, disability, gender, race or religion²⁰
- b. do not create any unnecessary legal risks for the funding councils or the panel members
- c. do not create excessive or unnecessary burdens upon panel members, institutions or the funding councils
- d. are not likely to have behavioural effects which the funding councils consider unacceptable.

²⁰ Additionally, the funding councils may wish to seek advice on the best ways of assessing institutions' policy and practice on equal opportunities, drawing upon the experience of other sectors.

Interdependence of our proposals

267. Many of our proposals have been designed to complement one another. There is a risk that an emphasis upon the impact of individual recommendations rather than the generality of the proposals may lead to pressure to take forward a package which is incoherent. It is important therefore that the implications of revisiting any one of our proposals upon the feasibility of others, are properly understood.

Recommendation 16

Should the funding councils ultimately decide to pursue some but not all of our recommendations, members of the review team and the steering group should be reconvened to advise on the feasibility of the revised package of reforms.