



Review of research assessment

**Report by Sir Gareth Roberts to the
UK funding bodies**

Issued for consultation May 2003

Contents

Preface: Sir Gareth Roberts	2
Executive summary	4
Figures 1-6	19
Chapter 1 Background to the review	21
Chapter 2 The review process	24
Chapter 3 The evidence base	26
Chapter 4 Our approach	30
Chapter 5 Proposed model	33
Chapter 6 Implementation	57
Annexes	62
A: Steering group membership and terms of reference	62
B: Policy environment	63
C: A guide to the 2001 RAE	67
D: Operational review of the 2001 RAE	71
E: Analysis of responses to the 'Invitation to contribute' to the review of research assessment	81
F: Assessing research – the researchers' view	88
G: Changes in research assessment practices in other countries	91
H: Additional costs implicit in the recommendations	95
I: Glossary of terms	100

Preface

I am immensely grateful to the funding councils for the opportunity to carry out a review of research assessment. It has been both a great responsibility and a great pleasure.

The recommendations in this report constitute a radical overhaul of the Research Assessment Exercise (RAE). They do not however represent a wholesale rejection of the RAE and the principles upon which it was built. All who examine the impact of the RAE upon UK research and its international reputation must, I think, agree that it has made us more focused, more self-critical and more respected across the world. It has done this, in large part, by encouraging universities and colleges to think more strategically about their research priorities.

I have not developed these proposals in a vacuum. They have been canvassed very widely across the sector and its stakeholders. I am indebted to a great many people who have given up their time to discuss my ideas and contribute to their development. Over the course of over 50 meetings, I have been gratified by the positive response of almost all of those I have spoken to.

Nevertheless, I am conscious of one criticism which has been made a number of times. I have proposed a system which appears more complex than what has gone before. It is a truism that what is new appears more complex than what is familiar. However, I acknowledge a sense in which these proposals do sacrifice simplicity for efficiency and fairness.

I believe it is time to move away from a 'one-size-fits-all' assessment, to a model which concentrates assessment effort where the stakes are highest. This would reduce the burden of assessment on our universities and colleges but it does, inevitably, lead to a system which on paper appears more complicated.

Throughout the review, I have been careful to respect the autonomy of each funding council and indeed that of the territories they serve. It is my profound wish that the elements of the UK research system will continue to grow together as a cohesive unit. However, I have made sure that these proposals provide sufficient flexibility for each funding body to tailor its funding policy to meet the needs of each nation.

The funding councils will also need to address the interface between the assessment process described in this report and other sources of funding for research, in particular their own support for work with business and the community and for the development of research in subjects without a research tradition.

This report is being published by the funding councils as a consultation. I am very glad that this is the case. The research community and its stakeholders have the opportunity not merely to read the recommendations but to influence the funding councils in deciding whether and how to implement them. I will watch progress with interest, in the knowledge that consultation can only improve the proposals.

This report, then, is not the last word. Indeed, even were the consultation to produce no criticism, there would still be work to do. I have only hinted in the report at some of the technical issues which a new assessment exercise will have to resolve – problems such as the division of the research base into subject groupings for assessment (the 'units of assessment'), the development of proxy

measures to help panels and institutions take decisions on the quality of research, or the development of templates for my proposed assessment of research competences.

More important, I urge the funding councils to remember that all evaluation mechanisms distort the processes they purport to evaluate. My team and I have tried to investigate the effects our proposals will have upon the behaviour of managers in universities and colleges. Once the report is in the public domain, it will become much easier to explore these behavioural consequences and I urge the funding councils to do so thoroughly before taking any final decisions.

My acknowledgements, if complete, would exceed the report in length. I have already mentioned those who have taken the trouble to share their thoughts on early versions of these proposals – too many to mention by name. They will, I hope, recognise the sincerity of my thanks.

I am indebted also to my excellent steering group, who have supported and challenged me in equal measure. Both services are acknowledged with thanks.

Finally, I would like to acknowledge the invaluable help I have received from my team based at the Higher Education Funding Council for England, particularly Tom Sastry, who acted as secretary to the review and Vanessa Conte, as project manager. I salute their efforts.

Sir Gareth Roberts
Wolfson College, Oxford

Executive summary

The Research Assessment Exercise

1. 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.
2. 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.

How the system works

3. The RAE is essentially a peer review process. In the last exercise in 2001, research in the UK was divided into 68 subject areas or units of assessment. An assessment panel was appointed to examine research in each of these areas.
4. Higher education institutions were invited to make submissions, in a standard format, to as many units of assessment as they chose. There was no upper or lower limit on the number of units an institution could submit to. Nor was there any limit on the number of staff submitted as research active, although data were published on the proportion of staff submitted as research active.
5. In RAE2001 panels produced grades on a seven point scale (1, 2, 3a, 3b, 4, 5 and 5* – five star)¹. However, 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.

Background to the review

6. Following the outcome of the 2001 RAE, the funding bodies decided that the RAE ought to be reviewed in the light of the following concerns:
 - 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 need to fully 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)
 - f. ability to recognise, or at least not discourage, enterprise activities

¹ The same seven point grading scale was used in the previous exercise in 1996. Earlier exercises used shorter scales.

- g. concern over the disciplinary basis of the RAE and its effects upon interdisciplinarity and multidisciplinary
- h. lack of discrimination in the current rating system, especially at the top end with a ceiling effect.

7. In June 2002 Sir Gareth Roberts, President of Wolfson College, Oxford was asked to review research assessment on behalf of the UK higher education funding bodies. Sir Gareth's work has been supported by a steering group and assisted by officers. This is the report to the funding bodies by Sir Gareth and his team.

Key points

8. In the course of the review, we have reviewed some 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. report on international approaches to research assessment (update of 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
 - e. 44 informal consultative meetings with key stakeholders
 - f. open public meetings in Sheffield, Birmingham, Edinburgh, London, Cardiff and Belfast.
9. A number of themes have emerged strongly from each of these strands:
- a. the importance of expert peer review
 - b. the need for a clear link between assessment outcomes and funding
 - c. the need for greater transparency, especially in panel selection
 - d. the need to consider carefully the trade-off between comparability of grades and the flexibility for assessors to develop methods appropriate to their subject
 - e. the need for a continuous rating scale
 - f. the need for properly resourced administration of the RAE
 - g. consistency of practice across panels.
10. There are two main purposes of research assessment: 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. We do not advocate pursuing one of the purposes 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).
11. 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 which is fair, transparent and efficient.

12. We propose retaining many of the key features of the existing process:
 - a. a UK-wide system
 - b. dependence upon expert peer review to identify the best research
 - c. panel members recruited from within the research community (but not necessarily all UK-based academics)
 - d. peer reviewers informed by performance indicators but not obliged to reflect them in grading
 - e. an assessment organised on the basis of disciplinary panels
 - f. panels establish their own assessment criteria in consultation with their research community
 - g. transparency: panel criteria and working methods are published years 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. those who are assessed control their input into the process: submissions are put together by institutions.

Our recommendations

13. We have taken RAE2001 as our starting point and made our recommendations in relation to it. Our principal reforms could be summed up as follows:

- 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.

14. A summary chart showing the research assessment process which would be created if our recommendations were accepted is included as figure 1.

Centrality of expert review

15. Some of us believed, at the outset of the process, that there might be some scope for assessing research on the basis of performance indicators, thereby dispensing with the need for a complex and labour-intensive assessment process. Whilst we recognise that metrics may be useful

in helping assessors to reach judgements on the value of research, we are now convinced that the only system which 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 ultimately upon expert judgement is sufficiently resistant to unintended behavioural consequences to prevent distorting the very 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

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

17. 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.

18. 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.

19. 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 the 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 further. We would not 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.

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

20. Submissions to RAE2001 were expected to contain a statement of the 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 which underpin a unit's performance and its ability to continue to perform. These features include its staffing policy, its treatment of young researchers, and long-term financial planning as reflected in that statement.

21. We propose to separate the assessment of these 'competences' from the assessment of research quality in order to make it more visible and credible. The assessment would be based upon sets of objective criteria related to specific actions. We suggest that these criteria would be grouped under four headings (see figure 2):

- a. research strategy (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 postgraduate research (PGR) students, postdoctoral researchers and junior lecturers
- c. equal opportunities policies and success in putting them into practice (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,² and work promoting the public understanding of research topics.

22. 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.

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.

² 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 which helps others to do the same. Therefore, if we are concerned with encouraging a broader view of the dissemination of academic research, to exclude links with teaching would seem peculiar. The QAA might be in a position to comment on the strength of those links.

Assessment burden in proportion to reward

23. At present all institutions and units are assessed in the same way. We believe that the full weight of research assessment ought not to be brought to bear on all research, and that 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.

24. 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 will. 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.

25. 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.

26. There will be those who 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 provide this service where there is no realistic prospect of funding.

27. 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 old RAE for the most competitive departments (Research Quality Assessment or RQA).

28. 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.

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 assessment

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

30. 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 are obliged to 'play games' in order to ensure that they fall the right side of the grade boundary
- 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.

31. We propose an alternative system which we believe offers a solution to these problems. For each submission the panel would produce a 'quality profile' (see figure 3). For each submission the panel would decide how much work could be defined as meriting one, two or three stars (or no stars). This system emphasises that the focus of the assessment is to discriminate between the very good research and the very best. It also provides for what is, in effect, a continuous grading scale, eliminating the problems created by grade boundaries.

32. 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 methods. Research assessment should remain an assessment of institutional research quality within a subject area, rather than a review of the performance of individuals.

33. 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.

34. This would enable the funding councils to provide something for which there is an overwhelming demand: clear information on the relationship between the scores achieved in the assessment and the impact upon funding (see figure 4). It is clearly desirable, though not absolutely necessary, if the weights employed by each funding council are consistent. Funding weights will undoubtedly vary between subjects, there being a rationale for greater selectivity in subjects where there is already a large amount of research of the highest class and where the costs of remaining competitive are particularly high.

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 they 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

35. Even if panels are limited in the number of 'star ratings' they can award, there is still a need for a mechanism to ensure consistency of practice in order to:

- a. ensure that 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. ensure that panels adhere to their own criteria
- c. enable the process as a whole to provide feedback to the funding councils on areas of research which are stronger or weaker than the norm in relation to international benchmarks.

36. We therefore propose a hierarchical panel structure, in which the recommendations of each sub-panel would be signed off by a higher level body with a remit to ensure consistency of practice. Our proposed structure is illustrated in figures 5 and 6.

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

37. Whilst we are convinced that there is a need to ensure that panels' practices are consistent (or equivalent) where this is appropriate, we consider it equally important to define those aspects of the assessment where greater sensitivity to disciplinary differences would enhance the reliability of the results. We have therefore brought forward proposals which we believe will enable panels to assess work in their fields in a way which is both more sensitive and more consistent.

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.

38. We propose to work alongside the research communities to develop a set of discipline-specific performance indicators which could form the basis of the indicative bandings. These bandings would be produced at least one year before the assessment. They would inform institutions' key strategic choice – which subject areas to submit for RQA and which for RCA. They would also inform the decisions of the panels but would not bind the panels in any way.

39. 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.

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

40. It is important to define what is assessable as well as how it is assessed. As noted above, institutions submitting to RQA would forfeit the right to submit staff from that area to the RCA – and any funding consequent upon RCA results. The RAE defines the population of eligible researchers in a unit of assessment, and uses this information to publish 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.

41. The abolition of grades should lower the stakes for institutions. Top-rated researchers would attract funding even if the average score was depressed by the inclusion of others in the return. We are confident that this would reduce 'games-playing'.

42. Nevertheless it remains important that RQA results present an accurate picture of the strength of a department whilst at the same time providing the flexibility needed to protect teaching staff from being pressurised into prioritising research. To this end, we propose that at least 80% of staff in any sub-unit of assessment must be included in any RQA return.

43. 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.

44. We also consider it to be extremely important to encourage institutions to make collaborative submissions. We advise the funding councils to do everything possible to facilitate this.

45. It should be possible for research groups to be submitted as a single entity. This would enable qualified staff whose research activity has contributed to important work for which they have not been formally recognised to be included in the assessment.

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 submissions 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

46. In RAE2001 panels had the opportunity to consider statements on the research strategy and environment underpinning each submission. Under our proposals, the elements contained within that statement would be covered in the research competences assessment.

47. Notwithstanding the institutional competences assessment, 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 ought to be able to confirm whether the two documents were consistent with one another.

48. 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

49. We have proposed that institutions be allowed to nominate a minimal number of emerging units. They would have to demonstrate their commitment to developing research in these departments to the level where it was genuinely competitive with top-rated research. The relevant

assessment panels would propose objective success criteria which would indicate that they were catching up with leading departments. Progress against these criteria would be assessed at the mid-point of the assessment period, by officers of the research assessment process.

Recommendation 11

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

Links to other funding processes

50. 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' which would recognise the sharing of excellence with other top-rated research units. These are seen as a means of helping the funding councils to encourage collaboration.
- b. third stream activities, to improve the interactions between HE and business, the public sector and the wider community³.

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.

Panel recruitment

51. The recruitment of panel members was considered by institutions to be one of the less transparent aspects of the exercise. In part, we believe this was because institutions did not engage with recruitment as closely as with other parts of the process which were more salient to them. The most transparent way to identify assessors would be to advertise each post. However, over 1,500 people contributed to the assessment of research in RAE2001, and the burden of open competition for that number of people would, we believe, be excessive.

52. We therefore propose a package of measures intended to balance transparency with the need to ensure that the burden is in proportion to the benefit obtained.

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.

³ The wider community can be taken to include the voluntary sector and, of course, society as a whole.

- 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.

Administrative reforms

53. The operational review⁴ of the RAE has found that the RAE team itself performed admirably. However, it could justly be said that the planning of the administrative support for RAE2001 failed to anticipate the demands it would face.

54. 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, 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.'

55. 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 RAE2001.

56. 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.

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

⁴ 'An operational review of the 2001 RAE' (Universitas 2003).

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

57. 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 placed by 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.

58. 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
- develop discipline-specific metrics
- 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 religion⁵
- 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.

⁵ 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

59. 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.

Figure 1 Sexennial research assessment

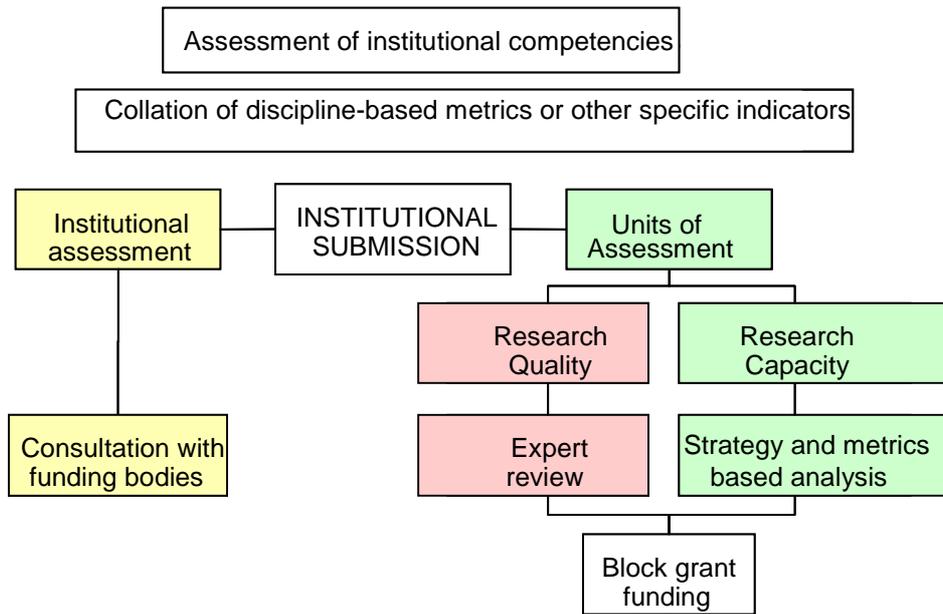


Figure 2: Institutional competences

Item	Exemplar of good practice	Satisfactory	Unsatisfactory
Research strategy			
Development of researchers			
Equal opportunities			
Dissemination of research			

Figure 3: Volume determination for funding

Sub-panel \ Grade	A	B	C	D	E	Totals

**						
*						
Totals						

Figure 4: Funding ratios (factors shown here are illustrative)

Unit of Assessment	Research Quality funding factor				Research Capacity funding factor
	***	**	*	unstarred	
X	6	4	0	0	1
Y	6	4	2	0	1
Z	4	3	2	0	1

Figure 5: Model structure

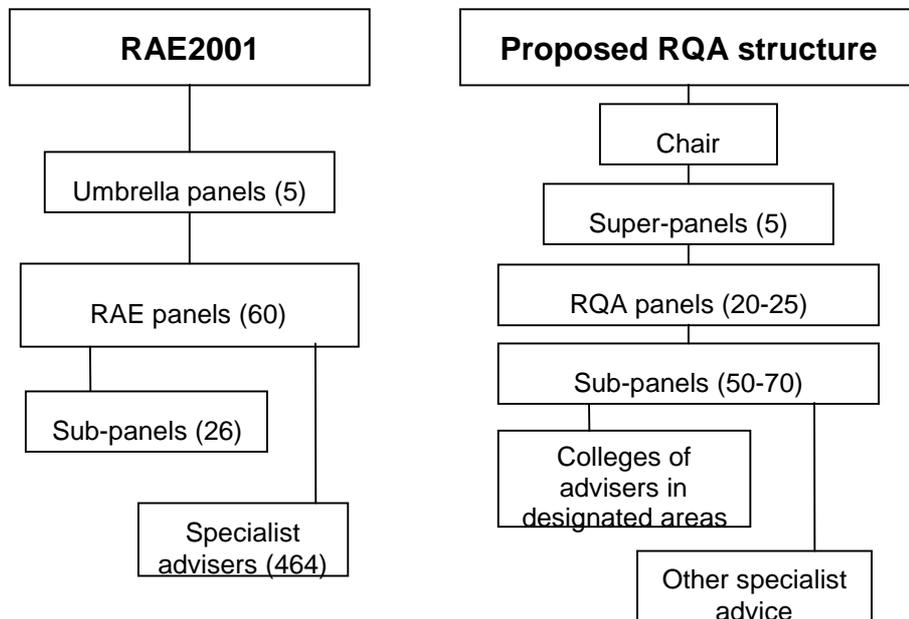


Figure 6: Research assessment panels

Super-panels	Engineering & Physical Sciences	Life Sciences	Arts & Humanities	Etc	RAE Chair
Panels	Engineering	Physical Sciences	Mathematics	Etc	Senior Moderator
Sub-panels	Mechanical	Electrical	Chemical	Etc	Moderator