RESEARCH QUALITY FRAMEWORK: Assessing the quality and impact of research in Australia

THE PREFERRED MODEL

September 2005

Endorsed for release for public consultation by the Expert Advisory Group for the RQF

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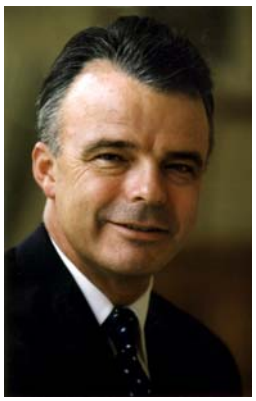

Minister's Foreword

I am very pleased to endorse the release of the *Research Quality Framework: Assessing the quality and impact of research in Australia – The Preferred Model*.

This paper presents the features of research assessment which will underpin the Australian Research Quality Framework (RQF).

Once implemented, the RQF will provide the Australian Government with the basis for redistributing research funding to ensure that areas of the highest quality of research are rewarded. This will involve all of the Institutional Grants Scheme (IGS) and at least fifty per cent of the Research Training Scheme (RTS). My Department will conduct a process, with the Australian Research Council and the National Health and Medical Research Council, to develop the way in which the outcomes of the RQF will impact on the funding distributed by the research councils. It is expected that any impact on research council funding would not occur until after the first RQF assessment process has been completed.

It is critically important that the RQF is designed to identify and reward outstanding research quality and impact in Australia's publicly funded research institutions.

While being the best in Australia is an achievement, Australia's future depends on a collective effort by the Australian Government, industry and the community in identifying areas of international research excellence in Australia. Many of the features outlined in this paper, including how the assessment mechanism will be structured, the membership of assessment panels and the kind of assessment criteria and guidelines required for the RQF, reflect this desire to focus on excellence in research quality and impact.

I am pleased with progress to date with developing the RQF. Especially impressive is the acceptance and commitment shown by the key stakeholders, particularly the universities, to developing the best possible Framework. Each step taken in collaboration will bring us closer to an agreed model and will allow us to develop the necessary guidelines to implement the RQF. This paper is an important step in this process. I look forward to comments from the research sector on the features presented herein, and encourage you to continue your strong and positive engagement with developing the RQF.

Following receipt of comments on the preferred model, there will be discussions on how to move forward from the model to implementation. I expect to receive advice from the Expert Advisory Group for the RQF in the coming months on the preferred model and next steps.

I commend the RQF Preferred Model to everyone interested in the development and implementation of an RQF in the pursuit of Australian research excellence.

The Hon Dr Brendan Nelson MP
Minister for Education, Science and Training
September 2005

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Table of Contents

List of acronyms

ABS	Australian Bureau of Statistics
ANU	The Australian National University
ARC	Australian Research Council
DEST	Department of Education, Science and Training
EAG	Expert Advisory Group for the development of the RQF
HDR	Higher Degree by Research
IGS	Institutional Grants Scheme
IRUA	Innovative Research Universities Australia
PFRA	Publicly Funded Research Agency
RFCD	Research Fields, Courses and Disciplines
RQF	Research Quality Framework
RTS	Research Training Scheme
UK-RAE	United Kingdom's Research Assessment Exercise

SECTION 1: PROGRESS ON THE DEVELOPMENT OF THE RQF

1.1 Objectives

This paper outlines the Expert Advisory Group's (EAG) preferred model for the RQF. The preferred RQF model has been developed after careful consideration of:

- evidence from overseas and Australian research quality assessment exercises in universities and other publicly funded research agencies;
- feedback received in response to the two earlier EAG papers – the RQF Issues[1] and Advanced Approaches[2] Papers; and
- detailed work of three EAG Working Groups.

The EAG is seeking feedback from key stakeholders on the RQF preferred model.

1.2 Contexts

1.2.1 Quality and Impact

The EAG has agreed that the RQF should focus on both:

- the quality of research including its intrinsic merit and academic impact - academic impact relates to the recognition of the originality of research by peers and its impact on the development of the same or related discipline areas; and
- its broader impact or use, i.e. the extent to which research is successfully applied - broader impact or usefulness relates to the recognition by qualified end-users that quality research has been successfully applied.

The focus is on original basic and applied research rather than the application of other people's research.

1.2.2 Scope

The RQF will include all publicly funded research conducted within Australia's university sector and Publicly Funded Research Agencies (PFRAs).

1.2.3 Definition of Research

The EAG has agreed that for the purposes of the RQF, the definition of research to be adopted would be consistent with a broad notion of research activity consistent with the definition of research and experimental development (R&D) as comprising "creative work undertaken on a systematic basis in order to increase the stock of knowledge".[3] The Australian Bureau of Statistics (ABS) further classifies R&D into four types of activity: pure basic research; strategic basic research; applied research including new ways of achieving specific and predetermined objectives such as clinical practice; and experimental development including creative work and performance insofar as they directly relate to original basic and applied research.[4]

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[1] http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/research_quality_framework/issues_paper.htm

[2] http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/research_quality_framework/adv_approaches_paper.htm
http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/research_quality_framework/nsf.htm

[3] OECD (2002), *Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development*, OECD: Paris.

[4] ABS (1998), *Australian Standard Research Classification (ASRC)*, Cat. No. 1297.0, ABS: Canberra.

1.2.4 Underlying principles

The EAG has agreed that the RQF will be underpinned by the following principles:

- *Transparency:* process and results are clear and open to stakeholders, including the use of reliable/repeatable measures/metrics;
- *Acceptability:* broad acceptance of the approach and measures;
- *Effectiveness:* the applied model achieves the purposes of valid and accurate assessment, and avoids a high cost of implementation and the imposition of a high administrative burden; and
- *Encourages Positive Behaviours:* improving the quality and impact of research and further developing and supporting a vibrant research culture in Australia.

By adopting 'acceptability' as a principle for the RQF, the EAG is acknowledging the need for broad acceptance of the approach and measures adopted for the model. That said, the EAG recognises that reaching consensus on every feature proposed for the RQF may not be possible. In those circumstances, acceptability will be guided by the other agreed underpinning RQF principles of 'transparency' and 'effectiveness.' To be transparent and effective, the RQF must be based on valid and accurate assessment, including the use of reliable/repeatable measures/metrics. An evidence based approach is therefore a fundamental feature of the RQF.

1.2.5 Link to "Third Stream" activities

The EAG has agreed that activities that involve successful application of the original research of others (eg knowledge diffusion or transfer) and broader activities that stimulate and facilitate knowledge transfer by universities to business and society are not a focus for the RQF. However, the EAG agrees that these types of initiatives are important and could be addressed through the introduction of "Third Stream" funding.

The EAG also notes, tentatively, that there may be opportunities in the future to link the impact score from an RQF assessment to considerations of the broader impact of the dissemination of others' research under "Third Stream" funding, should such funding be available in the Australian context.

1.3 Development of the RQF: Progress to-date on agreed features

The EAG has undertaken considerable work to develop agreed features of the RQF model. First, it has examined evidence from overseas and Australian research quality assessment exercises in universities and other publicly funded research agencies. It has noted the advantages and the lessons learned from these experiences in developing the preferred RQF model.

Second, it has released two consultation papers - the RQF Issues and Advanced Approaches Papers – and considered responses to both of these papers. Third, the EAG has undertaken considerable public consultation on both papers. Some 165 written responses were received on the RQF Issues Paper and around 370 people attended public consultations in relation to the issues presented in the paper. On 2 June 2005, some 100 invited representatives participated in a National Stakeholder Forum for the development of the RQF. The Forum presented an opportunity for stakeholders to discuss the research assessment issues and design features presented in the RQF Advanced Approaches Paper. The primary purpose of the discussion was to identify those issues requiring clarification before a preferred model of the RQF could be determined. The agreed outcomes from the Forum are outlined at **Figure 1**.

Finally the EAG undertook its own investigations into three design features of the preferred RQF model as follows:

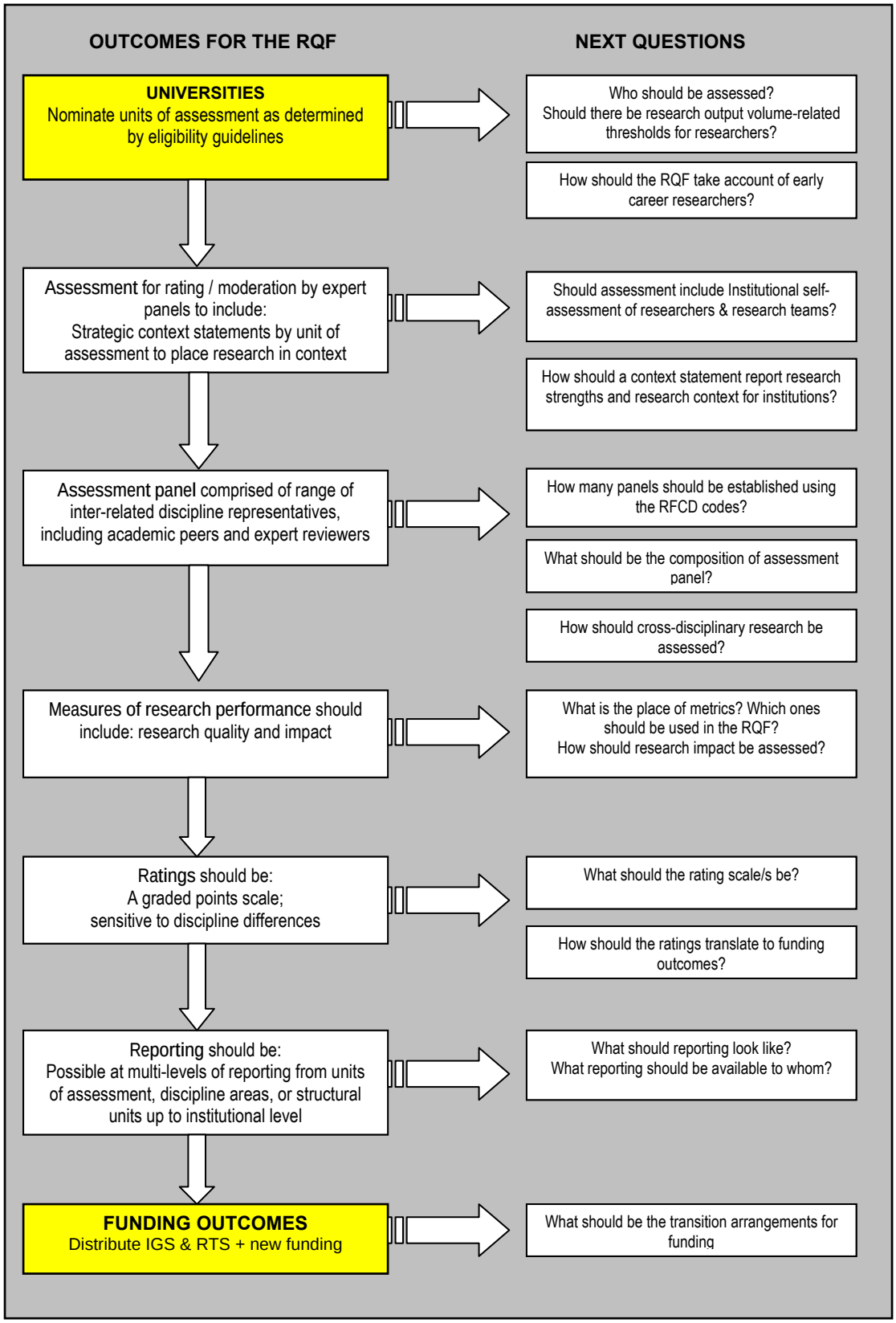
- the international benchmarking of the outcomes of the RQF;
- the structure and operation of expert review panels and the assessment of cross-disciplinary research; and
- the relationships between RQF outcomes and research training.

Drawing on the evidence from overseas and Australian research quality assessment exercises; feedback received in response to the RQF Issues and Advanced Approaches Papers; and outcomes from the detailed work of three EAG Working Groups, the EAG agreed that the RQF should have the following features:

- It should enable comparisons to be made of the research excellence between universities and PFRAs. However, funding pools for universities and PFRAs should be kept separate.
- It should focus on research quality whose value would be related to its impact and would include assessment of its impact.
- Institutions should decide, against a set of guidelines, which researchers would be assessed in the RQF.
- Research groupings will be the subject of assessment in the RQF. Research groupings may be either identified Research Groups whose work may cut across disciplinary boundaries, or aggregations of individuals who do not necessarily work together but whose work fits within a common broad Research Fields, Courses and Disciplines (RFCD) classification.
- Nominated research groupings' research outputs should be placed into context through statements from institutions.
- Assessment panels should be established for the RQF; and these panels should be structured on broad-disciplinary lines based on aggregations of the ABS RFCD classifications. Panels should have explicit procedures for assessment of cross-disciplinary research.
- Representation on assessment panels should consist of a majority of academic peer-reviewers with additional research end user reviewers, as appropriate.
- The RQF should have a graded points system/rating scale eg 0 to 4*, 1 to 5, etc. which is sensitive to discipline differences.
- It should be structured in a way which enables assessments of quality to be provided at multiple levels, for example, by broad discipline area, Faculty or other structural unit up to institutional-level. There is to be no reporting at the level of individual researchers.
- Funding allocated to institutions on the basis of the RQF should take the form of block grants for which institutions have discretion to determine their internal distribution.

To develop its preferred RQF model, the EAG has addressed several threshold questions (see **Figure 1**). Details of the preferred model are set out in the following section.

FIGURE 1: OUTCOMES FROM THE NATIONAL STAKEHOLDER FORUM, 2 June 2005

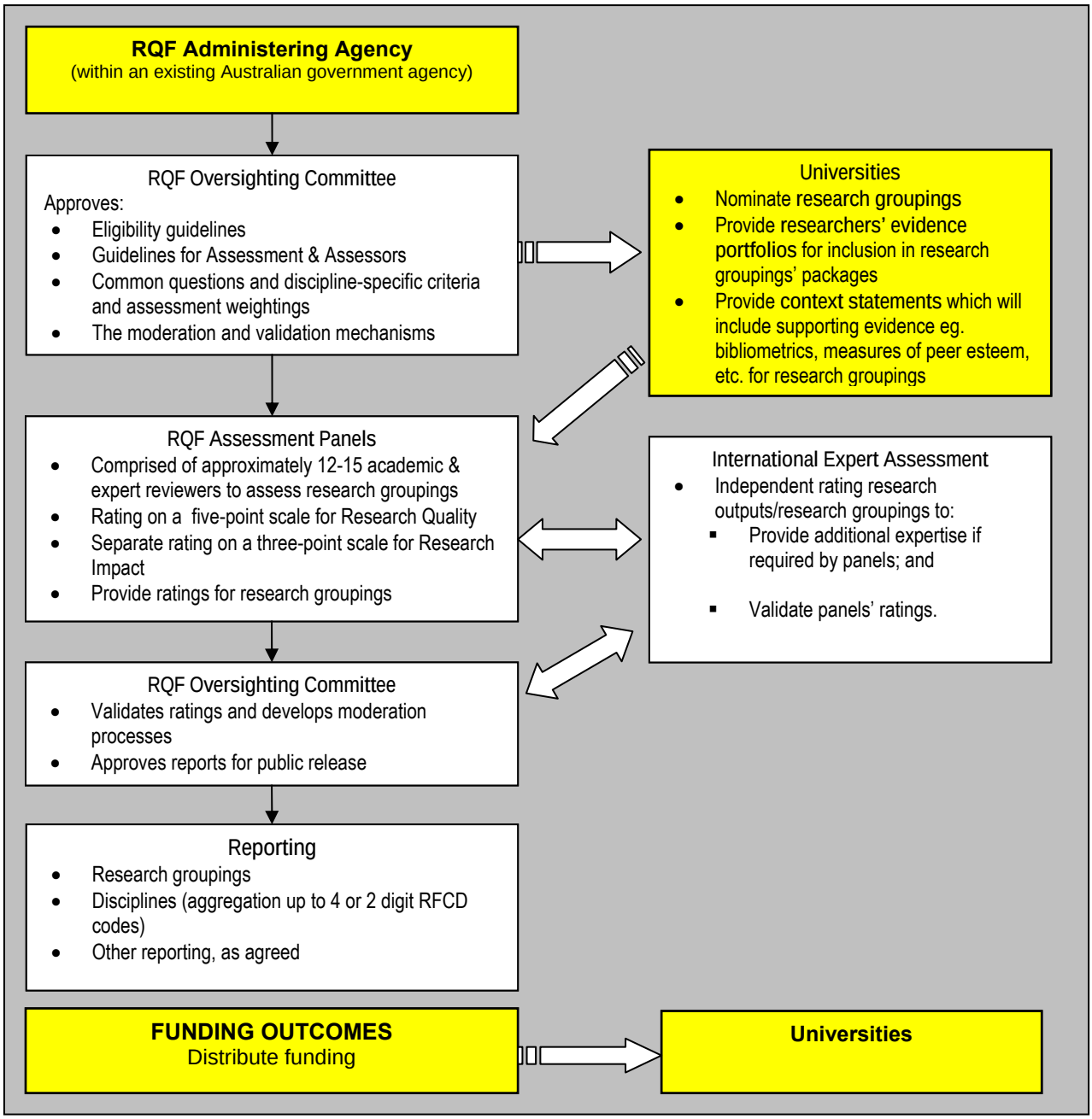


Source: http://www.dest.gov.au/sectors/research_sector/policies_issues_reviews/key_issues/research_quality_framework/nsf.htm

SECTION 2: AGREED FEATURES OF THE RQF PREFERRED MODEL

The EAG agreed to recommend the following features for the preferred model of the RQF. A summary of the preferred RQF model is at **Figure 2** below.

FIGURE 2: THE PREFERRED RQF MODEL



2.1 Eligibility for assessment in the RQF

Eligible academic staff to be nominated by universities for assessment should hold university Level B and above positions. Academic research staff whose positions are funded through individual competitive research grants may also be nominated for assessment, for example postdoctoral fellows holding Level A positions.

Individual researchers will be nominated by universities as members of a 'research grouping' A research grouping can be either:

- an aggregation of individual researchers who do not necessarily work together but whose work fits within a common broad RFCD classification, or

- an identified Research Group in which individual researchers are working together on research that may cut across disciplinary boundaries.

The EAG recognises that universities offer a variety of appointments to researchers who contribute to the success of research groups, while not being employed by the university. Therefore, other researchers formally associated with a nominating university may be included in a research grouping for consideration in terms of rating, although they would not be included in consideration for funding distribution to institutions.

The EAG recognises that there will need to be a minimum size for a research grouping to maintain the anonymity of individual researchers.

2.2 Evidence portfolios for assessment

Universities will provide evidence portfolios of individual researcher's outputs within nominated research groupings. To be included for assessment, two conditions must be met:

- Each individual researcher included in a research grouping must have produced at least four research outputs over the assessment period; and
- Each research grouping must submit no more than four research outputs per individual researcher for assessment.

The RQF Assessment Panels will be afforded flexibility in the RQF Guidelines to accept fewer than four research outputs in an individual researcher's portfolio for discipline differences in research outputs as well as for equity reasons and/or professional judgement of their research achievements. This would ensure that early career researchers are appropriately considered in the assessment process.

In addition, there may be value in universities providing a context statement which describes the relevant quality and impact claims for research groupings' outputs. The context statement will include metrics, where appropriate to discipline areas, such as bibliometrics, industry research grants and short supporting statements of research impact by relevant end-users.

2.3 The RQF Assessment Panels

Each discipline-based RQF Assessment Panel will assess both the quality and the impact of submitted research. Panel membership will include research users as well as discipline peers as appropriate to discipline areas.

Overall responsibility for the RQF Assessment Panels would be undertaken by the RQF Oversighting Committee (see **Figure 3** below). This Committee, comprising the Chairs of RQF Assessment Panels and other significant experts from Australia and overseas, would develop the guidelines for assessment including eligibility criteria and instructions for assessors. It would also establish the parameters for assessing early career researchers, Indigenous research, and other areas of emerging research priority.

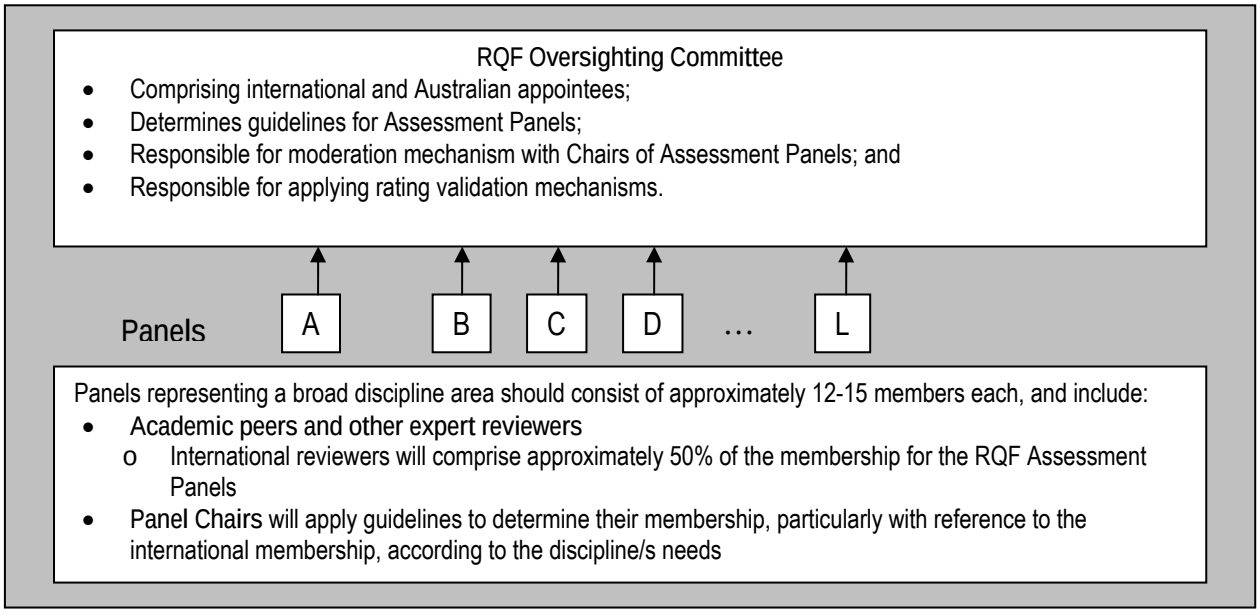
2.3.1 The number of panels

The ABS RFCD classifications contain 24 two-digit codes and 139 four-digit codes. The EAG believes that all existing research can be mapped (not always in a one-to-one manner) to Australia's RFCD classifications.

Research that crosses traditional disciplinary boundaries is increasing in volume and arguably also in significance. For example, the National Research Priorities are inherently cross-disciplinary in scope. Research proposals classified as cross-disciplinary (i.e. where the research classification includes at least two different 2-digit RFCD codes, e.g. health economics = economics and health) have been increasing as a proportion of proposals submitted to the Australian Research Council (ARC). Assessing cross-disciplinary work may

be difficult because of (among other things) differences in language and methodologies across disciplines.

FIGURE 3: PROPOSED HIERARCHICAL STRUCTURE FOR THE RQF



The greater the range of expertise on a particular panel, the easier it will be to resolve most cross-disciplinary matters. However, not all cross-disciplinary work will lie within the scope of a single panel. In relation to the assessment of cross-disciplinary research, it is proposed that:

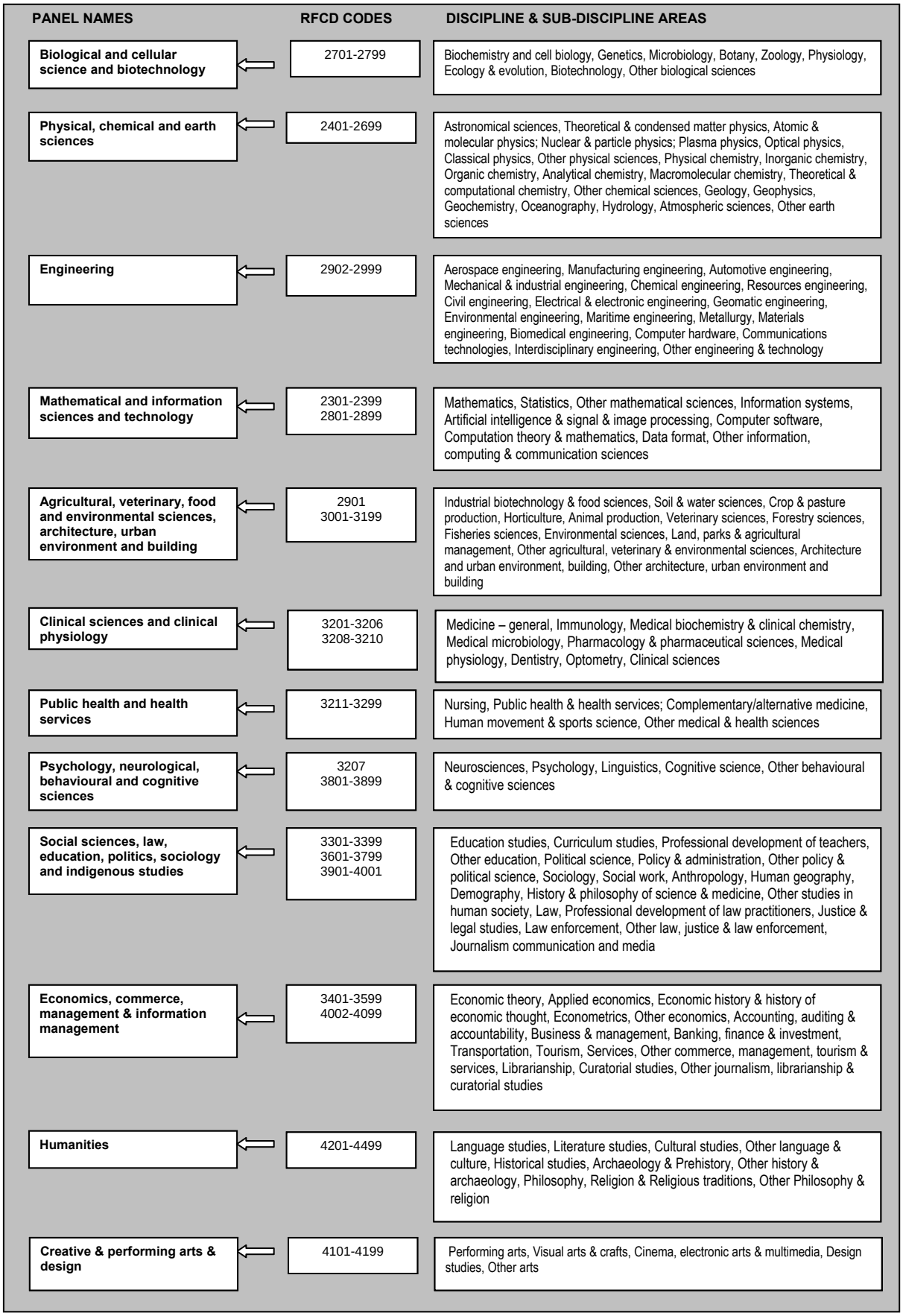
- assessments of research outputs should be made by the relevant nominated panels to take account of cross-disciplinary issues, and that there should not be separate cross-disciplinary panels;
- research groupings should be submitted to a single panel for assessment;
- evidence portfolios will indicate where the research is cross-disciplinary, either (a) within the disciplines covered by a panel (intra-panel) or (b) across at least two panels (inter-panel). Panel chairs should be required to seek input from another panel or panels if the research outputs are identified as cross-disciplinary between panels, either by the submitting institution or by the panel receiving the submission; and
- as part of the assessment process, panel chairs should record and report the incidence of cross-disciplinary research assessed separately in RQF reports.

Given the above considerations, it is proposed that there should be no more than 12 panels for the assessment of research by discipline categories.[5] However, the optimal number of panels will be informed by the workload that would become apparent once the details of the assessment process are agreed.

The 12 panels would be mapped to the RFCD codes, while taking into account current international discipline categorisations for benchmarking purposes. The proposed list of RQF Assessment Panels, with their component RFCD codes is at **Figure 4**.

[5] The final number of panels could, however, change slightly once a preferred approach to assessing research impact was agreed.

FIGURE 4: PROPOSED RQF ASSESSMENT PANELS BY RFCD CODES



2.3.2 Composition of RQF Assessment Panels

The consensus view from the responses to the RQF Issues and Advanced Approaches Papers was for the inclusion of both academic peers and other stakeholders (notably other expert reviewers) on the RQF Assessment Panels.

Panel membership should consist of approximately 12 to 15 members, depending on the discipline/s and expected workload. The numbers of panel members will not need to be identical for each panel, but should be determined by the RQF Oversighting Committee. Details of the panel numbers and membership should be included in the Panel Guidelines and will be publicly available prior to the commencement of the assessment process.

It was recommended by the EAG that panel membership should comprise:

- At least **50 per cent** international experts, primarily international experts who are resident overseas as well as some international experts resident in Australia; and
- At least **two** experts, as deemed appropriate to the panel structure, who could represent the views of users of the research under assessment.

The recruitment of panel members will be undertaken through a number of mechanisms, including:

- open advertisement for nominations (subject to guidelines);[6]
- targeted invitations to relevant organisations and representative groups, including universities, the Learned Academies, PFRAs, business and community groups, etc; and
- capacity for panel chairs to approach additional experts as required.

The Chairs of the RQF Assessment Panels would form a Moderating Group, with participation of the RQF Oversighting Committee, to examine and resolve questions of consistency of assessment across the panels. However, all RQF Assessment Panels and the RQF Moderating Group would operate within an agreed framework determined by the RQF Oversighting Committee, which would carry overall responsibility for the process.

The business operations (e.g. guidelines, deadlines, transparency, ethics, conflict-of-interest etc) and broad assessment criteria of each panel should be the same. Some operational aspects of each panel could be different. Details of the operation of each panel should be transparent and available prior to the commencement of the assessment process.

2.4 Research outputs for assessment

The EAG agrees that research assessment should be carried out through experts' examination of research outputs provided by researchers in an evidence portfolio, i.e. research outputs from individual researchers within research groupings. Where individual researchers have produced outputs with other researchers, they will indicate their specific contribution (i.e. proportion of effort) to achieve the outcome.

The nature and type of research outputs will typically differ according to discipline areas. For this reason, there will need to be further consultation when the RQF Guidelines are being developed on what constitutes research outputs for each Panel.

The research outputs should have been undertaken during a pre-determined period of time (eg 6 years) terminating at a given census date. The EAG suggests that there will be a shorter period of time between the first cycle of the RQF and the second cycle of the RQF (eg 3 years), followed by a longer period for the third cycle. In this way, if the census date for the first cycle was 1 January 2007 and the collection time period was 6 years, it would mean that research outputs produced between 1 January 2001 and 31 December 2006 could be

[6] For the UK-RAE, individuals cannot nominate themselves nor can universities nominate their own staff.

considered for assessment in the first RQF cycle. Examples of possible cycles are listed in **Table 1** below.

Table 1: Examples of RQF Cycles and possible census periods

RQF Cycle	Year	Census date	Production years
1	2007	1 January 2007	1/1/2001 – 31/12/2006
2	2010	1 January 2010	1/1/2004 – 31/12/2009
3	2016	1 January 2016	1/1/2010 – 31/12/2016

2.5 Context statements and validation information

As set out in 2.2, in order for consistency in assessments and ratings to be achieved across panels, similar guiding principles must be accepted and similar standards applied across all panels. However, this need not imply identical arrangements in all cases if, for example, different procedures or different types of evidence are seen as necessary to assess research quality and impact in different disciplines.

There was some support at the National Stakeholder Forum for institutions to provide a 'strategic context statement' for the research groupings under assessment. There was also general agreement that metrics and other quantitative indicators may assist some panels in making their assessments. It will be desirable when providing guidelines for institutions to indicate the type of information which would be appropriate for the context statement. Based on existing qualitative research assessment documents,[7] it may be appropriate to provide a supplementary context statement with the portfolio of evidence, including for example:

- A brief overview of the research grouping, including the group members by category of appointment;
- Relevant developmental context for the research grouping including reference to early career researchers;
- Statement of claims regarding the quality and impact of the nominated research outputs;
- Designation of the relevant assessment panel by which the submission is to be primarily evaluated. If a submission is to be designated as cross-disciplinary then this should be clearly stated along with a list of the relevant assessment panels.

An alternative approach would be to provide supplementary metrics to support the assessment of research quality, where appropriate to discipline areas, such as bibliometrics, and industry research grants. Short supporting statements by relevant end-users of research impact could also be provided.

There will need to be further consultation on what will constitute a valid evidence portfolio for assessment, and on the degree to which the panels may be permitted to interact with researchers and institutions.

The EAG also agreed that the Assessment Panels should outline the types of indicators that would assist them in making an assessment, so that a core of common information can be made available to panellists. Obviously, it is desirable to exploit evidence and metrics currently available within universities and the Australian Government where they are likely to be relevant to the assessment exercise.

[7] See for example the CSIRO Science Assessment Review (outline in the RQF Issues Paper) and/or the Curtin University research assessment trial guidelines (http://research.curtin.edu.au/notices.cfm#2103).

The evidence of research impact should be verifiable. Consequently, and as in the assessment of research quality, the EAG agreed that research impact should be retrospective and demonstrable rather than prospective and potential. It should not focus on mechanisms and structures designed to increase the likelihood of impact (such as industry consultation or formal linkage arrangements), but rather on the outcomes of such arrangements.

2.6 The RQF Rating Scales

2.6.1 Research quality

The EAG recommends separate criterion-referenced ratings for research quality and research impact. It recommends that research quality should be rated on a five point scale. There is clear acceptance that the top ratings will be based on notions of "international excellence" - outstanding research achievements on an international scale. Similarly, the lowest rating on the scale will be described as 'unclassified' research (see **Table 2** below). However, for the remaining intermediate ratings, there will need to be consultation with the sector for appropriate descriptors and/or criteria. Other examples of possible descriptors are listed in **Appendix A**.

Table 2: Possible Research Quality Rating Scale

Rating	Descriptor
5	The majority of research outputs were considered to be in at least the top 20% of research in its field internationally, with a significant percentage (>25%) in the top 10%. There was evidence of high international peer esteem and significant impact on the international academic community.
4	
3	
2	
1	The research is unclassified.

2.6.2 Research impact

Given the complexities of assessing research impact, the EAG recommends that a rating scale for research impact will be, at least initially, less finely-graded than the rating scale for research quality and will comprise a three point scale of (a) high impact, (b) moderate impact or (c) limited impact.

Claims of research impact need to be evidence-based as do claims of research quality including, for example, the international significance of the impact. **Table 3** sets out some criteria that could be applied. The sector's views are sought on the proposed descriptors for the research impact scale.

Table 3: Possible Research Impact Rating Scale

Rating	Descriptors
High	Fundamentally altered policy or practice in a particular field, or produced a major, identifiable social, economic or environmental change, locally or internationally. Examples might include changes in legislation, amendments to regulatory arrangements, wide take-up of a product, service, process or way of thinking derived from the research, significant impact of take-up of the research findings (revenue increases, cost savings, changed 'view of the world', technological change or new products).
Moderate	Significantly altered policy or practice in a limited field, or produced an identifiable social, economic or environmental change.
Limited	Little or no identifiable change in policy or practice, and little or no identifiable social, economic or environmental change.

As with other international research assessment exercises, there will be a learning process through the first cycle of the RQF. It may be that the research impact rating scale will require further refinement in the future cycles of the RQF.

2.6.3 Aggregations of research quality and impact ratings

Ratings of research impact will be determined and recorded separately from quality ratings. However, final ratings will be a single score determined using a matrix rating model along the lines illustrated in **Figure 5** below.

Figure 5: Research quality and impact matrix

				Adjusted Score
Research quality	**5**	5	5	**5**
↑	**4**	4	4	**5**
	3	3	3	**4**
	2	2	2	**3**
	1	1	1	**1**
		Limited	**Moderate**	**High**
			→	**Impact**

With an aggregated rating matrix model such as set out above, those research groupings assessed as having a quality rating of at least two and having a high research impact will gain an additional rating point.

2.6.4 Validation of RQF ratings

The RQF Assessment Panels will have access to expert assessors of international professional standing to seek additional assessment of research outputs where this is judged to be necessary.

In addition, there will be a validation process in which a proportion of research outputs and panels' ratings are sent to expert assessors, of international professional standing with a preference for those residing overseas, for a validation rating. This process will be coordinated by the RQF Oversighting Committee in consultation with the Chairs of the RQF Assessment Panels.

2.7 Reporting from the RQF

The Chairs of RQF Assessment Panels will provide a report to the RQF Oversighting Committee on the quality and impact ratings of all research groupings. There will be no reporting at the level of the individual researcher.

Additional reporting of quality and impact ratings at the 'discipline level' where research groups across institutions are aggregated up to the 4 and/or 2 digit RFCD code level will also be provided. The form of aggregation requires further consideration (e.g. weighted sums versus profiles). If agreed, reporting could also be at higher levels of aggregation (e.g. institutional structures).

2.8 RQF Outcomes and Funding

2.8.1 The RQF and research training

Although the EAG agrees that the outputs of Higher Degree by Research (HDR) students should not be included for assessment within the RQF, it does acknowledge that the quality of research and its environment does relate to the quality of research training. In this context, the EAG recommends that the RQF should be a determining factor (at least 50 per cent) in the allocation of research training resources by way of its outcomes being included in a revised Research Training Scheme (RTS) formula.

Using the outcomes of the RQF as a driver of RTS, funding allocations would involve the replacement of the current publications and income measures of the RTS (currently a 50 per cent weighting in aggregate) with an RQF score.

In the absence of a better methodology for measuring the quality of research training, it is proposed that HDR completions could perhaps be continued as a proxy. It is clear that further work needs to be undertaken by DEST and the sector more generally on the formulation and trialling of alternative measures of research training quality, and the use of RQF ratings for future RTS funding.

2.8.2 The RQF outcomes and block/performance funding

There was agreement at the National Stakeholder Forum that RQF outcomes should influence the distribution of several existing block funding schemes, including the Institutional Grants Scheme and RTS. However, without robust data to undertake financial modelling, the EAG cannot recommend at this stage any particular formula for distributing research resources using the RQF outcomes. There will need to be specific consultation on this aspect of implementing the RQF once the preferred RQF model has been agreed. Consideration will be given to the implications of the redistribution of any existing research funding and associated transition arrangements.

2.9 Developing RQF Guidelines

In describing the above features, it is recognised that there will need to be detailed RQF Guidelines developed including information on the following:

- which RFCD codes comprise a given panel so that nominated research units may frame their units of work appropriately;
- how panels will address cross-disciplinary research;
- the discipline-specific meanings and measures of research impact; and
- the assessment criteria and relationships to ratings.

It will also be important to establish robust eligibility criteria and definitions of the research outputs to be submitted for assessment. Similarly, rules will need to be developed concerning the allocation of research outputs to institutions and discipline-based groupings where the researchers generating that research have moved between institutions during the assessment period and/or the research itself falls into more than one discipline category.

The development of the guidelines will require wide-ranging consultations with relevant stakeholders to ensure that appropriate consideration is given to the breadth of disciplines to be assessed.

SECTION 3: NEXT STEPS

3.1 Timing

During September 2005, there will be consultation on the preferred RQF model set out in this paper. This will involve seeking written feedback on the paper as well as a series of briefing sessions by the EAG with key stakeholders.

Following the fourth meeting of the EAG scheduled for 17 October 2005, the EAG will report to the Minister on preferred model(s) for assessing research quality and its associated impact.

The EAG recognises that there will be a need for considerable additional work prior to the implementation of the RQF, including the development of detailed RQF guidelines; the establishment of appropriate governance structures; and identifying and enhancing the technological capacities to support the RQF. The EAG also anticipates that the interactions of the various components of the RQF model should be carefully tested prior to the full implementation of the model. The way in which research quality ratings would translate to funding outcomes will also need to be carefully considered including through detailed data modelling.

For these reasons, it is expected that there will be a need to refine the details of the RQF model during the course of 2006 with full implementation of the RQF expected by 2007 with reporting of RQF outcomes by 2008.

3.2 Specific issues for consultation

The EAG is interested to receive feedback on any aspect of the preferred RQF model. In particular, it would like feedback on the descriptors for the rating scales for research quality and research impact.

The EAG has agreed that research quality should be rated on a five point scale (international leading edge through to unclassified) while impact will be rated on a three point scale (limited, moderate, high). There are still significant decision points regarding the descriptions of these scales and how they will be used. It is proposed that the scales chosen be tied as closely as possible to international equivalents.

When providing written comments/perspectives on the above issues, it would be helpful if stakeholders could draw on evidence from current assessment processes such as Faculty/Institutional reviews etc. where such information is available.

3.3 Consultation process

The EAG is seeking feedback on this paper by **4 October 2005**. Written responses may be provided to the Research Quality Assessment Framework Team (RQAF) through the following contact details:

Post: RQAF Team
Loc. 721
Dept of Education, Science & Training
GPO Box 9880
Canberra ACT 2601

Fax: 02 6123 5717 or 02 6123 5911

Email: rqf@dest.gov.au

Further information, copies of the various RQF Papers and the outcomes from the National Stakeholder Forum are available from the RQF web pages at: http://www.dest.gov.au/resqual.

Appendix A

Possible assessment scales and descriptors

New Zealand Quality Categories and Criteria

Peer Esteem Assessment Criteria

Rating	Descriptor
7	The evidence portfolio would be expected to demonstrate that the staff member has attracted world-class recognition through her or his research. This could be reflected by some or all of the following: the receipt of prestigious prizes, or fellowships of leading learned societies/academies or prestigious institutions, or special status with professional or academic societies, or editorship, membership of editorial panels or referees of top-ranked journals, or awards for research as well as invited attendance, or examination of PhDs and presentation at prestigious academic and industry conferences/events. An ability to attract overseas/top research students and scholars as well as to mentor his/her own students into postdoctoral and other fellowships, scholarships and positions in centres of research excellence could be demonstrated in the evidence portfolio. A consistent record of favourable citations of research should combine with strong evidence of positive research reviews and contribution to knowledge in the discipline (including overseas where relevant), and movement into creative practice.
6	
5	The evidence portfolio shows that the staff member, through their research, is recognised within New Zealand or elsewhere and is esteemed beyond the researcher's own institution. The evidence portfolio demonstrates peer esteem by providing evidence of some or all of the following: the receipt of prizes, membership of a professional society or similar with restricted or elected membership or honours or special status with professional or academic societies, editorship or membership(s) of editorial panels of reputable journals within New Zealand or elsewhere, research fellowships of esteemed institutions, reviewing of journal submissions and book proposals, PhD examination or invitations for keynote addresses for conferences/events that are at a middle level of excellence. A consistent record of research citation and positive reviews of specific research outputs and/or overall contribution to research knowledge in a discipline or substantive area of knowledge or practice can be expected. The evidence portfolio could demonstrate graduate students moving into research scholarships or postdoctoral fellowships or junior lectureships in departments with good research ratings.
4	
3	The evidence portfolio demonstrates a developing recognition among peers of the staff member's research contribution and developing rigour in the application of research techniques. This may be evidenced through attracting awards and invitations to present research to informed audiences, within and possibly beyond the applicant's immediate institution, as well as positive reviews and citations, or being asked to referee research outputs. Where the staff member has an involvement primarily in commissioned research outputs, reference to letters of commendation or other evidence of esteem by commissioning agents could be expected.
2	
1	Minimal evidence of peer esteem generated through research activities
0	No evidence of peer esteem generated through research activities

Source: Tertitary education commission (2006) 'The Performance Based Research Fund (PBRF) Guidelines 2006' Avaliable: http://www.tec.govt.nz/downloads/a2z_publications/pbrf2006-guidelines.html

New Zealand Quality Categories and Criteria

Contribution to the Research Environment Assessment criteria

Rating	Descriptor
7	The evidence portfolio would be expected to demonstrate a contribution to New Zealand and/or international research environments, for example, through extensive research networks and/or collaborations in addition to a strong contribution to the research environment in their organisation(s). The evidence portfolio may show a history of attracting renowned scholars to the TEO and/or New Zealand. Evidence of research and disciplinary leadership may include some or all of the following: membership(s) of renowned collaborative research teams; membership(s) of research selection panels in New Zealand and elsewhere; research leadership at the highest levels (eg leading/participating in major research consortia including researchers outside of New Zealand); organising and hosting world-class conferences; the development of research infrastructure, or significant contributions to research-focused conferences or attracting funding. The evidence portfolio is likely to show a strong and consistent history of successful supervision of students, particularly at PhD level, and could provide evidence of supporting research students to access and produce research outputs that are quality-assured (possibly in combination with academic staff). The evidence portfolio could demonstrate contributions to developing new research capacity that go beyond student supervision, including among Māori researchers and Pacific researchers. Other contributions to debate in the discipline, both in New Zealand and beyond, and/or public understanding of developments in or implications for the discipline may be expected.
6	
5	The evidence portfolio demonstrates research and disciplinary leadership within the broader discipline in addition to contributing to the individual's own TEO research environment. Research and disciplinary leadership may include some or all of the following: collaborative research across disciplinary boundaries or across organisations and/or membership(s) of research selection panels or leading research consortia within New Zealand, and/or show evidence of attracting researchers and scholars to the TEO, and/or research funding, and/or organising and hosting conferences. The evidence portfolio could show supervision of research activities of students and supporting them to produce research outputs, possibly in conjunction with academic staff. The evidence portfolio could show a contribution to developing new researchers, including Māori researchers and Pacific researchers, or generating research opportunities by attracting external funding as a research programme or project leader. Other contributions to debate in the discipline and/or public understanding of developments/implications in the discipline may be expected.
4	
3	The evidence portfolio is likely to show contributions to the research environment primarily within the TEO or locality. Research and disciplinary leadership is likely to be reflected in participating in committees of organisational bodies or discipline-related bodies dealing with research matters. The evidence portfolio could show contributions within the TEO, such as hosting of visiting researchers, organisation/hosting of conferences/seminars, and/or assisting in attracting research money, or as a named researcher in externally funded research programmes or projects. Other contributions to the discipline may be demonstrated such as successful supervision of masters and PhD students, including Māori students and Pacific students.
2	
1	Minimal evidence of contribution to research environment.
0	No evidence of contribution to research environment.

Source: Tertitary education commission (2006) 'The Performance Based Research Fund (PBRF) Guidelines 2006' Avaliable: http://www.tec.govt.nz/downloads/a2z_publications/pbrf2006-guidelines.html

New Zealand Quality Categories and Criteria
Research Output Assessment Criteria

Rating	Descriptor
7	The evidence portfolio would be expected to demonstrate leadership and accomplishment in research exemplified by a platform of world class research that includes highly original work that ranks with the best of its kind. In doing so, the evidence portfolio would likely be characterised, for example, by outputs that represent intellectual or creative advances, or contributions to the formation of new paradigms, or generation of novel conceptual or theoretical analysis and/or theories or important new findings with wider implications. In doing so it could indicate research that is exemplary in its field and/or at the leading edge and/or highly innovative. It would be expected to demonstrate intellectual rigour, imaginative insight or methodological skill, or could form a primary point of reference to be disseminated widely. A significant proportion of research outputs should be presented through the most appropriate and best channels. The research outputs would be likely to result in substantial impact or uptake. Such impacts could also include product development, uptake and dissemination, or significant changes in professional, policy, organisational, artistic, or research practices.
6	
5	The evidence portfolio demonstrates a platform of significant research output that has generated substantial new ideas, interpretations or critical findings and makes a valuable contribution to existing paradigms and practices. The research outputs generate new information or ideas and are well researched and technically sound. The portfolio typically includes research outputs that are presented in reputable channels considered of being at least at a middle level of excellence. The research is likely to contribute to further research activities and to have demonstrable impacts reflected in developments that may include product development, uptake and dissemination, changes in professional, organisational, policy, artistic, or research practices.
4	
3	The evidence portfolio demonstrates a platform of research activity (or developing research activity) and output that is based on a sound/justifiable methodology, and makes a contribution to research within the discipline and/or to applied knowledge. This could be demonstrated by the production of research outputs that have been subject to quality-assurance processes.
2	
1	Minimal evidence of research outputs
0	No evidence of research outputs.

Source: Tertitary education commission (2006) 'The Performance Based Research Fund (PBRF) Guidelines 2006' Avaliable: http://www.tec.govt.nz/downloads/a2z_publications/pbrf2006-guidelines.html

New Zealand Quality Categories and Criteria
Overall Quality Category

Rating	Descriptor
Quality Category A	To be assigned an "A" for his/hers EP it would normally be expected that the staff member has, during the assessment period in question, produced research outputs of a world-class standard, established a high level of peer recognition and esteem within the relevant subject area of his/her research, and made a significant contribution to the New Zealand and/or international research environment.
Quality Category B	To be assigned an "B" for his/hers EP it would normally be expected that the staff member has, during the assessment period in question, produced research outputs of a high quality, acquired recognition by peers for her/his research at a national level, and made a contribution to the research environment beyond her/his institution and/or significant contribution within her/his institution.
Quality Category C	To be assigned an "C" for his/hers EP it would normally be expected that the staff member has, during the assessment period in question, produced a reasonable quantity of quality-assured research outputs, acquired some peer recognition for her/his research, and made a contribution to the research environment within her/his institution.
Quality Category C (NE)	To be assigned an "C (NE)" for his/hers EP a new or emerging researcher would normally be expected, during the assessment period in question, to have produced a reasonable platform of research, as evidenced by having a) completed her/his doctorate or equivalent qualification, AND b) produced at least two quality –assured research outputs' OR c) produced research output equivalent to a) AND b).
Quality Category R or R (NE)	An "R" or "R(NE)" will be assigned to an evidence portfolio that does not demonstrate the quality standard required for a "C" Quality category of higher or, in the case of a new or emerging researcher, the standard required for a "C (NE)" Quality Category or higher.

Source: Tertitary education commission (2006) 'The Performance Based Research Fund (PBRF) Guidelines 2006' Avaliable: http://www.tec.govt.nz/downloads/a2z_publications/pbrf2006-guidelines.html

UK Research Assessment Exercise
UK RAE 2001 – 7 point Scale

Rating	Descriptor
5*	Quality that equates to attainable levels of international excellence in more than half of the research activity submitted and attainable levels of national excellence in the remainder
5	Quality that equates to attainable levels of international excellence in up to half of the research activity submitted and attainable levels of national excellence in the remainder
4	Quality that equates to attainable levels of national excellence in virtually all of the research activity submitted, showing some evidence of international excellence
3a	Quality that equates to attainable levels of national excellence in over two-thirds of the research activity submitted, possibly showing some evidence of international excellence
3b	Quality that equates to attainable levels of national excellence in more than half of the research activity submitted
2	Quality that equates to attainable levels of national excellence in up to half of the research activity submitted
1	Quality that equates to attainable levels of national excellence in none, or virtually none, of the research activity submitted

Source: Roberts G., (2003) 'Joint Consultation on the review of Review of Research Assessment'. HEFCE pg 79

UK RAE 2008 Quality Profile

Rating	Descriptor
Four star:	Quality that is world-leading in terms of significance and rigour.
Three star:	Quality that is internationally excellent in terms of originality, significance and rigour but which nonetheless falls short of the highest standards of excellence.
Two star:	Quality that is recognised internationally in terms of originality, significance and rigour.
One star:	Quality that is recognised nationally in terms of originality, significance and rigour.
Unclassified:	Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purpose of this assessment.

Source: RAE 2008 (2005) 'Guidance to panels' HEFCE pg25

ARC criteria and guidelines to assessors

Rating	Descriptor
90-100	Outstanding: Of the highest merit, at the forefront of international research in the field. Less than 2% of applications should receive scores in this band.
85-90	Excellent: Strongly competitive at international levels. Less than 20% of all applications should receive scores in this band.
80-85	Very Good: An interesting sound, compelling proposal. Approximately 30% of all applications should receive scores in this band. Approximately 50% of all applications will have scores above 80.
75-80	Good: A sound research proposal, but lacks a compelling element. Approximately 30% of all applications are likely to fall into this band.
70-75	Fair: the proposal has potential, but requires development to be supportable. Up to 20% of all applications are likely to have a score below 75.
0-70	Flawed: the proposal has one or more fatal flaws.

Source: ARC 'Discovery Projects, Linkage Projects: Assessor Handbook'

CSIRO Science Assessment Review

A variety of information will be assessed by the review panel, including research work, and information about the division including research plans, and significant outcomes. There are two categories of benchmarks used:

Research community position:

Rating	Descriptor
Benchmark:	Sustained scientific leader- well recognised in the international research community for this.
Strong:	Able to set and sustain new scientific/technical directions within the international research community.
Favourable:	Able to maintain a good position in the international research community "pack": not a scientific leader except in developing niches (not mainstream areas).
Tenable:	Not able to set or sustain independent scientific/technical direction – a sense of being continually a follower.
Weak:	Declining quality of scientific/technical directions output compared with other research groups. Often a short term "fire-fighting" focus.

Industry/community Position:

Rating	Descriptor
Benchmark:	Research results used to set the pace and direction of technically-based commercial, environmental, community or policy development – recognised in industry or community for this.
Strong:	Research results able to be used by organisations to distinguish themselves form peers or competitors.
Favourable:	Research results able to be used by organisations to improve their position relative to peers or competitors.
Tenable:	Research results able to be used by organisations to maintain, but not improve, their position relative to peers or competitors. Research results not able to be used to differentiate organisations from their peers or competition.
Weak:	Research results not able to be used by organisations to even maintain their position relative to peers or competitors.

Source: DEST, (2005) 'RQF Issues Paper' pg 57

ANSTO Ratings Scale

Rating	Descriptor
World class:	Sustained leadership and accomplishment exemplified by outputs that influence highly original work that ranks with the best of its kind. Within the top 5% of the field internationally.
Very significant:	Making a significant contribution to the field. Within the top 10% of the field internationally.
Significant:	Demonstrating a platform of research output that has generated substantial new ideas, interpretations or critical findings and makes an internationally recognised contribution to existing paradigms and practises. Within the top 25% of the field.
Contributing:	Demonstrating a platform of research activity (or developing research activity) and output that is based on a sound/justifiable methodology, and makes a contribution to the research within the discipline and/or to applied knowledge.
Limited:	The research outputs will have been assessed as having either limited or no significant impact, contribute little or no additional understanding or insight in the discipline or field, and/or is considered to be lacking in appropriate application of theory and/or methods.

Source: RQF Submission RQF010165