



Australian Government  
Australian Research Council

## DRAFT PILOT SUBMISSION GUIDELINES

# Consultation

RESEARCH in the national interest - enabling the future

Excellence in Research for Australia (ERA) Initiative

22 August 2008

# CONTENTS

<b>1. PILOT OVERVIEW</b> .....	<b>3</b>
1.1 Purpose of the Guidelines.....	3
1.2 ERA Overview.....	3
1.3 Purpose of the Pilot.....	3
1.3.1 Indicators Development Group.....	4
1.4 Pilot Timelines.....	4
1.5 Further Assistance.....	4
<b>2. PILOT SUBMISSIONS</b> .....	<b>5</b>
2.1 Scope.....	5
2.2 Pilot Submission Certification.....	5
<b>3. SUBMISSION DATA</b> .....	<b>6</b>
3.1 Research Outputs.....	6
3.1.1 Definition of Research.....	6
3.1.2 Research Outputs Reference Period.....	6
3.1.3 Eligible Researchers.....	7
3.1.4 Eligible Research Output Types.....	8
3.2 Research Income.....	11
3.2.1 Research Income Reference Period.....	12
3.2.2 Category 1 Income: Australian Competitive Grants.....	12
<b>4. OTHER MATTERS</b> .....	<b>13</b>
4.1 Privacy Complaints and Advice.....	13
4.2 Freedom of Information.....	13
4.3 Intellectual Property.....	13
<b>APPENDIX A</b> .....	<b>14</b>
<i>Eligible Institutions</i> .....	14
<b>APPENDIX B</b> .....	<b>15</b>
<i>SEER Technical Specifications – Preliminary Information</i> .....	15

## 1. PILOT OVERVIEW

### 1.1 Purpose of the Guidelines

The purpose of the *Excellence in Research for Australia (ERA) Pilot Submission Guidelines* is to provide an overview of, and specify the content and data requirements for, submissions to the ERA Pilot. It also provides guidance to eligible higher education providers (henceforth ‘institutions’) on policy and practical matters in preparing submissions.

Institutions considered in ERA are the eligible institutions listed at **Appendix A**.

Pilot data is to be submitted electronically via a system which is being specifically developed for ERA purposes. The system is called ‘SEER’ (System to Evaluate the Excellence of Research). **Appendix B** of these guidelines provides preliminary information on SEER. In September 2008 the ARC will provide a more detailed technical specification which will inform institutions on the specific technical requirements of the ERA Pilot.

It is expected that a separate set of *SEER Technical Specifications* will be issued following feedback from the sector upon completion of the ERA Pilot. These specifications will outline in greater detail the data and submission requirements for the formal ERA process.

### 1.2 ERA Overview

ERA will undertake evaluations of research in Australian institutions in each of eight clusters of disciplines. Disciplines are defined as four-digit Fields of Research (FoR) as identified in the Australian-New Zealand Standard Research Classification (ANZSRC).

ERA will evaluate research excellence using a combination of indicators and expert review by committees comprising experienced, internationally-recognised experts. These evaluations will be informed by three broad categories of indicators:

1. *Indicators of research activity and intensity*  
Indicators of research activity and intensity include research income and total number of research outputs.
2. *Indicators of research quality*  
Indicators of research quality include analysis of publications and other research outputs using ranked outlets, citation analysis and percentile analysis where relevant.
3. *Indicators of applied research and translation of research outcomes*  
Indicators of applied research and translation of research outcomes will be determined at a discipline-specific level.

For the purposes of the ERA Pilot only a narrow sample of data will be collected and no form of evaluation will be undertaken. The scope and data requirements for the Pilot are outlined in further detail in the remainder of these guidelines.

### 1.3 Purpose of the Pilot

The ERA Pilot aims to:

- facilitate the sector’s feedback on an early draft of the ERA Submission Guidelines;
- ensure that institutions can successfully make submissions via the Pilot iteration of SEER; and
- test that the SEER technology works in terms of core submission functionality.

### ***1.3.1 Indicators Development Group***

The ERA Pilot will not pre-empt decisions on issues to be considered by the Indicators Development Group (IDG). Therefore, these guidelines do not include detailed information on all elements which will be considered in the formal ERA submission process. Rather, they specifically focus on information which is relevant and necessary to achieve the aims of the ERA Pilot.

### **1.4 Pilot Timelines**

Institutions participating in the ERA Pilot are able to submit data from Wednesday 1 October until Friday 14 November 2008. SEER will not permit further data to be entered in the system for the purposes of the Pilot after this time.

### **1.5 Further Assistance**

Queries regarding the *ERA Pilot Submission Guidelines* should be directed to the ERA Team on (02) 6287 6755 or email [era@arc.gov.au](mailto:era@arc.gov.au).

As specified in the data dictionary, institutions are requested to provide Uniform Resource Identifiers (URIs) for each research output. Where institutions provide URIs to research outputs in their repositories, a member of the SEER Technical Team may contact the institution's nominated ERA Technical Contact Officer to discuss testing access to the repository. Research outputs that are stored in repositories must only be made available where the institution has a licence that gives them permission to do so.

## 2. PILOT SUBMISSIONS

### 2.1 Scope

For the purposes of the ERA Pilot, sample data is requested for the Physical, Chemical and Earth Sciences (PCE) Discipline Cluster only. This consists of all disciplines included in the table below:

	DISCIPLINE	FoR
	ASTRONOMICAL AND SPACE SCIENCES	0201
ATOMIC, MOLECULAR, NUCLEAR, PARTICLE AND PLASMA PHYSICS	0202	
CLASSICAL PHYSICS	0203	
CONDENSED MATTER PHYSICS	0204	
OPTICAL PHYSICS	0205	
QUANTUM PHYSICS	0206	
OTHER PHYSICAL SCIENCES	0299	
PHYSICAL CHEMISTRY (INCL. STRUCTURAL)	0306	
INORGANIC CHEMISTRY	0302	
ORGANIC CHEMISTRY	0305	
ANALYTICAL CHEMISTRY	0301	
MACROMOLECULAR AND MATERIALS CHEMISTRY	0303	
THEORETICAL AND COMPUTATIONAL CHEMISTRY	0307	
MEDICINAL AND BIOMOLECULAR CHEMISTRY	0304	
OTHER CHEMICAL SCIENCES	0399	
GEOLOGY	0403	
GEOFYSICS	0404	
GEOCHEMISTRY	0402	
OCEANOGRAPHY	0405	
PHYSICAL GEOGRAPHY AND ENVIRONMENTAL GEOSCIENCE	0406	
ATMOSPHERIC SCIENCES	0401	
OTHER EARTH SCIENCES	0499	

Institutions participating in the ERA Pilot are required to submit a sample of the following kinds of research item against one or more of the FoRs identified above:

- Research Outputs:
  - Books-Authored Research;
  - Book-Chapters in Research Book;
  - Journal Articles-Refereed, Scholarly Journal; and
  - Conference Publications.
  
- Research Income:
  - Australian Competitive Grants.

Institutions may choose the amount of each kind of data they wish to submit for the purposes of the Pilot. Further detail on the format in which this data must be submitted is also outlined in **Appendix B**.

### 2.2 Pilot Submission Certification

For the purposes of the ERA Pilot, institutions are not required to certify their submissions.

For the formal ERA submission process institutions will be responsible for collecting, validating and transmitting to the ARC all information in each cluster submission by the due date for each evaluation process. Institutions will also be responsible for certifying that all the reported information is accurate and comprehensive.

### **3. SUBMISSION DATA**

#### **3.1 Research Outputs**

For institutions to submit information on a research output, the research output must meet all of the following criteria:

1. meet the definition of research;
2. have been published within the research outputs reference period;
3. have one or more eligible researchers listed on the output; and
4. be an eligible research output type.

Further detail on each of these criteria is provided below.

For the purposes of the ERA Pilot, institutions are required to submit research output information only where it is listed against a FoR from the PCE Discipline Cluster. Institutions are required to ensure that research outputs are assigned to only one FoR code.

##### **3.1.1 Definition of Research**

For the purposes of ERA, research is defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.

This definition of research is consistent with a broad notion of research and experimental development (R&D) as comprising ‘creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise applications’.<sup>1</sup> This definition should be read as consistent with that used in the *2008 Higher Education Research Data Collection Specifications for the Collection of 2007 Data*.<sup>2</sup>

This definition of research should be used by institutions when determining the acceptability of research outputs for submission in ERA.

##### **3.1.2 Research Outputs Reference Period**

For a research output to be eligible for submission, the output must have been published within the research outputs reference period. For the purposes of ERA, ‘published’ is broadly defined to mean that the research output must have been published (in the case of traditional research outputs such as publications) or brought into the public domain.

The research outputs reference period is defined as the six-year period from 1 January 2002 until 31 December 2007. Earlier outputs are not eligible to be included.

The years of publication of a research output must appear on the output and/or in the information to be provided for each research output. Where the actual date of publication differs from the listed date of publication, institutions should be able to explain this variance on request by the ARC.

The year of publication is normally the most recent year indicated as published, printed or the year of copyright. Institutions should note that copyright dates or ‘date last updated’ which appear on web pages do not typically refer to a publication included on that page. Web page dates should not be used as evidence of the year of publication.

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<sup>1</sup> OECD (2002), *Frascati Manual: Proposed Standard Practice for Surveys on Research and Experimental Development*, OECD, Paris.

<sup>2</sup> [http://www.dest.gov.au/sectors/research\\_sector/online\\_forms\\_services/higher\\_education\\_research\\_data\\_collection.htm](http://www.dest.gov.au/sectors/research_sector/online_forms_services/higher_education_research_data_collection.htm)

#### *(a) Revisions*

There may be some cases in which a research output was revised following the publication of the output (e.g., snapshots of research outputs on a website). These outputs are only acceptable if the institution can demonstrate that the research output meets all the eligibility criteria.

#### *(b) Reprints and Multiple Editions*

Where there has been a reprint or new edition of a research output within the reference period and both versions are submitted, institutions are required to be able to state, on request by the ARC, how the reprint or new edition has contributed substantially new research.

Where there have been multiple prints or editions within the reference period, none of which constitute substantially more new research than the other, the institution may decide which edition or print is to be submitted. Institutions are responsible for ensuring that any revisions or reprints that occurred outside the reference period are not included as a research output.

#### *(c) Exceptions*

Where a research output was originally produced in a medium where no year of publication is stated within (e.g., in the byline) or on the output, a letter from an editor, conference organiser or publisher may be acceptable evidence to identify the year of publication. A letter cannot override a year of publication stated within the output. Institutions are required to be able to provide the letter on request by the ARC.

Provided no other date exists within or on the research output, the year an output was 'presented' may be acceptable evidence of the year of publication (e.g., to a conference in the case of a conference paper).

### **3.1.3 Eligible Researchers**

For institutions to submit information on a research output, the output must have one or more eligible researchers listed as an author either within (e.g., in the byline) or on the output being claimed. Eligible researchers must be affiliated on the staff census date.

#### *(a) Staff Census Date*

For the purposes of ERA, the staff census date is defined in accordance with the Higher Education Staff Data Collection. Researchers must be included as members of staff in the institution's submission to the staff data collection as at 31 March 2008.

#### *(b) Affiliation*

For the purposes of ERA, being "affiliated" means that, on the census date, the researcher meets one of the following criteria:

1. is an employee of, and derives more than 50 per cent of their annual earnings from, the eligible institution; or
2. is a holder of an adjunct appointment or equivalent at the eligible institution who does not have a substantive position or paid appointment elsewhere (either in Australia or internationally); or
3. derives more than 50 per cent of their annual earnings from an organisation that has demonstrated a publication association with an eligible institution.

'Earnings' means the amount paid directly or indirectly as remuneration for work a researcher undertakes or services they perform. It includes amounts paid under employment and/or consultancy arrangements.

‘Adjunct appointment or equivalent’ means that an institution has a formal agreement in writing with a researcher which is publicly acknowledged and which establishes an ongoing association with the institution, of the nature of a conjoint, emeritus or honorary academic or visiting fellow.

To demonstrate a researcher’s ‘publication association’ with an eligible institution, a researcher’s research output must list the name of any eligible institution within (e.g., in the byline) or on the research output. The output must still meet the other research output criteria (i.e., sections 3.1.1 and 3.1.2) and be an eligible output type.

Researchers are not considered affiliated if they do not meet one of the above criteria. Research outputs on which they are listed therefore may not be included unless another listed researcher meets the eligibility requirements. This means that in the case of researchers whose eligibility is determined by their publication association only those outputs that list the name of any eligible institution are eligible.

### **3.1.4 Eligible Research Output Types**

#### *(a) Books-Authored Research*

Institutions are required to submit information on all eligible books for each year of the research outputs reference period. Eligible books are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be a major work of scholarship;
- must have an International Standard Book Number (ISBN);
- must be entirely written by a single author, or by joint authors who share responsibility for the whole book; and
- must have been published by a commercial publisher (i.e., an entity for which the core business is producing books and distributing them for sale).

The following types of books are likely to meet the eligibility criteria for the ‘Book’ output type:

- critical scholarly texts;
- new interpretations of historical events; or
- new ideas or perspectives based on established research findings.

Many of the books published by professional bodies do not report original research findings but report the results of evaluations, or repackage existing information for the benefit of professionals or practitioners. It is important that institutions assess these publications very carefully against the definition of research and only count those books for this publication type which report research activities.

The following types of books are unlikely to meet the eligibility criteria for the ‘Book’ output type:

- textbooks;
- anthologies;
- edited books;
- creative works such as novels;
- translations; or
- revisions or new editions.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion the book according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each book against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

*(b) Book-Chapters in Research Book*

Institutions are required to submit information on all eligible book chapters for each year of the research outputs reference period. Book chapters refer to a contribution, consisting substantially of new material, to an edited compilation in which the material is subject to editorial scrutiny. Eligible book chapters are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be a chapter in a book that has an International Standard Book Number (ISBN); and
- must be a chapter in a book that has been published by a commercial publisher (i.e., an entity for which the core business is producing books and distributing them for sale).

The following types of book chapters are likely to meet the eligibility criteria for the 'Book Chapter' output type:

- scholarly introduction of chapter length to an edited volume, where the content of the introduction reports research and makes a substantial contribution to a defined area of knowledge;
- critical scholarly text of chapter length; or
- critical reviews of current research.

The following types of book chapters are unlikely to meet the eligibility criteria for the 'Book Chapter' output type:

- chapters in textbooks;
- entries in reference books;
- anthologies;
- revisions of chapters in edited books;
- forewords;
- brief introductions;
- brief editorials;
- appendices; or
- translations.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion book chapters according to the number of authors listed on either the book or the chapter. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each book chapter against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

*(c) Journal Articles-Refereed, Scholarly Journal*

Institutions are required to submit information on all eligible journal articles for each year of the research outputs reference period. Eligible journal articles are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must have been published in a scholarly journal;
- must have been peer-reviewed; and
- must have an International Standard Serial Number (ISSN).

For the purposes of ERA, an acceptable peer review process is one that involves an assessment or review, before publication, of the research output in its entirety by independent, qualified experts. Independent in this context means independent of the author.

Some journals may be regularly published as separate volumes with an ISBN rather than an ISSN. Provided that the publication is clearly identified as an edition of a journal, and not a book, articles in such publications may be eligible if they meet all other criteria.

For journal articles, any of the following are acceptable as evidence of peer review:

- the journal is indexed by one or more external citation suppliers;
- the journal is included in the ERA Journal Rankings;
- there is a statement in the journal which shows that contributions are peer reviewed;
- there is a statement or acknowledgement from the journal editor which shows that contributions are peer reviewed; or
- a copy of a reviewer's assessment relating to the article.

A statement from an author that a publication was peer reviewed is not sufficient evidence. The existence of a national or international advisory board is also not sufficient evidence that all relevant publications were assessed by its members.

The following types of journal article are likely to meet the eligibility criteria for the 'Journal Article' output type:

- commentaries and communications of original research;
- research notes;
- letters to journals, provided that the letter satisfies the definition of research and the subsequent definitions for journal articles provided above;
- critical scholarly texts which appear in article form;
- articles reviewing multiple works or an entire field of research;
- invited papers in journals;
- articles in journals which are targeted to both scholars and professionals; or
- articles in a stand alone series.

The following types of journal article are unlikely to meet the eligibility criteria for the 'Journal Article' output type:

- letters to the editor;
- case studies;
- articles designed to inform practitioners on existing knowledge in a professional field;
- articles in newspapers and popular magazines;
- editorials;
- book reviews; or
- brief commentaries and communications of original research.

These types of research outputs may be included for specific disciplines in the formal ERA process.

For the ERA Pilot, institutions are not required to apportion journal articles according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each journal article against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

#### *(d) Conference Publications-Full Paper Refereed*

Institutions are required to submit information on all eligible peer-reviewed conference publications for each year of the research outputs reference period. Eligible conference publications are those that, in addition to the criteria outlined in sections 3.1.1-3.1.3, meet the following criteria:

- must be published in full (the papers may appear in a number of different formats, e.g., a volume of proceedings, a special edition of a journal, a normal issue of a journal, a book or a monograph, CD- or DVD-ROM or conference or organisational website);
- must be peer reviewed (i.e., an assessment or review of the research publication has been undertaken by independent, qualified experts. Independent in this context means independent of the author); and
- must be presented at conferences, workshops or seminars of national or international significance.

Keynote addresses and invited papers may be included where all other papers for the conference are peer reviewed.

The types of conference publications that are unlikely to meet the criteria include papers that appear only in a volume handed out to conference participants.

For the ERA Pilot, institutions are not required to apportion conference publications according to the number of listed authors. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

Institutions are required to provide information on each conference publication against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

### **3.2 Research Income**

For the ERA Pilot, institutions are requested to only submit information related to 'Category 1' research income (i.e., Australian Competitive Grants).

Institutions are required to submit grant information only where it is listed by the institution against a FoR from the PCE Discipline Cluster. Institutions are required to ensure that research income is not double counted across multiple FoR codes.

For institutions to submit information on research income, the research income must:

1. meet the research income reference period requirements; and
2. be an eligible income category type, which, for the purposes of the ERA Pilot, refers only to 'Category 1' research income (i.e., Australian Competitive Grants).

Further detail on each of these criteria is provided below.

### **3.2.1 Research Income Reference Period**

For an institution to include research income, it must have been reported as part of the HERDC for the relevant year of the research income reference period. The research income reference period is defined as the three-year period from 1 January 2005 to 31 December 2007.

Institutions are required to ensure that reporting of grant information from research income for one year does not occur for another year of the reference period.

It is recognised that the year a grant is awarded may differ from the year(s) income was received. Institutions may therefore include a grant where some or all of the income was received in the reference period.

### **3.2.2 Category 1 Income: Australian Competitive Grants**

Institutions are required to only submit grant information on Australian Competitive Grants where it was submitted as part of the HERDC for the relevant year of the research income reference period. The *HERDC Specifications* for the relevant year should be used to determine the eligibility of the income unless otherwise indicated.

Institutions are required to provide information on each eligible grant against the fields outlined in **Appendix B**. It is expected that there will be some additional fields required for the formal ERA process.

For the ERA Pilot, institutions are not required to apportion research income across more than one FoR. Further guidance on apportionment for the formal ERA process will be provided following consideration by the IDG.

## 4. OTHER MATTERS

### 4.1 Privacy Complaints and Advice

The ARC is bound, in administering ERA, by the provisions of the *Privacy Act 1988* ('Privacy Act'). Section 14 of the Privacy Act contains the Information Privacy Principles (IPPs) which prescribe the rules for handling personal information. In brief, the IPPs require that:

- personal information is collected in accordance with IPPs 1-3;
- suitable storage arrangements, including appropriate filing procedures, are in place;
- suitable security arrangements exist for all records containing personal information;
- access to a person's own personal information held by an organisation is made available to the person at no charge;
- records are accurate, up-to-date, complete and not misleading;
- where a record is found to be inaccurate, the correction is made;
- where a person requests that a record be amended because it is inaccurate, but the record is found to be accurate, the details of the request for amendment are noted on the record; and
- the personal information is only to be used for the purposes for which it was collected, or for other purposes where expressly allowed by IPP 10.

Complaints about breaches of privacy should be referred to:

The Privacy Contact Officer  
Research Excellence Branch  
Australian Research Council  
GPO Box 2702  
Canberra ACT 2601

Privacy complaints may also be emailed to [era@arc.gov.au](mailto:era@arc.gov.au).

Privacy complaints can be made directly to the Federal Privacy Commissioner. However the Commissioner prefers that the ARC be given an opportunity to deal with the complaint in the first instance.

### 4.2 Freedom of Information

All documents sent to the ARC with regard to ERA are subject to the *Freedom of Information Act 1982* ('FOI Act'). Unless a document falls under an exemption provision, it will be made available to the general public if requested under the FOI Act. Decisions regarding requests for access will be made by the ARC's authorised FOI decision-maker in accordance with the requirements of the FOI Act.

### 4.3 Intellectual Property

The ARC does not claim ownership of any intellectual property submitted by an institution as part of a cluster submission for ERA. However institutions are required to give an express licence to the ARC for the use of material submitted as part of ERA for the purposes of ERA.

The ARC retains the intellectual property in all materials created by the ARC, except where it is limited by licence with external suppliers.

## **APPENDIX A**

### ***Eligible Institutions***

Australian Catholic University  
Batchelor Institute of Indigenous Tertiary Education  
Bond University  
Central Queensland University  
Charles Darwin University  
Charles Sturt University  
Curtin University of Technology  
Deakin University  
Edith Cowan University  
Flinders University  
Griffith University  
James Cook University  
La Trobe University  
Macquarie University  
Melbourne College of Divinity  
Monash University  
Murdoch University  
Queensland University of Technology  
RMIT University  
Southern Cross University  
Swinburne University of Technology  
The Australian National University  
The University of Adelaide  
The University of Melbourne  
The University of New England  
The University of New South Wales  
The University of Newcastle  
The University of Notre Dame Australia  
The University of Queensland  
The University of Sydney  
The University of the Sunshine Coast  
The University of Western Australia  
University of Ballarat  
University of Canberra  
University of South Australia  
University of Southern Queensland  
University of Tasmania (incorporating Australian Maritime College)  
University of Technology, Sydney  
University of Western Sydney  
University of Wollongong  
Victoria University

## APPENDIX B

### *SEER Technical Specifications – Preliminary Information*

The information technology capability of the ERA initiative is being provided by an online platform known as ‘SEER’.

A full technical description of the interfaces to the SEER platform will be made available to institutions as part of the *SEER Technical Specifications* which will be issued following feedback from the sector upon completion of the ERA Pilot.

The SEER platform is a web-based service that collates research information and will support the evaluation and administration workflows of the formal ERA process. The pilot platform is limited in scope in that it serves only to allow institutions to upload (and verify the validity of) pilot submissions and to give institutions an indication of the technical requirements for institutions to interface with SEER for the formal ERA process.

The high-level pilot system workflow can be summarised as follows:

- 1. preparation and submission:** institutions collate their body of research item metadata as a compliant XML document (i.e., their ERA submission). This XML document is then uploaded into SEER by an institutional user via the web user interface;
- 2. verification:** institutions verify the results of their uploaded submissions and re-submit where necessary;
- 3. review:** ERA initiative staff access the SEER system to review the submissions process and data.

### **System Access**

The interfaces to SEER are solely web based. Institutional pilot users will each be allocated login usernames and passwords with which they can authenticate to the web user interface. An institutional user must authenticate to SEER to upload ERA submission packages and to access reports regarding submissions.

No role-based authorisation will apply for user accounts during the pilot phase. Role-based authorisation of user accounts will be instituted for the subsequent “live” SEER as part of the formal ERA process and will be outlined in the *SEER Technical Specifications* to determine which operations a user has access to.

### **Technical Submission Requirements**

The SEER pilot platform requires a “push” upload of institutional ERA submissions in an XML format. Institutions are thus required to collate the metadata related to their body of eligible research item data into an aggregated XML data structure. This structure must be compliant with the pilot XML Schema as prescribed by SEER. The specification and documentation for the pilot XML Schema will be presented in a more detailed technical specification which will inform institutions on the specific technical requirements of the ERA Pilot. This pilot XML Schema will serve only for the duration of the ERA pilot, after which time it will be modified and extended to support subsequent releases of SEER.

Once an institution has aggregated its ERA submission research item records into a single XML document instance, this document is to be uploaded to SEER via the web user interface. Any errors in an XML submission will be immediately reported to the institutional user allowing for correction and re-upload of a submission where necessary.

The SEER pilot XML Schema will incorporate the data elements described in the data dictionary outlined below. Research output-related information in this dictionary has been specified with

reference to the Dublin Core (DC) standard where appropriate and available. Other information in the dictionary has been specified in accordance with existing standards. Where the dictionary is based on existing standards this has been noted on in the description. It is expected that further refinements will be made following feedback from the sector upon completion of the ERA Pilot. The dictionary is a set of definitional terms and not a representation of data structures. This information will be supplied as part of the more detailed technical specification.

### **Success Criteria**

An institution's interaction with the SEER pilot platform will be considered successful based on completion of the following operations:

- successful upload of XML structured ERA submission; and
- retrieval of reports from the SEER system that meet institutional expectations.

## SEER Pilot Data Dictionary

Group	Element	Type	Length	Mandatory (M) or Optional (O)	Description
Author	orderInOutput	String	3	M	The order in which the author is listed on the Research Output. ( <b>DC:</b> the Creator)
Bibliometric Key	indexProvider	String	100	O	Name of the external index provider.
Bibliometric Key	uniqueIdentifier	String	36	O	The value of the metrics reference key.
Name	firstName	String	100	O	The first or given name of a person (eg. the author for a Research Output).
Name	lastName	String	100	M	The last name, family name or surname of a person (eg. a Researcher).
Name	middleName	String	100	O	Any other given name(s) of a person.
Research Income	annualValue	integer	10	M	The value of the Research Income received for a grant for a year to the nearest thousand dollars.
Research Income	herdcCategory	integer	2	O	The identifier for the category of Research Income. That is, 1 = Australian Competitive Grants 2 = Other Public Sector 3 = Industry and Other 4 = Cooperative Research Centre
Research Income	program	String	1000	O	The name of the program against which a Research Income grant is reported.
Research Income	value	integer	10	M	The total dollar value of a Research Income item to the nearest thousand dollars.
Research Income	yearAwarded	String	4	O	The full (4-digit) calendar year in which a Research Income Item was awarded.
Research Income	yearClaimed	String	4	M	The full (4-digit) calendar year against which a Research Income item is being claimed.
Research Outlet	discipline	String	6	O	The group-level FoR code which describes the focus of the Research Outlet. ( <b>ANZSRC:</b> Group).

Research Outlet	issue	String	3	O	The issue number of the Research Outlet.
Research Outlet	name	String	100	M	The name of the Research Outlet (for a Journal, where available use the standard Journal Name as specified in the Ranked Journal List).
Research Outlet	volume	String	3	O	The volume number of the Research Outlet.
Research Output	discipline	String	6	O	The group-level FoR code which describes the focus of the Research Output. (ANZSRC: Group).
Research Output	edition	String	3	O	The edition of the Research Output.
Research Output	electronicLocation	String	255	O	The Uniform Resource Identifier (e.g., URL, Handle, DOI, etc.) that links to the Research Output.
Research Output	ISBN	String	8	O	The standard number for the Research Output. Only digits and characters with no spacing or punctuation should be provided.
Research Output	ISSN	String	8	O	The standard number for the Research Output. Only digits and characters with no spacing or punctuation should be provided.
Research Output	language	String	100	O	Language of the title of the Research Output if other than English. (DC: A language of the resource)
Research Output	outputType	String	2	M	The identifier for the type of Research Output. That is, 1 = Book 2 = Book Chapter 3 = Journal Article 4 = Conference Publication
Research Output	physicalLocation	String	100	O	The physical location of the Research Output if not in a repository. (DC: Location)
Research Output	placeOfPublication	String	100	O	The location in which the Research Output was published. (DC: Place of publication)
Research Output	publisher	String	100	O	The entity responsible for making the Research Output available. (DC: The entity responsible for making the resource available)

Research Output	publisherDiscipline	String	6	O	The group-level FoR that describes the discipline focus of the Research Output in the context of the Publisher for the purposes of ranked publisher indicators. (ANZSRC: Group).
Research Output	title	String	500	M	The title of the Research Output. (DC: The name given to the resource)
Research Output	totalPages	String	6	O	The total number of pages of the Research Output. (DC: Extent - the size or duration of the resource)
Research Output	yearAvailable	String	4	O	The full (4-digit) calendar year in which the Research Output was first available if different to the published year.
Research Output	yearPresented	String	4	O	The full (4-digit) calendar year in which the Research Output was presented (if different to the published year).
Research Output	yearPublished	String	4	M	The full (4-digit) calendar year in which the Research Output is published. (DC: Date).
Research Output	staffReference	String	10	M	A reference given by the institution to allow a researcher to be assigned to a research output they are associated with.