Research Publications Reporting

This information is highly relevant to all Notre Dame members of staff who are engaged in research, the administration of research activity, and the reporting of research activity. This may include Administration Officers in Schools, Deans and Directors, as well as academics, including sessional and adjunct staff. This document outlines and explains the following research related reporting processes, research classifications and supporting software.

Integrated Research Management Application (IRMA)

Higher Education Research Data Collection (HERDC)

Excellence in Research for Australia (ERA)

Fields of Research (FoR)

Socio-economic Objective (SEO)
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1. Integrated Research Management Application (IRMA)

IRMA (Integrated Research Management Applications) is the Research Management System (RMS) recently adopted by the University of Notre Dame Australia to manage its research activities and outputs.

IRMA is different to ResearchOnline@ND, and has a unique, if complementary role within the University. While ResearchOnline is a repository for the University’s research output and showcases our researchers’ works to the world, it does not have the reporting capacity needed by the University to comply with government and internal reporting requirements.

IRMA has been designed to create the appropriate reports in the correct format for ERA and HERDC as well as allowing for School by School reporting or reports of outputs by individual researchers. Research data collected by IRMA will be forwarded to ResearchOnline so that the University’s outputs are accessible to the wider research community. As such, research information is submitted once but utilised by both systems for their different purposes.

The IRMA system offers several modules including Publications, Contracts and Grants, ERA, Higher Degree Research (HDR) students, Ethics, Projects and Reporting. The University is implementing the Publications, Contracts and Grants, and HDR modules in the first instance.

Publications Module

The Publications Module manages information about published research outputs by Notre Dame researchers, research students and professional staff, and makes this information available to ResearchOnline@nd.

Outputs include books, book chapters, journal articles, conference papers, reports and creative works. Staff in the Research Office currently enter all publications data into IRMA. These data are obtained from a number of sources. Details about many books, book chapters, journal articles, and
conference publications are documented as part of the annual Higher Education Research Data Collection (HERDC) requirements of the Department of Education (DoE).

Publications information is also sourced from Schools and Research Centres, individual researchers, the CVs of new staff and from a number of key databases such as Scopus. Individuals can notify the Research Office about new or missing publications at any time.

Each publication is assigned a research output category according to the following classification system:

**Publication Categories**

**Books**
- A1 - Book Authored - Research
- A2 - Book Authored - Other
- A3 - Edited Book
- A4 - Revision/New Edition/Reprint

**Book Chapters**
- B1 - Book Chapter - Research
- B2 - Book Chapter - Other

**Journal Articles**
- C1 - Refereed Journal articles
- C2 - Other contribution to a refereed journal
- C3 - Non Refereed Journal Article
- C4 - Letter or note
- C5 - Edited Journal Issue

**Conference Proceedings**
- E1 - Conference Publication - Full/refereed
- E2 - Conference Publication - Full/NON-refereed
- E3 - Extract of paper - eg. Abstract/Poster
## Computer Software
- **E4 - Edited Conference Proceedings**

## Patents
- **G1 - Computer Software**
- **I1 - Patents**

## Reference Work
- **K1 - Encyclopedia/Dictionary over 4000 words**
- **K2 - Encyclopedia/Dictionary under 4000 words**

## Reports
- **L1 - Contract Report**
- **L2 - Technical Report**
- **L3 - Internal Report**
- **L5 – Public Sector Report**

## Internal
- **M1 - Internal Working Paper**

## Newspaper/Magazine
- **N1 - Magazine article**
- **N2 - Newsletter**
- **N3 - Newspaper article**

## Creative Works
- **Q1 - Original Work - Textual**
- **Q2 - Original Work - Other**
- **R1 - Live Performance - Play**
- **R2 - Live Performance - Other**
- **S1 - Recorded/Rendered Work - Film/Video**
- **S2 - Recorded/Rendered Work - Radio**
- **S3 - Recorded/Rendered Work - Other**
- **T1 - Curated Work - Exhibition/Event**
- **T2 - Curated Event - Festival**

## Other Outputs
- **X1 - Interview**
- **X3 - Research Outputs not covered elsewhere**
- **X4 - Thesis - PhD/Masters**
Please note: Research submitted to IRMA does not have to be HERDC reportable, just as has been the case for ResearchOnline@ND.

Each submission must be assigned at least one Field of Research and at least one Socio Economic Objective. Researchers are encouraged to consult with their Dean or Research Office should they wish to discuss the implications of this further, or if they need assistance.

Researchers will complete an online form to detail each research output.

All publications data is then verified by the Research Office before it is entered into IRMA. Researchers may be requested to provide missing data or further information from time to time.

**Required Data -** The Publications module has a number of fields, grouped into tabs:

<table>
<thead>
<tr>
<th>Header</th>
<th>Information which generally describes a publication such as its title and year of publication, number of internal and external authors, ISBN/ISSN, publisher, place of publication, volume, issue, pagination, DOI and notes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors</td>
<td>Names of all internal ND and external authors identified on the publication. Authors are linked to the school/s or unit claiming the publication.</td>
</tr>
<tr>
<td>Documents</td>
<td>Copies of files in pdf, doc, wav, mp3, xls, tif, tiff, jpg, jpeg, mov, wma, docx, xlsx file types can be</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Brief notes about the publication.</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td><strong>Coding</strong></td>
<td>Up to 3 Field of Research (FoR) subject codes and up to 3 Socio-Economic Objective (SEO) codes and their associated percentages can be assigned. FoR and SEO codes are obtained from the Australian and New Zealand Standard Research Classification (ANZSRC), available at <a href="http://www.arc.gov.au/pdf/ANZSRC_FOR_codes.pdf">http://www.arc.gov.au/pdf/ANZSRC_FOR_codes.pdf</a></td>
</tr>
<tr>
<td><strong>Verification</strong></td>
<td>Allows verification check list to be completed for all DIISR publications.</td>
</tr>
<tr>
<td><strong>Summary</strong></td>
<td>Used primarily for calculating DIISR points for authors/schools.</td>
</tr>
<tr>
<td><strong>Grants</strong></td>
<td>Used to link the publication with a particular research grant.</td>
</tr>
</tbody>
</table>
2. Higher Education Research Data Collection (HERDC)

The information in this section has been extracted from the following publication:


The Higher Education Research Data Collection (HERDC) comprises research income and research publications data submitted by universities each year.

Notre Dame (ND) collects all information on research publications published by staff, students, and honorary associates (e.g. Adjunct staff). This data is reported on an annual basis as required by the Department of Education (DoE). The collation of accurate data is important because:

- The HERDC collection is a key contributor towards research funding,
- The Department uses the data to calculate performance based funding allocations (more information is available from the Department website: http://education.gov.au/), and
- It helps to maintain up to date data for the University’s internal purposes, e.g. the Research Incentive Scheme (RIS), compact negotiations, Institutional Performance Portfolio and ERA.

Universities are subject to audit to ensure submitted data meets the Department’s specifications.

HERDC Research Output Categories

Book – Authored Research, major work of scholarship (A1)

Book Chapter – Subject to editorial scrutiny (B1)

Journal Article – Refereed, Scholarly Journal (C1)

Conference Publication – Full Paper, Refereed (E1)

For HERDC eligibility **institutional affiliation must be demonstrated** by the naming of The University of Notre Dame Australia in the author’s by-line. A footnote or statement in the publication indicating that the research leading to publication was undertaken in the author’s capacity as a staff member or student of ND is also sufficient proof of affiliation. Where the by-line shows that an author has affiliation to more than one institution, each Australian university named in the by-line can claim the publication at full value.


> 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 leads to new and creative outcomes.

> This definition of research is consistent with a broad notion of research and experimental development (R&D) as comprising of 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 new applications. (OECD (2002), Frascati Manual: Proposed Standard

This definition of research encompasses pure and strategic basic research, applied research and experimental development (2013, 7-8).

Works in any format, including electronic works, are eligible to be counted, provided they meet all relevant criteria for the publications category against which they are being claimed. Further detail regarding each of the HERDC research output categories is as follows.

BOOK – Authored Research, major work of scholarship (A1)

Eligibility

In order to be included as an A1 research output, the book must meet the definition of research and ALL of the following:

- be a major work of scholarship
- have an International Standard Book Number (ISBN)
- be written entirely by a single author, or by joint authors who share responsibility for the whole book
- have been published by a commercial publisher, or if not published by a commercial publisher, must have been peer reviewed:

  Publication is more than the production of a book. It includes quality control such as peer review or equivalent in-house quality control through processes such as expert assessment or review, as well as editing, copy-editing, design, and conversion of the work to an appropriate format.

- the author must be affiliated with ND
Types of books that may meet the criteria include:

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

Scholarly editions and scholarly translations must have a major demonstrable original research component in the edition or translation to be considered for inclusion.

The type of book that is unlikely to meet the criteria:

- textbook
- anthology
- edited book
- creative work such as a novel
- translation (unless it has a major demonstrable original research component)
- revision or new edition
- manual or handbook
- thesis (PhD, Masters and Honours)

Verification requirements

To be included in the HERDC A1 collection, ND needs to provide PDF documentation of the following details for each entry:

- title page
- bibliographic details - ISBN, publisher, all dates referring to copyright, publication, place of publication and printing
- table of contents
- evidence of the author's affiliation to the University of Notre Dame Australia (contributor information pages from the publication when available)
BOOK CHAPTER – Subject to editorial scrutiny (B1)

Eligibility

In order to be included as a B1 research output, the chapter must meet the definition of research and **ALL** of the following:

- have an International Standard Book Number (ISBN)
- have been published by a commercial publisher, or if not published by a commercial publisher, must have been peer reviewed:

  Publication is more than the production of a book. It includes quality control such as peer review or equivalent in-house quality control through processes such as expert assessment or review, as well as editing, copy-editing, design, and conversion of the work to an appropriate format.

- have at least one author of the chapter affiliated with The University Notre Dame Australia

Types of book chapters that may meet the criteria include:

- a 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
- a critical scholarly text of chapter length
- critical reviews of current research.
- A book chapter may be included if it has been published previously as long as it constitutes **substantial new knowledge** and constitutes original research.
The type of book chapter that is unlikely to meet the criteria:

- a chapter in a textbook
- an entry in a reference book
- an anthology
- a revision of a chapter in an edited book
- a foreword
- a brief introduction
- a brief editorial
- an appendix
- a literary or creative piece such as a short story; and
- a translation (unless it has a major demonstrable original research component)

Verification requirements

To be included in the HERDC collection, the University needs to provide PDF documentation, from the publication, of the following details for each B1 entry:

- title page
- bibliographic details - ISBN, publisher, place of publication, all dates referring to copyright, publication and printing
- full table of contents
- evidence of the author’s affiliation to the University of Notre Dame (contributor information pages from the publication when available)
- a copy of the full chapter being claimed
- copy of the footnotes and/or references related to the chapter if not within the text or at the end of the chapter
- if claiming a new chapter in a revised edition, the table of contents of the previous edition is required. If there is a chapter with the same title in previous editions, we will also need a copy of that chapter to show the new chapter is substantially different.
JOURNAL ARTICLE – Refereed, Scholarly Journal (C1)

Eligibility

In order to be included as a C1 research output, the journal article must meet the definition of research and ALL of the following:

- be published in a scholarly journal
- have been peer reviewed in full
- have an International Standard Serial Number (ISSN)
- have at least one author affiliated with the University of Notre Dame Australia

The types of journal articles that may meet the criteria include:

- commentaries and communications of original research
- research notes
- letters to journals, provided that the letter satisfies the definition of research and the requirements for journal articles in this section
- 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
- articles in a stand alone series

The type of journal article that is unlikely to meet the criteria is:

- a letter to the editor
- a case study
- an article designed to inform practitioners on existing knowledge in a professional field
- an article in a newspaper or popular magazine
- an editorial
- a book review
• a brief commentary or communication of original research
• a review of an art exhibition, concert, theatre production.

Verification requirements

To be included in the HERDC collection, the University needs to provide PDF documentation of the following details for each C1 entry:

• a copy of the full published article
• proof of peer reviewing
• bibliographic details - journal name, volume/issue and dates referring to publication and copyright (if not on the article itself, we would need copies of the front of the journal with that information and a contents page)
• evidence of the author's affiliation to the University of Notre Dame Australia

CONFERENCE PUBLICATIONS – Full Paper, Refereed (E1)

Eligibility

In order to be included as an E1 research output, the conference publication must meet the definition of research and ALL of the following:

• be published in full in any of the following formats: a volume of proceedings, a special edition of a journal, a normal issue of a journal, a book or a monograph, CD Rom or conference/organisation website
• the full paper must be peer reviewed
• be presented at a conference, workshop or seminar of national or international significance
• have at least one author affiliated with the University of Notre Dame Australia
• a conference paper can be counted once only, even if published in more than one format, e.g. if a conference paper is later published in
a special issue of a journal, it cannot be claimed in this journal if it was first published in a separate proceedings

**The type of conference publication that does not meet the criteria:**

- a paper that appears only in a volume handed out to conference participants
- a keynote address
- a plenary address
- a poster presentation
- an abstract of a conference publication

**Verification requirements**

To be included in the HERDC collection, the University needs to provide PDF documentation from the publication of the following details for each E1 entry:

- a copy of the full article (from the published Proceedings), i.e. not an author's copy of the paper
- proof of full paper peer review
- proof of the national or international significance of the conference
- evidence of the author's affiliation to the University of Notre Dame Australia

Please check the HERDC Guidelines for more detailed information about the eligibility/ineligibility of research outputs.

**Publication Points**

As part of the government reporting process, HERDC-eligible publications are allocated a score, 1 for each chapter, journal article or conference paper, and 5 for research books.
Books receive a weighting, so publications may be reported as raw numbers, or weighted numbers – an unweighted book also receives a score of 1.

These scores are allocated according to the total number of authors – an article with two authors, one from Notre Dame and one from another institution, would receive 0.5 points; two Notre Dame authors would receive 0.5 points each. Note that a complex formula is used to determine points for book chapters – details are available in the HERDC Specifications document.

Points are calculated automatically in IRMA.
3. Excellence in Research for Australia (ERA)

The information in this section has been extracted from the following publication:


Excellence in Research for Australia (ERA) is an assessment system that evaluates the quality of the research conducted at Australian higher education institutions. In 2015 the third ERA assessment exercise will take place, following those in 2010 and 2012.

Assessment is based on four categories of indicators:

- Research quality, including publishing behaviour, citation analysis, peer review by ERA reviewers, and peer reviewed Australian and international research income;
- Research volume and activity, based on the total of research outputs, research income, and other research items related to the profile of eligible researchers;
- Research application, including research commercialisation income, patents and registered designs, Plant Breeder’s Rights, and NHMRC endorsed guidelines;
- Recognition, based on a limited range of esteem measures.

An ERA submission includes data about eligible researchers, research outputs, research income, applied measures, and esteem measures, and may include explanatory statements describing research activity in disciplines. To be eligible, researchers must be affiliated with the institution on the staff census date (not yet released for ERA2015).

Research outputs must meet the definition of research, have been published during the reference period (not yet released for ERA2015), have one or more eligible researchers listed as author(s), and be an eligible output type (research books, chapters in research books, journal articles...
and fully published and refereed conference papers, as well as some “non-traditional” types of research output, ie creative works and commissioned reports).

For the purposes of ERA, disciplines are defined at four-digit and two-digit Fields of Research (FoRs) as identified in the Australian and New Zealand Standard Research Classification (ANZSRC).

Data for ERA are submitted at the four-digit FoR level. Indicators are calculated at the four-digit and two-digit FoR levels based on the data submitted for each institution, and this information is aggregated to create four-digit and two-digit Units of Evaluation.

Low Volume Thresholds

To ensure that there is a meaningful level of data to be evaluated, a ‘low volume threshold’ exists for each Unit of Evaluation in ERA.

For disciplines where citation analysis is used, the low volume threshold is 50 apportioned indexed journal articles over the six year research outputs reference period. Articles must have been published in journals which appear in the ERA Journal List, and must have been included in the citation data provided by the ERA citation data provider (not yet announced for ERA 2015).

For disciplines where peer review is used, the low volume threshold is the equivalent of 50 submitted apportioned research outputs. For these disciplines, books are given a weighting of 5:1. 30% of each type of research output included in the Unit of Evaluation must be nominated for peer review.

Despite these low volume thresholds, all eligible research outputs are included in an institution’s ERA submission, whether or not Units of Evaluation meet the threshold.
Evaluation of ERA submissions is carried out by Research Evaluation Committees (RECs) comprising experienced, internationally recognised experts.

**ERA Rating Scale**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Outstanding performance well above world standard</td>
</tr>
<tr>
<td>4</td>
<td>Performance above world standard</td>
</tr>
<tr>
<td>3</td>
<td>Average performance at world standard</td>
</tr>
<tr>
<td>2</td>
<td>Performance below world standard</td>
</tr>
<tr>
<td>1</td>
<td>Performance well below world standard</td>
</tr>
<tr>
<td>N/A</td>
<td>Not assessed due to low volume</td>
</tr>
</tbody>
</table>

Detailed information about ERA including ERA 2015 is available from the ARC website:

The information in this section has been extracted from the following publication:


The Australian and New Zealand Standard Research Classification (ANZSRC) is jointly produced by the Australian Bureau of Statistics (ABS) and Statistics New Zealand (Statistics NZ).

ANZSRC is the collective name for a set of three related classifications developed for use in the measurement and analysis of research and experimental development (R&D) undertaken in Australia and New Zealand. The three constituent classifications included in the ANZSRC are:

- Type of Activity (TOA) (not discussed in this document)
- Fields of Research (FoR), and
- Socio-economic Objective (SEO) – discussed below.

The categories in FoR classification include major fields and related sub-fields of research and emerging areas of study investigated by businesses, universities, tertiary institutions, national research institutions and other organisations.

The FoR is a hierarchical classification with three levels, namely Divisions (2 digits), Groups (4 digits) and Fields (6 digits). Each level is identified by a unique number.

Each Division is based on a broad discipline. Groups within each Division are those which share the same broad methodology, techniques and/or
perspective as others in the Division. Each Group is a collection of related Fields of research.

Consistent use of the following general procedures should ensure consistent and successful use of the classifications.

A research project or research program is to be allocated to a FoR field in a hierarchical manner. This is achieved by:

- first determining the division in which the largest component of the research project or research program is being performed; then
- determining the most relevant group within that division; and then
- determining the most relevant field within that group.

**FoR Division codes and titles**

01 Mathematical Sciences  
02 Physical Sciences  
03 Chemical Sciences  
04 Earth Sciences  
05 Environmental Sciences  
06 Biological Sciences  
07 Agricultural and Veterinary Sciences  
08 Information and Computing Sciences  
09 Engineering  
10 Technology  
11 Medical and Health Sciences  
12 Built Environment and Design  
13 Education  
14 Economics  
15 Commerce, Management, Tourism and Services  
16 Studies in Human Society  
17 Psychology and Cognitive Sciences  
18 Law and Legal Studies  
19 Studies in Creative Arts and Writing
20 Language, Communication and Culture  
21 History and Archaeology  
22 Philosophy and Religious Studies

Examples of Divisions, Groups and Fields

<table>
<thead>
<tr>
<th>Level</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>11 Medical and Health Sciences</td>
</tr>
<tr>
<td>Group</td>
<td>1103 Clinical Sciences</td>
</tr>
<tr>
<td>Field</td>
<td>110317 Physiotherapy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division</td>
<td>13 Education</td>
</tr>
<tr>
<td>Group</td>
<td>1302 Curriculum and Pedagogy</td>
</tr>
<tr>
<td>Field</td>
<td>130209 Medicine, Nursing and Health Curriculum and Pedagogy</td>
</tr>
</tbody>
</table>

The University’s ERA submission includes data about eligible researchers, research outputs, research income, applied measures, and esteem measures, and may include explanatory statements describing research activity in disciplines. For the purposes of ERA, disciplines are defined as four-digit and two-digit Fields of Research.
As an example, FoR codes may be used to describe the University’s Research Focus Areas as outlined in the Strategic Plan 2013-2016.

<table>
<thead>
<tr>
<th>Research Focus Area</th>
<th>FoR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous Research</td>
<td>169902 Studies of Aboriginal and Torres Strait Islander Society</td>
</tr>
<tr>
<td>Health</td>
<td>11 Medical and Health Sciences</td>
</tr>
<tr>
<td>Ethics</td>
<td>2201 Applied Ethics</td>
</tr>
<tr>
<td>Philosophy</td>
<td>2203 Philosophy</td>
</tr>
<tr>
<td>Theology</td>
<td>2204 Religion and Religious Studies</td>
</tr>
<tr>
<td>Catholic Education</td>
<td>130211 Religion Curriculum and Pedagogy</td>
</tr>
</tbody>
</table>

According to the University’s Compact 2014-2016:

11 is an FoR we anticipate will show improvement in the next ERA evaluation, based on the number of publications across the field which were included in the 2012 ERA submission.

Outputs in the 1102, 1103 and 1117 FoR codes reached the low volume threshold in 2012, with a number of other FoRs getting close to the threshold. These included 1106, 1110, and 1114.

The CRN will also impact on this area, though not in time for ERA 2015.

FoR 1699 was not close to the low volume threshold in 2012, and is not likely to reach the threshold for 2015, but it is an area we expect to improve in given the CRN focus.
5. Socio-economic Objective (SEO)

The information in this section has been extracted from the following publication:


The ANZSRC SEO classification (http://www.abs.gov.au/Ausstats/abs@.nsf/Latestproducts/CF7ADB06FA2DFD69CA2574180004CB82?opendocument) allows R&D activity in Australia and New Zealand to be categorised according to the intended purpose or outcome of the research, rather than the processes or techniques used in order to achieve this objective.

The purpose categories include processes, products, health, education and other social and environmental aspects in Australia and New Zealand that R&D activity aims to improve.

Structure of the SEO Classification

SEO codes are required for both the ERA assessment and the Australian Bureau of Statistics Survey of Research and Development Higher Education reports which the University is required to participate in biennially.

The SEO is a hierarchical classification with four levels, namely Sector (letter), Divisions (2 digits), Groups (4 digits) and Objectives (6 digits).

While the Sector forms part of the hierarchical structure of the SEO, it is used only for grouping divisions for publication of R&D data, not for data
collection. Sectors are identified by a letter, while the lower levels of the classification are identified by unique numbers.

Each Division is based on a broad research objective. Groups within each Division are those which are aligned towards the same objective as the Division. Each Group is a collection of related research Objectives. Groups and research objectives are categorised to the Divisions with which they are most closely aligned.

An example of the hierarchical structure of the SEO classification system:

<table>
<thead>
<tr>
<th>Level</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector</td>
<td>B: Economic Development</td>
</tr>
<tr>
<td>Division</td>
<td>86 Manufacturing</td>
</tr>
<tr>
<td>Group</td>
<td>8607 Agricultural Chemicals</td>
</tr>
<tr>
<td>Objective</td>
<td>860702 Chemical Fertilisers</td>
</tr>
</tbody>
</table>

**Expanding Knowledge**

Due to their unique nature some divisions have only one Group within them. For example, the Defence and Expanding Knowledge Divisions each contain only one group. However, these Divisions still follow hierarchical principles and contain a number of Objectives.

Sector E, Expanding Knowledge is for the categorisation of R&D which does not have an identifiable socio-economic objective. This is usually the case for pure basic research or strategic basic research.

The conceptual framework adopted for the development of the SEO uses
R&D activities according to the objective or outcome of the research undertaken, rather than the processes and techniques used in the R&D.

**Guidelines for classifying by SEO**

Consistent use of the following general procedures should ensure consistent and successful use of the classification among users.

A research project or research program should first be considered in its broadest sense and in terms of the dominant beneficiary of the research output at the conclusion of the research project or research program. A research project or research program is to be allocated to a SEO objective in a hierarchical manner. This is achieved by:

- first determining the most relevant sector in which the largest component of the research project or research program is being performed; then
- determining the most relevant division within that sector; then
- determining the most relevant group within that division; and then
- determining the most relevant objective within that group.

Many R&D projects will be a homogeneous body of work directed towards a specific objective. These are more straightforward to categorise. However, if the project or program is sufficiently large or complex (in terms of research areas) then multiple fields should be selected and attributed with a proportion of resources relative to the project's or program's total R&D expenditure. If the disaggregation is difficult, consideration of relative importance may indicate a primary objective only (whether a specific or more general subject focus).

Where a defined objective cannot be identified within a group for a research project or research program, the 'not elsewhere classified' category at the objective level is to be used.
SEO sector and Division Codes and Titles

Sector A: Defence
   81 Defence

Sector B: Economic Development
   82 Plant Production and Plant Primary Products
   83 Animal Production and Animal Primary Products
   84 Mineral Resources (excl. Energy Resources)
   85 Energy
   86 Manufacturing
   87 Construction
   88 Transport
   89 Information and Communication Services
   90 Commercial Services and Tourism
   91 Economic Framework

Sector C: Society
   92 Health
   93 Education and Training
   94 Law, Politics and Community Services
   95 Cultural Understanding

Sector D: Environment
   96 Environment

Sector E: Expanding Knowledge
   97 Expanding Knowledge
Contact us for further information or any questions regarding research publications reporting

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