

## Metadata content requirements

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### Introduction

ANDS provides avenues for researchers and research organisations to participate in the Australian Research Data Commons by publicising the existence of their research data collections. By describing and publicising their data, participants increase the profile of their organisation, drive references to their work and enjoy a 'collaborative advantage' by forging ties with similar research groups, similar research projects and similar research data sets.

ANDS partners with research organisations around Australia to improve accessibility to information about research data collections. Descriptions of data collections registered with ANDS are disseminated through the ANDS discovery portal *Research Data Australia* and through a number of other portals nationally and internationally.

For the purposes of describing collections, ANDS has adopted the information model from the draft ISO 2146 (Registry Services for Libraries and Related Organisations) standard. This information model is based on research collections, people, organisations, research activities and services. The real value of this model is in the relationships that can be created between these entities to create a rich mesh of information about research. We want to enable people to traverse this information mesh to answer questions such as: Who worked on this research data? What other datasets did they work on? Which organisation sponsored the research? What project was involved? What other research data was produced by that project? How can I access the collection? What conclusions were published from this data?

The information we collect is designed to allow researchers to evaluate the research data collection in its context to help them decide whether or not to further investigate the data and possibly, re-use the data, cite the data, collaborate with the data creator, approach the research organisation involved, apply for ethics clearances, etc.

For the automated exchange of this information between research organisations and ANDS, ANDS uses an XML format, the Registry Interchange Format for Collections and Services (RIF-CS) which is based on ISO 2146. ANDS applies a number of structural and content rules about information being supplied in order to ensure its validity and broad fitness for purpose. Some information fields must be supplied. Completing these required fields is necessary but not sufficient to create a quality set of information about research data collections.

ANDS recommends that you supply a further set of information, tailored to providing the answers that potential users, collaborators, and funders might want to know about your organisation's research data assets.



A generic set of principles indicating scope and applicability of metadata requirements is provided for organisations participating in the ARDC through funded/nonfunded projects.

## **Principles**

### **Principle 1**

These metadata content requirements are primarily intended to support discovery of Australian research data by providing rich interlinked searchable metadata about that data. They also support technical and administrative functions within the institutions.

### **Principle 2**

*Research Data Australia* is intended to display metadata to assist discovery, determination of value, access and re-use. It is not expected to, and does not need to contain, all the metadata contained in the originating metadata source.

### **Principle 3**

Metadata requirements are standards based, interoperable and shareable across multiple portals and discovery interfaces. The RIF-CS XML format based on the ISO 2146 standard provides a flexible structure to accommodate the many different information models/standards/schemes found in different repositories or registries operating in differing contexts. Accordingly, there can be no one-size-fits-all set of standardised metadata requirements; most elements are repeatable and can contain local values. Use of ANDS suggested vocabularies as a source of metadata values is encouraged.

### **Principle 4**

Richer metadata contains detailed and meaningful names, subject keywords, full descriptions, temporal and spatial coverage, rights statement and meaningful relations that add information and context to the metadata document and support discovery and re-use. Contextual information such as information about the research program/project, data collection methods, researcher, or institution, helps a researcher decide if they want to re-use the data. Information about access such as access conditions and terms of use, restrictions on access, or contact information, enables the researcher to get to the data.

### **Principle 5**

Good quality, accurate and current metadata renders the research data more useful and accessible over the longer term. Documented quality assurance processes are desirable.

### **Principle 6**

Metadata from the 'Recommended' category should be provided where the metadata provider has collected the metadata, the additional information improves discovery and re-use, and maintenance of the information is practical and makes good use of resources.

## **Metadata content requirements**

The following tables list RIF-CS required and recommended schema elements for describing ANDS registry objects.



'Required' elements must be provided for each registry object (metadata record) shared with the ANDS Collections Registry.

'Recommended' elements are elements that ANDS prefers providers to include to support discovery and/or re-use. These should be provided if the metadata is available and if, in the opinion of the data provider, the elements support discovery or re-use in the context of the particular activity, collection, party or service being described.

Collection and party records complying with these standards must be provided and we recommend that activity and service records are also made available where appropriate.

For more detail see the ANDS Content Providers Guide: <http://ands.org.au/guides/content-providers-guide.html>. This guide is a reference tool for data source administrators and metadata providers who need to understand the semantic content of RIF-CS Schema documents for mapping or planning purposes. It describes the meaning and purpose of the information collected by the ANDS Collections Registry. It also explains how to use the RIF-CS Schema to share that information with ANDS.

### 1. Collection registry object (Required)

Label	Schema element name	Obligation Required/Recommended
registry objects	<a href="#">&lt;registryObjects&gt;</a>	Required
registry object	<a href="#">&lt;registryObject&gt;</a>	Required
originating source	<a href="#">&lt;originatingSource&gt;</a>	Required
group	group	Required
key	<a href="#">&lt;key&gt;</a>	Required
class type (collection)	<a href="#">&lt;collection&gt;</a>	Required
collection type	<a href="#">collection type</a>	Required
name/title	<a href="#">&lt;name&gt;</a>	Required
description	<a href="#">&lt;description&gt;</a>	Required
location/address	<a href="#">&lt;location&gt;</a>	Required
related object (party)	<a href="#">&lt;relatedObject&gt;</a>	Required
related object (activity)	<a href="#">&lt;relatedObject&gt;</a>	Required
rights	<a href="#">description type</a>	Required
identifier	<a href="#">&lt;identifier&gt;</a>	Recommended



subject	<a href="#">&lt;subject&gt;</a>	Recommended
spatial coverage	<a href="#">location type</a>	Recommended
temporal coverage	<a href="#">location type</a>	Recommended

## 2. Party registry object (Required)

Label	Schema element name	Obligation Required/Recommended
registry objects	<a href="#">&lt;registryObjects&gt;</a>	Required
registry object	<a href="#">&lt;registryObject&gt;</a>	Required
originating source	<a href="#">&lt;originatingSource&gt;</a>	Required
group	group	Required
key	<a href="#">&lt;key&gt;</a>	Required
class type (party)	<a href="#">&lt;party&gt;</a>	Required
party type	<a href="#">party type</a>	Required
name	<a href="#">&lt;name&gt;</a>	Required
identifier	<a href="#">&lt;identifier&gt;</a>	Recommended
location/address	<a href="#">&lt;location&gt;</a>	Recommended
related object (activity)	<a href="#">&lt;relatedObject&gt;</a>	Recommended
related object (collection)	<a href="#">&lt;relatedObject&gt;</a>	Recommended
description	<a href="#">&lt;description&gt;</a>	Recommended
subject	<a href="#">&lt;subject&gt;</a>	Recommended

## 3. Activity registry object (Highly recommended)

Label	Schema element name	Obligation Required/Recommended
registry objects	<a href="#">&lt;registryObjects&gt;</a>	Required



registry object	<a href="#">&lt;registryObject&gt;</a>	Required
originating source	<a href="#">&lt;originatingSource&gt;</a>	Required
group	group	Required
key	<a href="#">&lt;key&gt;</a>	Required
class type (activity)	<a href="#">&lt;activity&gt;</a>	Required
activity type	<a href="#">activity type</a>	Required
name/title	<a href="#">&lt;name&gt;</a>	Required
description	<a href="#">&lt;description&gt;</a>	Required
location/address	<a href="#">&lt;location&gt;</a>	Recommended
related object (party)	<a href="#">&lt;relatedObject&gt;</a>	Required
subject	<a href="#">&lt;subject&gt;</a>	Recommended

#### 4. Service registry object (Desirable)

Label	Schema element name	Obligation Required/Recommended
registry objects	<a href="#">&lt;registry Objects&gt;</a>	Required
registry object	<a href="#">&lt;registryObject&gt;</a>	Required
originating source	<a href="#">&lt;originatingSource&gt;</a>	Required
group	group	Required
key	<a href="#">&lt;key&gt;</a>	Required
class type (service)	<a href="#">&lt;service&gt;</a>	Required
service type	<a href="#">service type</a>	Required
name	<a href="#">&lt;name&gt;</a>	Required
location/address	<a href="#">&lt;location&gt;</a>	Recommended
related object (party)	<a href="#">&lt;related object&gt;</a>	Recommended
description	<a href="#">&lt;description&gt;</a>	Recommended



## Reference documents

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The RIF-CS Schemas (schemas for Registry Objects, Activities, Collections, Parties and Services), Schema Guidelines, and other documentation are available from <http://ands.org.au/resource/rif-cs.html>

ANDS Content Providers Guide: <http://ands.org.au/guides/content-providers-guide.html>. This guide is a reference tool for data source administrators and metadata providers who need to understand the semantic content of RIF-CS Schema documents for mapping or planning purposes. It describes the meaning and purpose of the information collected by the ANDS Collections Registry. It also explains how to use the RIF-CS Schema to share that information with ANDS.