

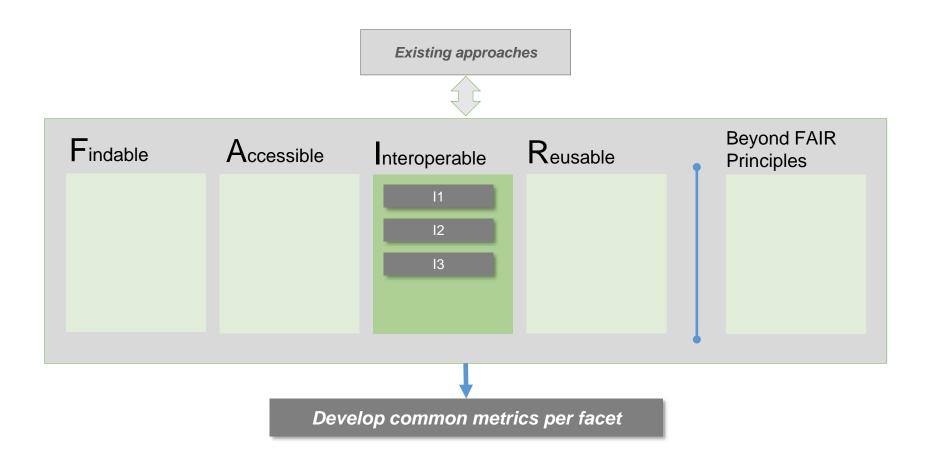
# FAIR Principles

Interoperable

Analysis of existing approaches









## FAIR Principles

### To be interoperable:

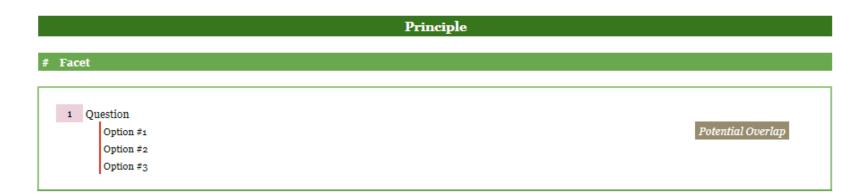
- I1. (meta)data uses a formal, accessible, shared, and broadly applicable language for knowledge representation
- I2. (meta)data uses vocabularies that follow FAIR principles
- 13. (meta)data includes qualified references to other (meta)data





### **LEGEND**

- 1 ANDS-NECTAR-RDS-FAIR data assessment tool
- 2 DANS-Fairdat
- 3 DANS-Fair enough?
- 4 The CSIRO 5-star Data Rating tool
- 5 FAIR Metrics Questionnaire
- 6 Big Data Readiness
- 7 FAIR Evaluator
- 8 Data Stewardship Wizard
- 9 Checklist for Evaluation of Dataset Fitness for Use
- 10 RDA-SHARC Evaluation







### I1 (meta)data uses a formal, accessible, shared, and broadly applicable language for knowledge representation

What (file) format(s) is the data available in?  No access to data  By individual arrengement  File download from online location	
Non standard web service	
Standard Web Service API	
What best describes the types of vocabularies/ontologies/tagging schemas used to define the data elements?  Data elements not described  No standards have been applied in the description of data elements.  Standardised vocabularies/ontologies/tagging schemas without global indentifiers  Standardised open and universal using resolvable global identifiers linking to explanations	
2 Is the data file in a proprietary format?	
No No	
Yes	
2 Are all of the data files in a proprietary format?  No Yes	
2 Please indicate which of these statements is the most applicable to the dataset:	
Most of the data files are proprietary	
Around half of the data files are proprietary	
Few of the data files are proprietary	
None of the data files are proprietary, they are all in a preferred format	
3 Are the data stored and archived in preferred archival formats?	R1.3
No	
Yes	
5 Please provide the URL to the specification of the language	

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7 Use of a formal, accessible, shared, and broadly applicable language for knowledge representation.
8 Will you be using common ontologies?  No Yes
9 metadata includes community accepted keywords and/or terms associated with relevant standards or terminologies  No Somewhat Yes
Are standard vocabularies, thesaurus or ontologies used for all data types present in datasets, to enable interdisciplinary interoperability between well define Never /NA If mandatory Sometimes Always
10 Are the interoperability criteria explained?  Never /NA If mandatory Sometimes Always
10 Are the interoperability criteria explained?  Never /NA If mandatory Sometimes Always



#### 12 (meta)data uses vocabularies that follow FAIR principles

3 Did you use standardized vocabulary?

No

Yes

4 Comprehensible - supported with unambiguous definitions for all internal elements

Local field codes or labels

Labels with full text explanations

Community standard labels (e.g. CF Conventions, UCUM units)

Some fields linked to externally managed definitions

All fields linked to standard, externally managed definitions

- 5 Please provide one or more (max 3) IRIs representing the vocabularies used within the (meta)data that is returned by resolving the RESOURCE ID
- 7 The metadata values and qualified relations should themselves be FAIR





#### I3 (meta)data includes qualified references to other (meta)data

2 Is there extensive metadata and rich additional documentation available?

R1, R1.2

No

Yes

3 How is the metadata linked to other data and metadata (to enhance context and clearly indicate relationships)?

There are no links to metadata

The meta data records includes URI links to related metadata, data, definitions

Metadata is represented in a machine readable format e.g. in a linked data format such as RDF

4 Linked - to other data and definitions using public identifiers (e.g URIs)

No links

In-bound links from a catalogue or landing-page

Out-bound links to related data and definitions

- 5 Please provide the URL to a formal Linkset or copy/paste the content of a formal linkset that describes at least a portion of the content at RESOU R1.2
- 7 Relationships within (meta)data, and between local and third-party data, have explicit and 'useful' semantic meaning

