

Introducing the Actionable Guidelines for FAIR Research Software Task Force

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Actionable FAIR4RS Task Force



Background

Background

FAIR Principles

The **FAIR (Findable, Accessible, Interoperable, Reusable) Principles (2016)** are high-level instructions to make research outcomes reusable

**Widely adopted across fields of research and by all stakeholders
including researchers, funders, and scientific publishers**

Background

FAIR4RS Principles

FAIR Principles for Research Software (FAIR4RS Principles, 2022)
are adaption of the FAIR Principles for research software

F1. Software is assigned a globally unique and persistent identifier.
F1.1. Components of the software representing levels of granularity are assigned distinct identifiers.
F1.2. Different versions of the software are assigned distinct identifiers.
F2. Software is described with rich metadata.
F3. Metadata clearly and explicitly include the identifier of the software they describe.
F4. Metadata are FAIR, searchable and indexable.

(and more)

<https://doi.org/10.1038/s41597-022-01710-x>

Background

FAIR-BioRS guidelines

FAIR Biomedical Research Software (FAIR-BioRS) Guidelines (2023)
are actionable guidelines for complying with the FAIR4RS Principles

- Work from a version controlled system platform (e.g. GitHub)
- Select a license and include a LICENSE file
- Include metadata in codemeta.json, CITATION.cff, CHANGELOG, README
- Archive source code on a DOI-issuing repository like Zenodo
- Etc.

Immense contribution from the BOSC community!

<https://doi.org/10.1038/s41597-023-02463-x>

Background

Limitations of the FAIR-BioRS guidelines

The FAIR-BioRS guidelines were developed only through inputs from the **biomedical research** community so they cannot be generalized as is



**The 2 year survey of the FAIR4RS Principles highlights
the need for generalized actionable guidelines**

<https://doi.org/10.5281/zenodo.15381365>



Actionable FAIR4RS Task Force

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Background

The Actionable Guidelines for FAIR Research Software Task Force
started in December 2024 under the Research Software Alliance (ReSA)



Establish actionable guidelines (i.e. guidelines that provide practical steps) to make any research software FAIR in line with the FAIR4RS Principles

<https://www.researchsoft.org/tf-actionable-fair4rs>

Actionable FAIR4RS Task Force

New challenges compared to the FAIR-BioRS effort

How to develop **domain-agnostic** guidelines?



How to address **open vs closed source** software?

How to keep up with **evolving standards**?

Actionable FAIR4RS Task Force

Members



~12 active members



Various geographical locations (USA, Canada, Germany, Spain, UK, Netherland, etc.)



Various research domains (Biomedical, Data Science, Knowledge Representation, etc.)

Email me to join! bpatel@calmi2.org

Actionable FAIR4RS Task Force

Progress

Task 1: Interpretation of the FAIR4RS Principles (Dec 2024 – March 2024)

17 Principles

6 categories

Many questions!

1. Identifier
2. Metadata for software publication & discovery
3. Standards inputs/outputs
4. Qualified references
5. Metadata for software reuse
6. License

Actionable FAIR4RS Task Force

Timeline

August 2025
Complete
sub-groups
investigations

October 2025
Release first draft
for community
feedback

January 2026
Publish first
version of the
guidelines

February 2026
Maintain
guidelines



<https://www.researchsoft.org/tf-actionable-fair4rs>

Thank You!



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fairdataihub.org

*Find these slides and
all resources here*



bit.ly/actionableFAIR4RS