# FAIR DATA: HISTORY AND PRESENT CONTEXT


- Ana Carballo-Garcia
- Juan-José Boté-Vericad

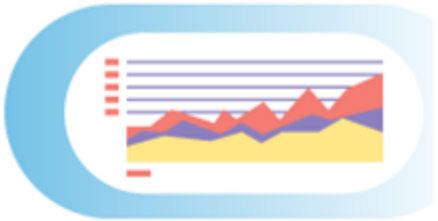

BOBCATSSS 2022 • DEBRECEN

Universitat de Barcelona
Facultat d'Informació i Mitjans Audiovisuals

University of Debrecen

Hochschule Hannover
University of Applied Sciences and Arts
Fakultät III
Medien, Information und Design

# SUMMARY OF THE PRESENTATION



- What are the FAIR principles?
- Why do the FAIR principles appear?
- How they appear?
- How was it received by the community?
- How are they implemented in research centers?
- What challenges do researchers face with data management?
- What can information professionals do?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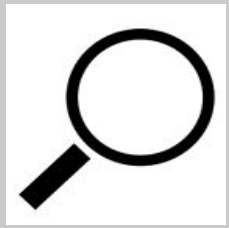
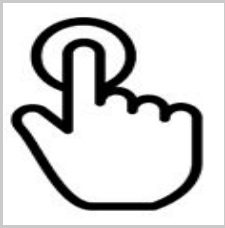
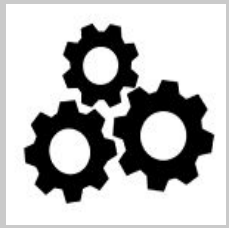
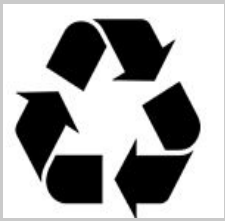
# WHAT ARE THE **FAIR PRINCIPLES**?

| **Findable**<br>The data and the metadata are easy to find for humans and computers.  | **Accessible**<br>Standard protocols are used.  |
|---|---|
| • Unique and persistent identifier.<br>• Described with rich metadata.<br>• Metadata include the identifier.<br>• Indexed in a searchable resource. | • Standard communications protocol.<br>  • Open, free, and universally implementable.<br>  • Authentication and authorization procedure.<br>• Metadata are accessible. |

| **Interoperable**<br>Easy to combine the data with existing data.  | **Reusable**<br>The data can be used, including descriptions as clear licenses.  |
|---|---|
| • Formal, accessible, shared language.<br>• Vocabularies that follow FAIR principles.<br>• Qualified references to other (meta)data. | • Described with relevant attributes.<br>  • Clear and accessible data usage license.<br>  • Associated with detailed provenance.<br>  • Meet domain-relevant community standard. |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# WHY DO THE FAIR PRINCIPLES APPEAR?

Research world:

- Generates large amounts of data in their research.

Open Science:

- Growing movement that facilitates access to the information generated by research.

Debates on how to share and reuse data:

- There were no guidelines or standards.

**Integration of research data into the digital ecosystem.**

# HOW THEY APPEAR?

Workshop

'Jointly Designing a Data Fairport'

**2014**

Journal

scientific data

'FAIR Guiding Principles for Scientific Data Management and Stewardship'

**2016**

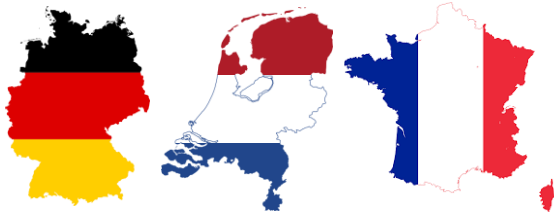
FAIR working group

FORCE11

# HOW WAS IT RECEIVED BY THE COMMUNITY?

G20 2016 CHINA

Summit supported



GO FAIR

RDA RESEARCH DATA ALLIANCE

Work groups apply the FAIR principles

COMMITTEE ON DATA CODATA INTERNATIONAL SCIENCE COUNCIL

'Data for Planet: Making data work for cross-domain grand challenges'.

LIBER

Involved in the adoption

'Turning FAIR into Reality'

# HOW ARE THEY IMPLEMENTED IN RESEARCH CENTERS?

- Create a group  **FAIR Data Maturity Model**
- Defined some indicators derived from the FAIR principles.

- Compiles and describes the existing resources for the evaluation of digital objects.  **13 resources.**

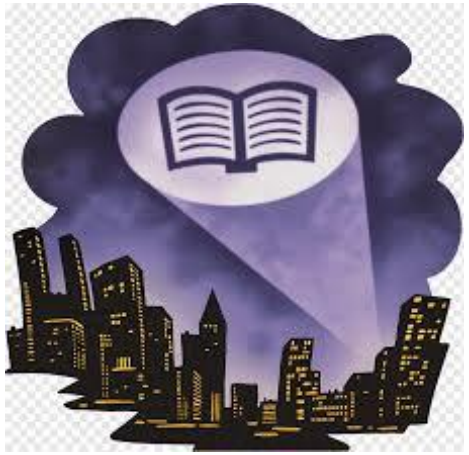
- Difficulty of translating FAIR guidance principles into domain specific applications.
- Lack as shared vocabularies, sufficient quality datasets and shared data management practices.

**Still too early to know if research centers have implemented FAIR principles**

# WHAT CHALLENGES DO RESEARCHERS FACE WITH DATA MANAGEMENT?

- To understand that data is part of the research workflow.
- Not having formal training in data management practices.
- Metadata and documentation are interest only if they help a researcher work.
- Absence of collaboration tools.
- Technical issues:
  - Deal with format (text, images or videos).
  - Anonymization of the qualitative data.
- Researchers are not aware of the data services that the library may provide.

# WHAT CAN INFORMATION PROFESSIONALS DO?



## Support researchers on:

- How data is generated or retrieved.
- How information is protected.
- How the data is described and documented.
- Train researchers how to deal with data management plans and data.
- Help researchers write Data Management Plant or implement it.
- Can help standardize the research data cycle process.
- Data curation: data collection and data cleaning.
- Planning data preservation or research dissemination.
- Support data reuse, storage, and later access of data.
- Ensure data policies and standards are effectively applied.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# THANK YOU FOR YOUR ATTENTION

QUESTIONS ARE WELCOME