



InnoRenew CoE

Livade 6, 6310 Izola/Isola, Slovenia, T: +386 40 282 944, E: coe@innorenew.eu, www.innorenew.eu



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FAIR research data in engineering sciences

Dr. Ana Slavec, InnoRenew CoE

RDA Ambassador for Engineering/Renewable Materials

ana.slavec@innorenew.eu



About InnoRenew CoE

Human Health in the Built Environment



Wood modification



Renewable Materials Composites



Sustainable Building with Renewable Materials



ICT in Renewable Materials and Sustainable Building



Experimental Design and Data Analysis



Research Data Alliance

<https://rd-alliance.org/>



RESEARCH DATA ALLIANCE

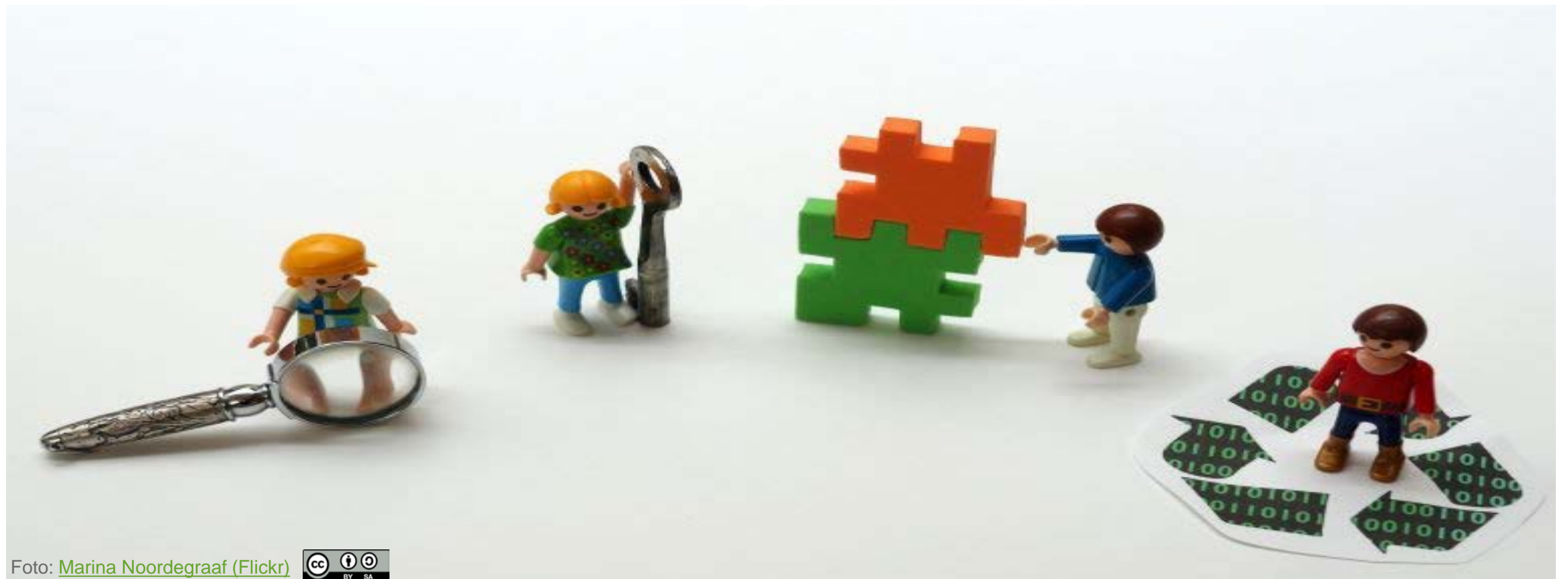
„RDA is building the social and technical bridges that enable open sharing of data to achieve its vision of researchers and innovators openly sharing data across technologies, disciplines, and countries to address the grand challenges of society.“

Data sharing challenges in engineering

- Social challenges
 - A lot of research is done in collaboration with industry which is reluctant to share data
 - Fear of losing competitive advantage
 - Fear of data being misused and misinterpreted
- Technical challenges
 - Lack of metadata standards and ontologies (for certain engineering fields)
 - Lack of domain-specific repositories (for certain engineering fields)

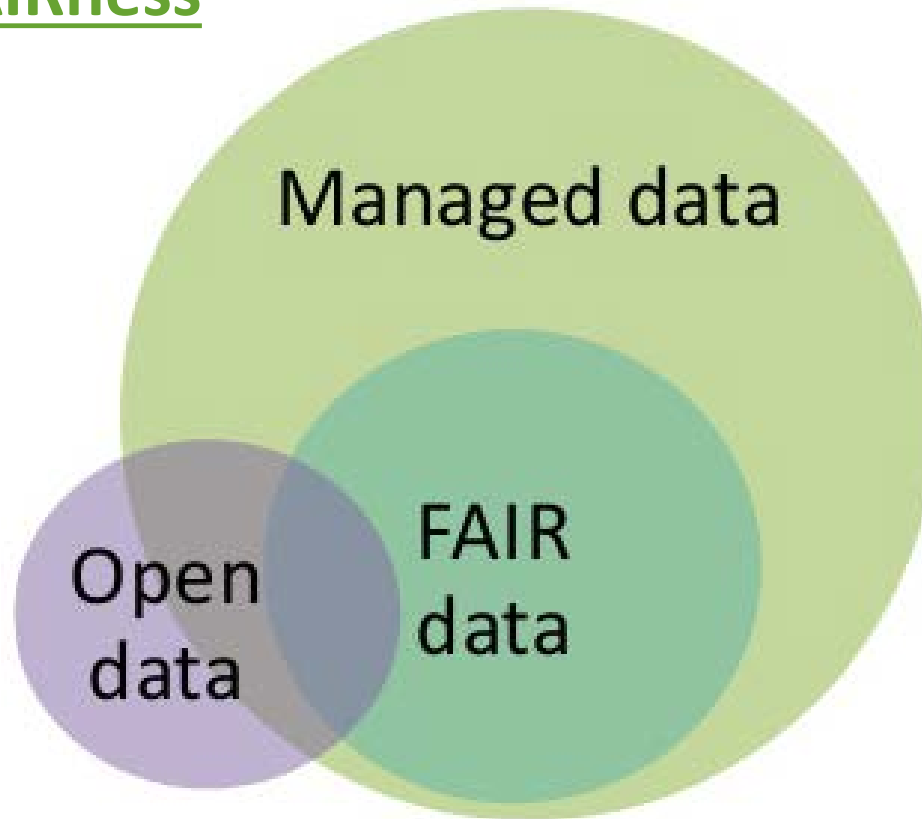


The FAIR data principles





Addressing social issues: understanding the difference between openness and FAIRness



Jones, S. 2018. Open data, FAIR data and RDM: the ugly duckling. Available at: [Zenodo](#).



Addressing technical issues: choice of appropriate repositories

General purpose (e.g. Zenodo, Figshare) and institutional data repositories

- + Simple process
- + Fast publication
- The metadata scheme is too general
- Data is not reusable without rich metadata and documentation

Domain specific repositories

- + Field specific metadata standards
- Lack of repositories for certain engineering fields
- Time consuming to prepare
- Requires domain specific skills

Where to find repositories?

How to improve FAIR data sharing

- Train researchers in data management
- Encourage better methodologies, better quality data
- Promote development of domain specific metadata standards
- Offer additional incentives (consideration in research assessment)
- Invest in support staff (data stewards)



Data stewardship (in engineering)

- Examples of good practices
 - [Data Stewards and Champions at TU Delft](#)
 - [Data Champions at University of Cambridge](#)
 - [Data Agents and Advisor at Aalto University](#)
 - ...
- Education
 - [CODATA-RDA Summer School for Research Data Science](#)





RDA Europe Ambassadors for Engineering



Ana Slavec
(Renewable Materials)



Nikola Vasiljevic
(Wind energy)



Shaun de Witt
(High energy physics/Fusion)



RDA groups relevant for engineers

- [Research Data Management in Engineering IG](#)
 - [RDA/CODATA Materials Data, Infrastructure & Interoperability IG](#)
 - [Physical Samples and Collections in the Research Data Ecosystem IG](#)
 - [International Materials Resource Registries WG](#)
 - [Persistent identification of instruments WG](#)
 - [International Materials Data Registries WG](#)
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RDA in Slovenia

Contact persons: **Janez Štebe, Irena Vipavc Brvar and Maja Dolinar**
(Slovenian Social Science Data Archive, University of Ljubljana)



RESEARCH DATA ALLIANCE
EUROPE





Next Plenary

INTERNATIONAL DATA WEEK 2022

Data to Improve our World

20 - 23 June, 2022 @ Seoul, Republic of Korea

Convened by

CODATA
COMMITTEE ON DATA
INTEGRATION
AND EXCHANGE

RDA
RESEARCH DATA ALLIANCE

WORLD DATA SYSTEM

KISTI
Korea Institute of
Science and Technology Information

KRISs
Korea Research Institute of
Science and Technology

National Library of Korea

KIOM
Korea Institute of
Geoscience and
Mineral Resources

KIGAM
Korea Institute of Geoscience
and Mineral Resources



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Thank you for your attention