

World Data Center for Climate at DKRZ

ICAS

14-Sep-2017

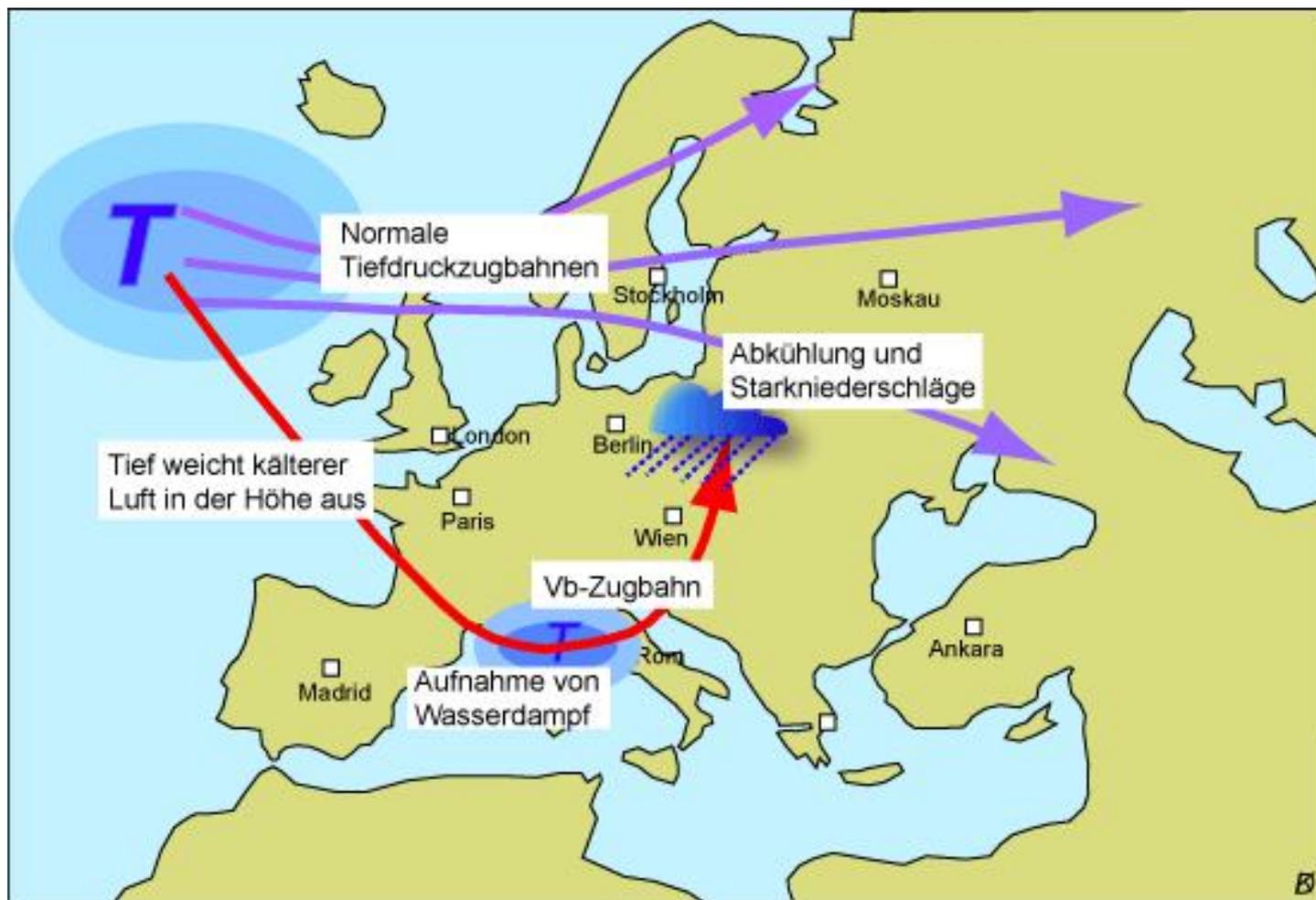


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Outline

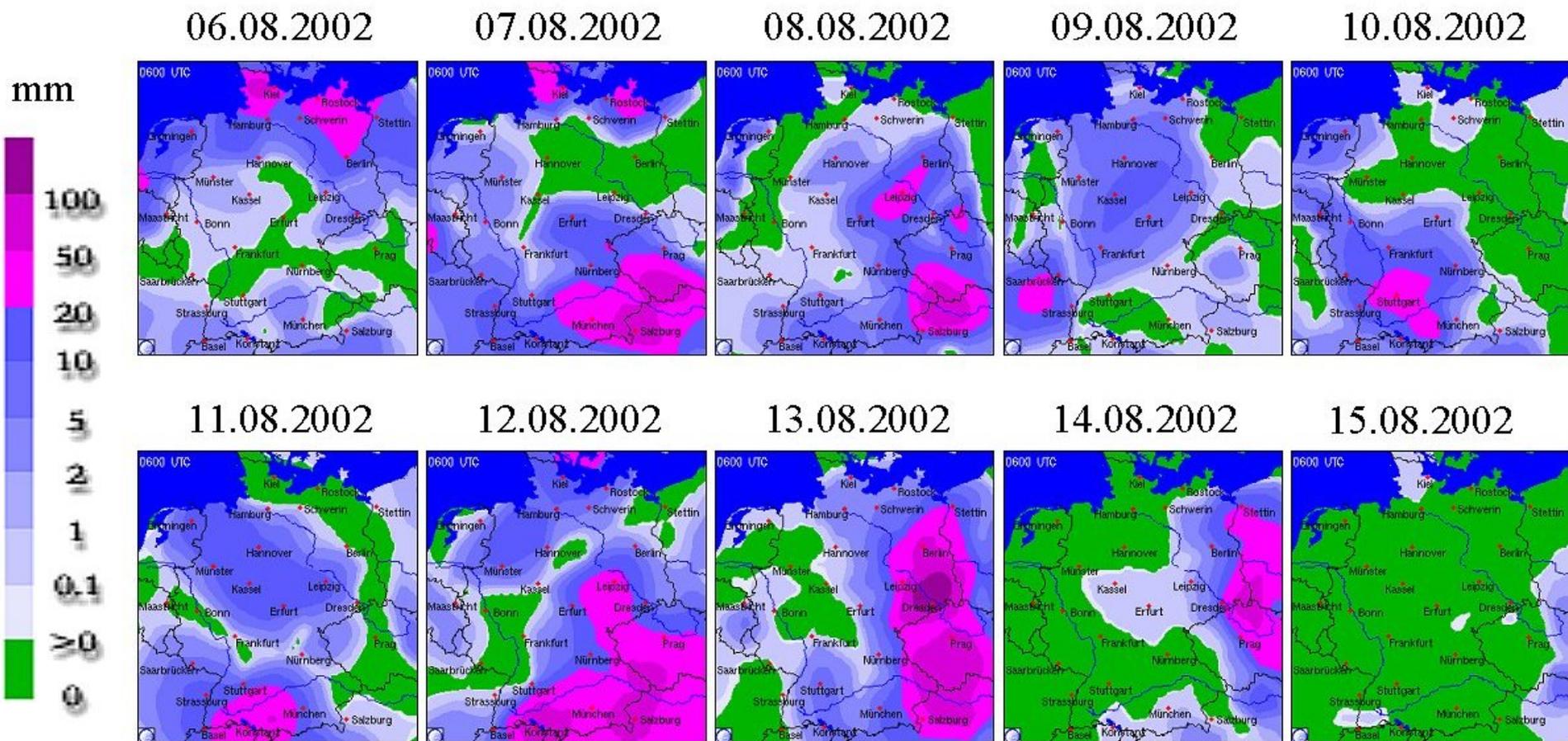
- Mission of WDCC
- It's role in the research infrastructure landscape.

Genua Low – Vb track



FU Berlin

Daily rainfall – August 2002 -



Havelmanagement.net



August 14, 2000

Elbe between
Torgau and
Aken



August 20, 2002

NASA
elbe_ls7_2002232

Chemistry park Bitterfeld



ufz.de

Consequences

Direct consequences in Germany

- 21 people died
- Many injured

Damages caused by the Elbe floods in Germany in 2002: ~ € 21 billion

(Political) Measures needed to avoid such disastrous damages in the future.



Wikipedia: Hawedi

Measures

- Raise and reinforce dykes
- (Re)create flood plains
- Dikes: which level required?
- Flood plains: how large?
- Intensity of rainfall: will it change in the future?
- How often will those events occur in the future?



Wikipedia

- Transparency and traceability
- needed in politics and science – and that for a long time
- How to support it?

DKRZ Long-Term Archive (LTA)

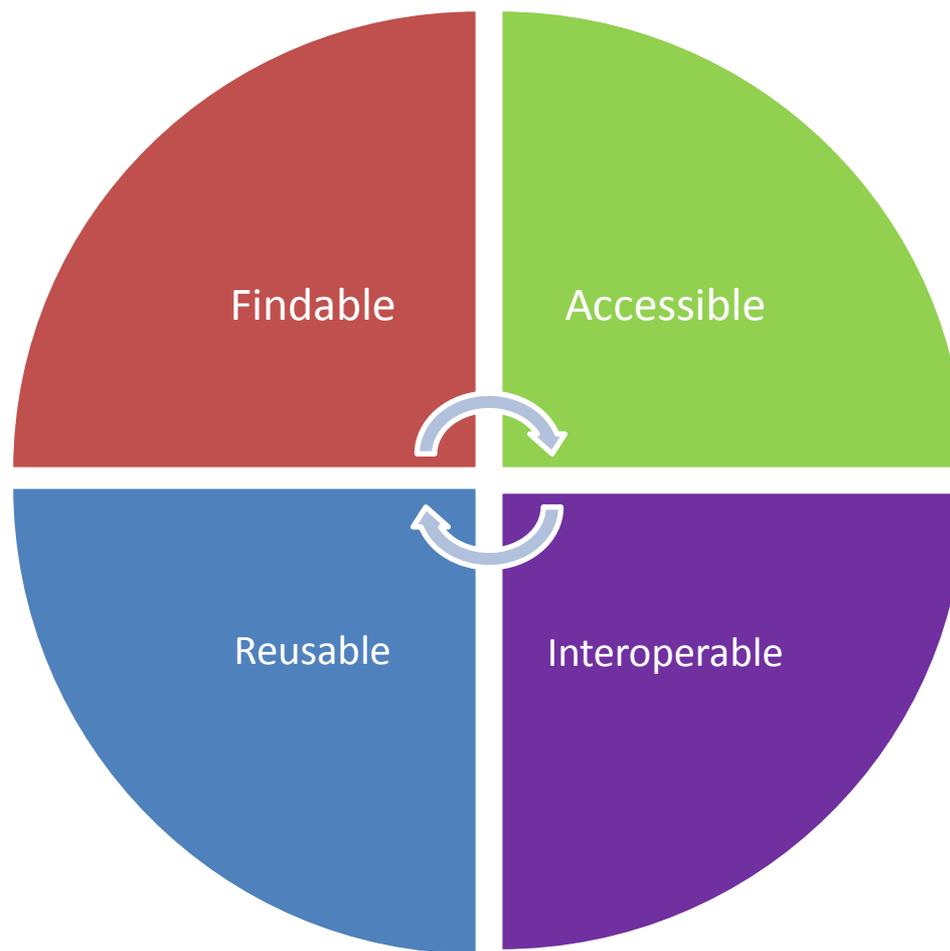
The mission of the DKRZ “Long-Term Archive” (DKRZ LTA) is to provide central long-term **data preservation** support for the climate modelling research community within Germany.

Preservation

- Data preservation is not only bit preservation.

- Data preservation ensures that the data will continue to be
 - Found and accessed
 - Understood
 - Used

FAIR



www.force11.org

Usability (1)

- Purpose may not be necessarily well defined from the beginning or it may change over time.
- Different users may have different notions of usability.
- How can we make the usability clear?

Usability (2)

- Establish and apply quality criteria and methods. (1)
- Permanently store the results of the assessment and link it to the data.
- This allows the users to assess the usability themselves.

(1) https://www.dkrz.de/daten-en/data-services/Datapublication/quality-assurance-of-data?set_language=en&cl=en

Trust (1)

It is important to establish trust between all parties concerned.

- Data providers
 - Enable traceability, quality approved, kept usable, findable and accessible
- Data consumers
 - Quality approved, integrity, authenticity, findable, accessible, well documented
- Funders
 - Money for creating data spent properly
 - The data generated by their means can be used in the long term

Trust (2)

To create trust the DKRZ long-term archive has undergone a basic certification process according to the rules of the

- ICSU World Data System (WDS)
- Data Seal of Approval (DSA)



Benefits of certification

- Awareness raising about digital preservation
- Stakeholder confidence
- Improved internal processes and documentation
- Attraction for data producers and consumers



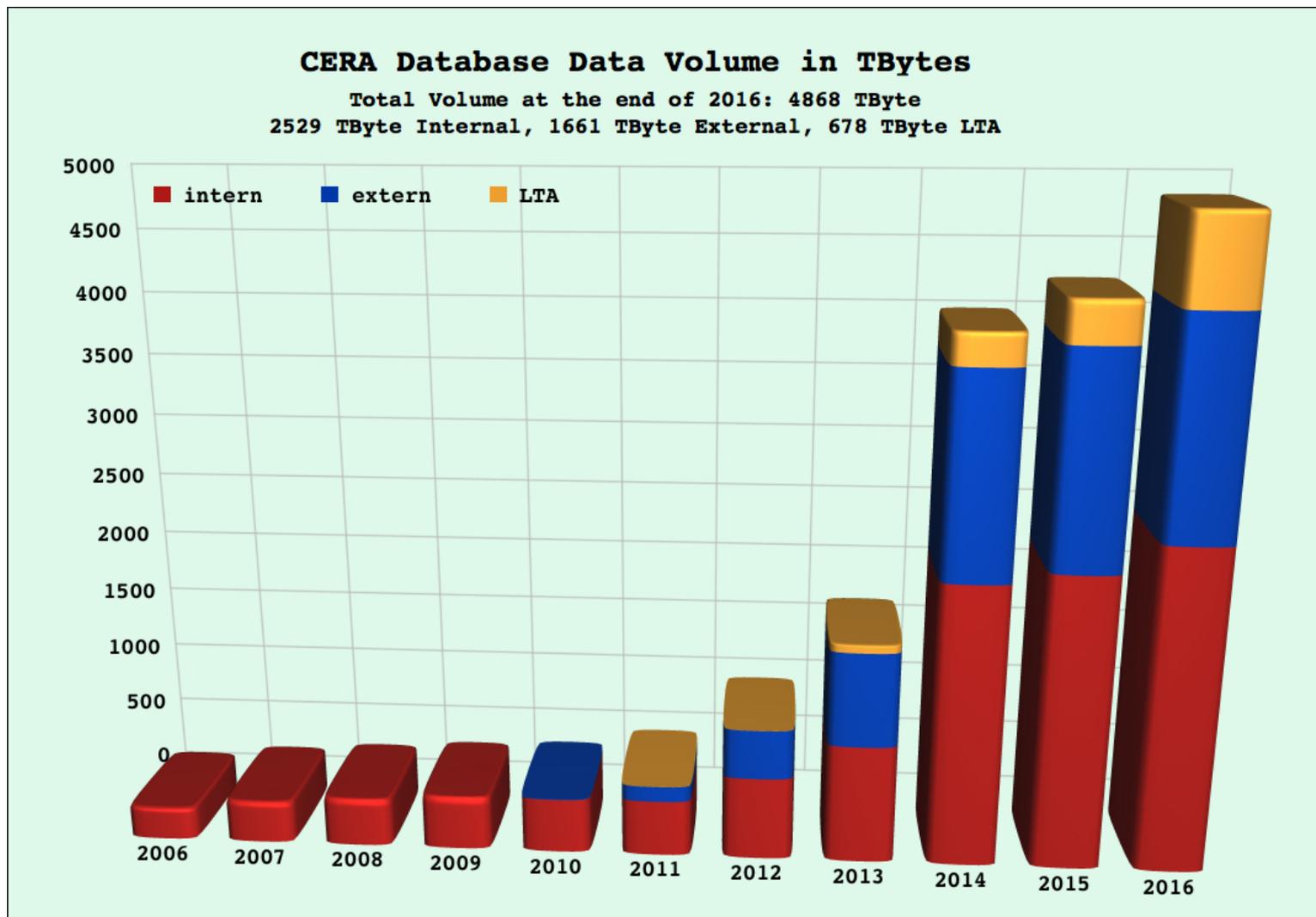
Guarantees



For all data that are part of the WDC Climate we guarantee

- A usability of at least 10 years.
- After 10 years the data will not be removed from the archive.

Data Volume



Projects

cera.wdc-climate.de

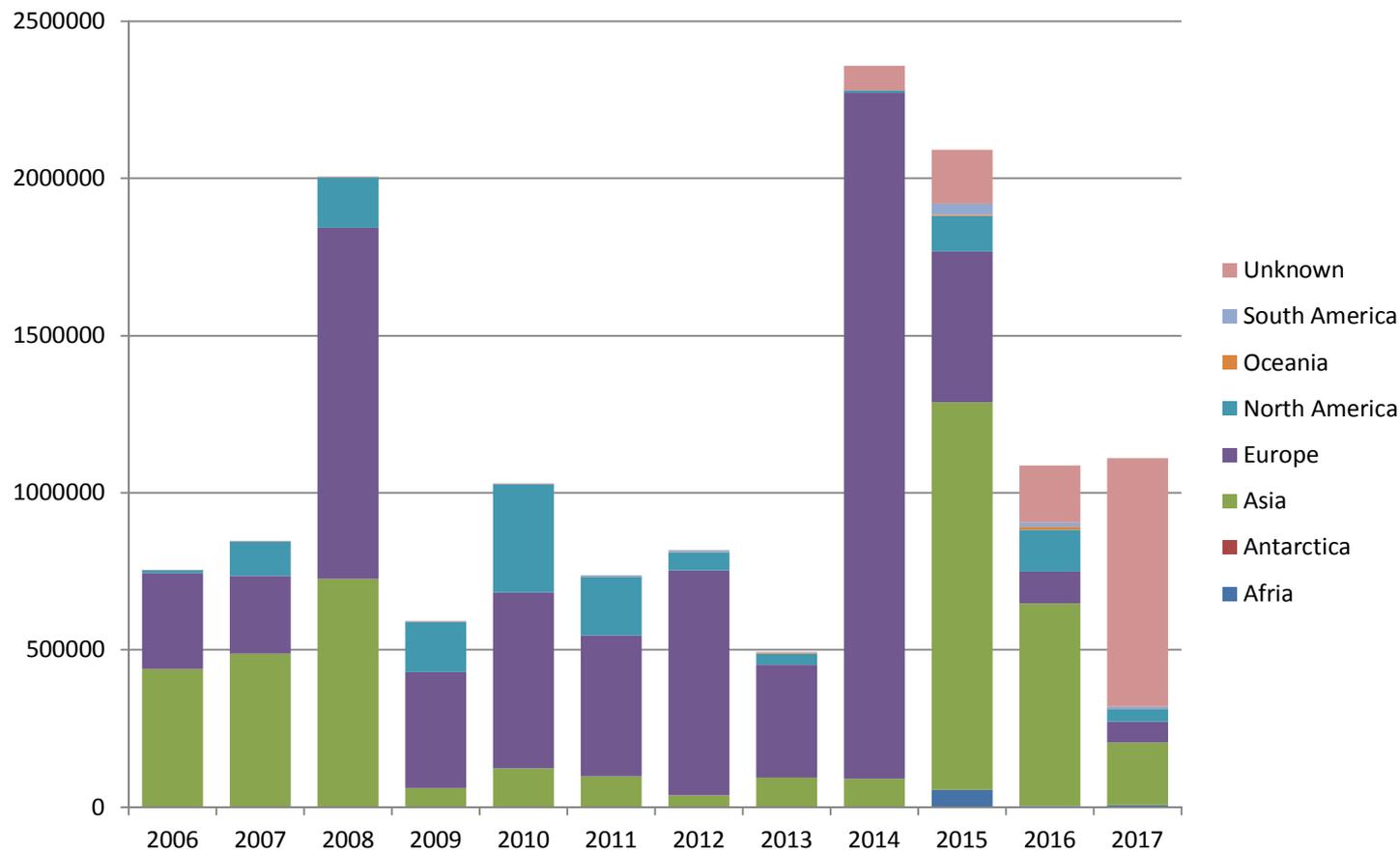
Continuous support for

- Large and small projects (MIPs and others)

- CMIP / IPCC

- Preparations for CMIP6 on the way.

Downloads from DKRZ-LTA



The WDCC is linked to many other services & infrastructures like

- EUDAT
- EOSC
- ESGF
- ...

- The WDCC gives guarantees for its data holdings. Through its membership in ESGF, the entire ESGF benefits from this.
 - Other repositories also contribute certain properties to the network. (e.g. QA, doc, ...)
- It is in the interest of ESGF to support individual repositories in reaching higher standards.

Common strategy for research infrastructures

- Strengthen repositories.
- Develop, propagate and establish common repository standards in relevant areas within ESGF / EOSC / ...
- Demonstrate the benefits of high quality repositories to all stakeholders.

Conclusion

- Support traceability and reusability.
- WDCC
- Infrastructures shall implement strategies to strengthen repositories.

Thank you for listening.