

DKRZ's data services for climate adaptation services

BOF Session on
Research data for climate change adaptation services

Merret Buurman
buurman@dkrz.de
Deutsches Klimarechenzentrum (DKRZ), Hamburg
(German climate computing centre)

German Climate Computing Centre (DKRZ)

Computing centre for carrying out climate simulations, for processing, storing and distribution of climate research data

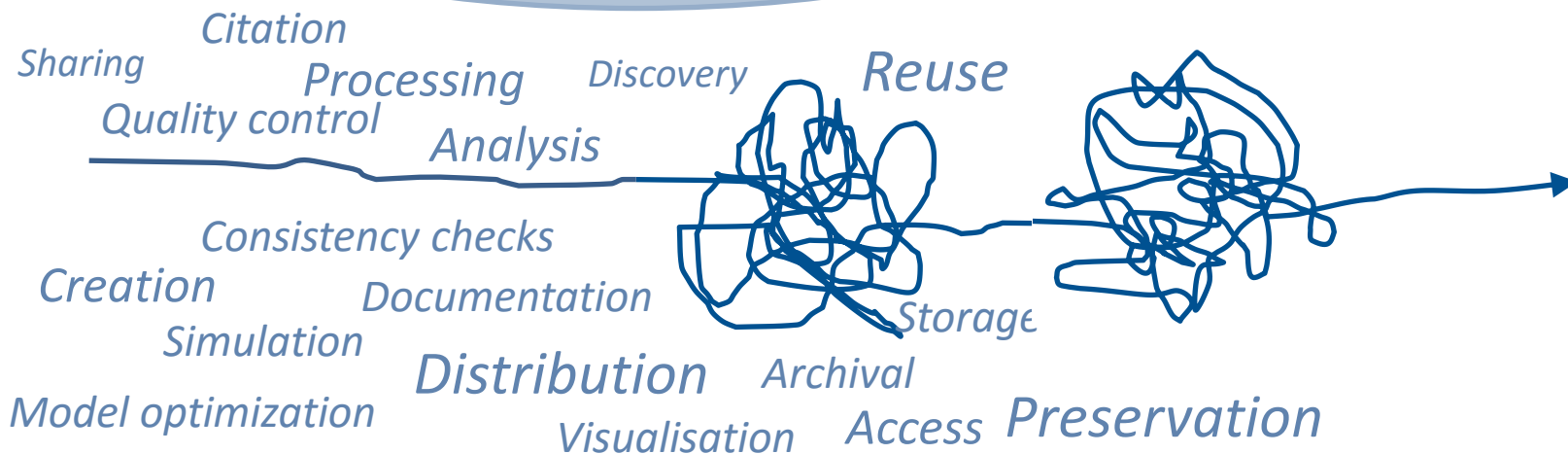
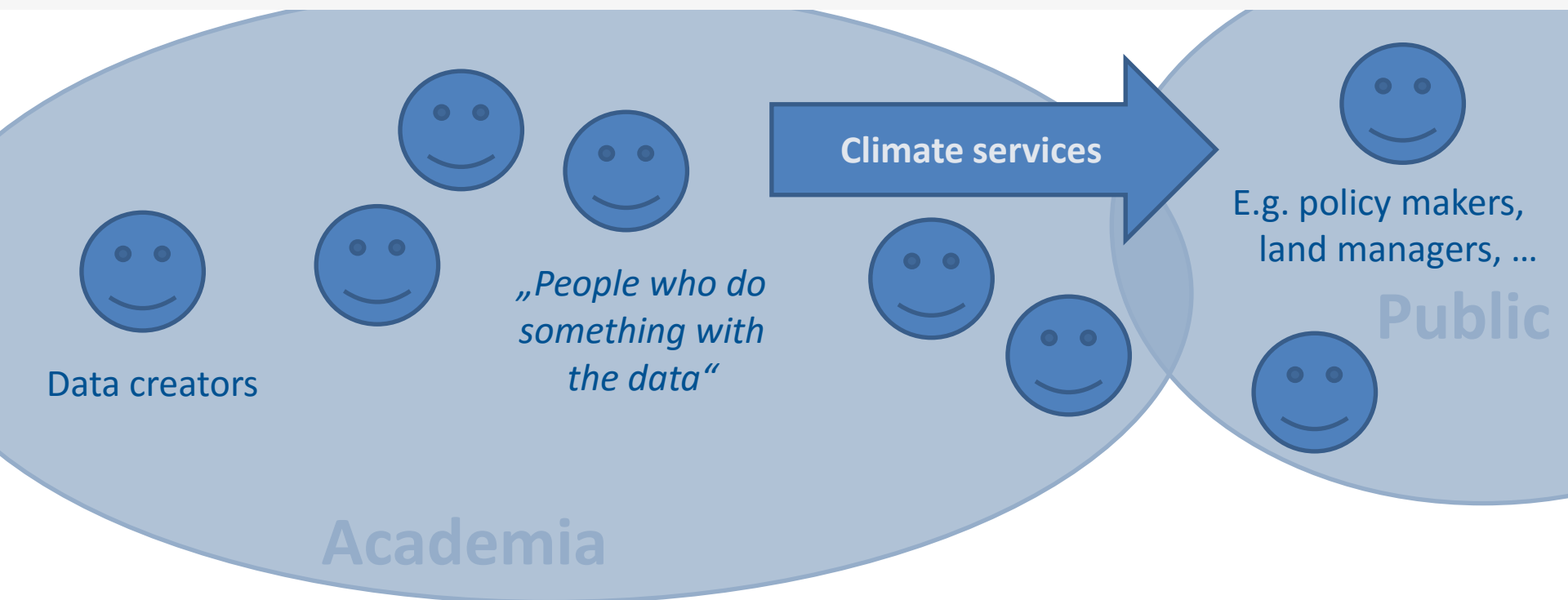


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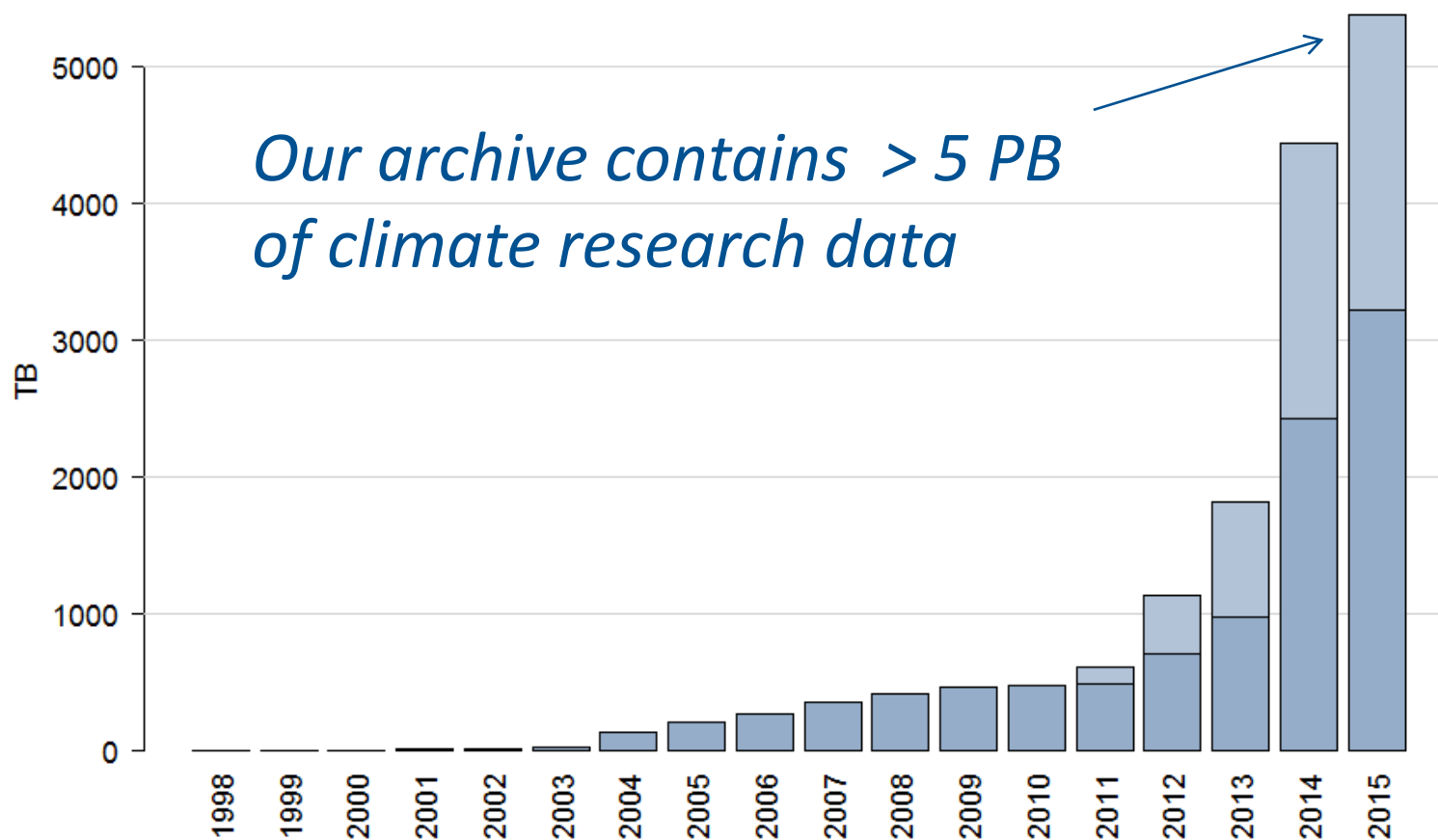
Federal Ministry of
Education
and Research

Where are we?



How much data do we store?

Volume of climate data archive (terabytes)



What is in those 5+ petabytes?

- IPCC Data Distribution Center
(together with BADC and CIESIN)



- World Data Center for Climate
(ICSU World Data System)



- ...and other projects/infrastructures, e.g.



*→ We have lots of data,
and it's being used!*

WDCC: <http://www.dkrz.de/daten-en/wdcc>

IPCC_DDC: http://www.dkrz.de/daten-en/wdcc/projects_cooperations/ipcc-data

Other projects: http://www.dkrz.de/daten-en/wdcc/projects_cooperations?set_language=en

Climate data preservation at DKRZ

- Well-documented (metadata standard)
- Long term (> 10 years)
- Metadata searchable on the web
e.g. in portals such as EUDAT, IS-ENES/ESGF, CERA, ...
- Data accessible and usable without contacting creator



*→ Research data is well preserved
and ready for use!*

... and in publications?



- Data is citable using a DataCite DOI

Stockhause, M., et al.:
"Quality assessment concept of the World Data Center for Climate and its application to CMIP5 data."
Geoscientific Model Development 5.4 (2012): 1023-1032.
doi: 10.5194/gmd-5-1023-2012

... and in publications?



- Data is citable using a DataCite DOI
- Additional quality requirements
 - technical and scientific
 - defined quality control workflow
 - e.g. IPCC AR5 data 

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 "Quality assessment concept of the World Data Center for Climate and its application to CMIP5 data."
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 doi: 10.5194/gmd-5-1023-2012

...if that process takes too long?

- Persistent Identifiers



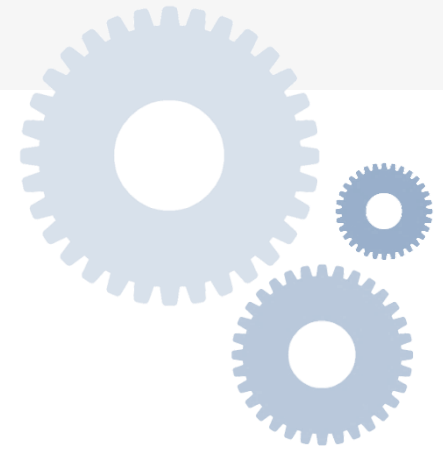
- Referable
- Flexible (no formally defined publishing process)



What do you want to do with the data?

Analyze it! *Remotely!*

- *Birdhouse* by DKRZ, IPSL *et al.* enables remote processing and accessing „reduced“ data using Web Processing Service (WPS)



<take home>

- DKRZ has a lot of climate data

- Well-documented and maintained

- Used by VIA community



→ *Further use welcome!*

- DKRZ data services & infrastructure:

- Long term archive



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- Processing (*Birdhouse/WPS*) / persistent identifiers / ...

→ *Open for new projects!*

- Contact us: buurman@dkrz.de, data@dkrz.de

