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Research Data Management – Open Science

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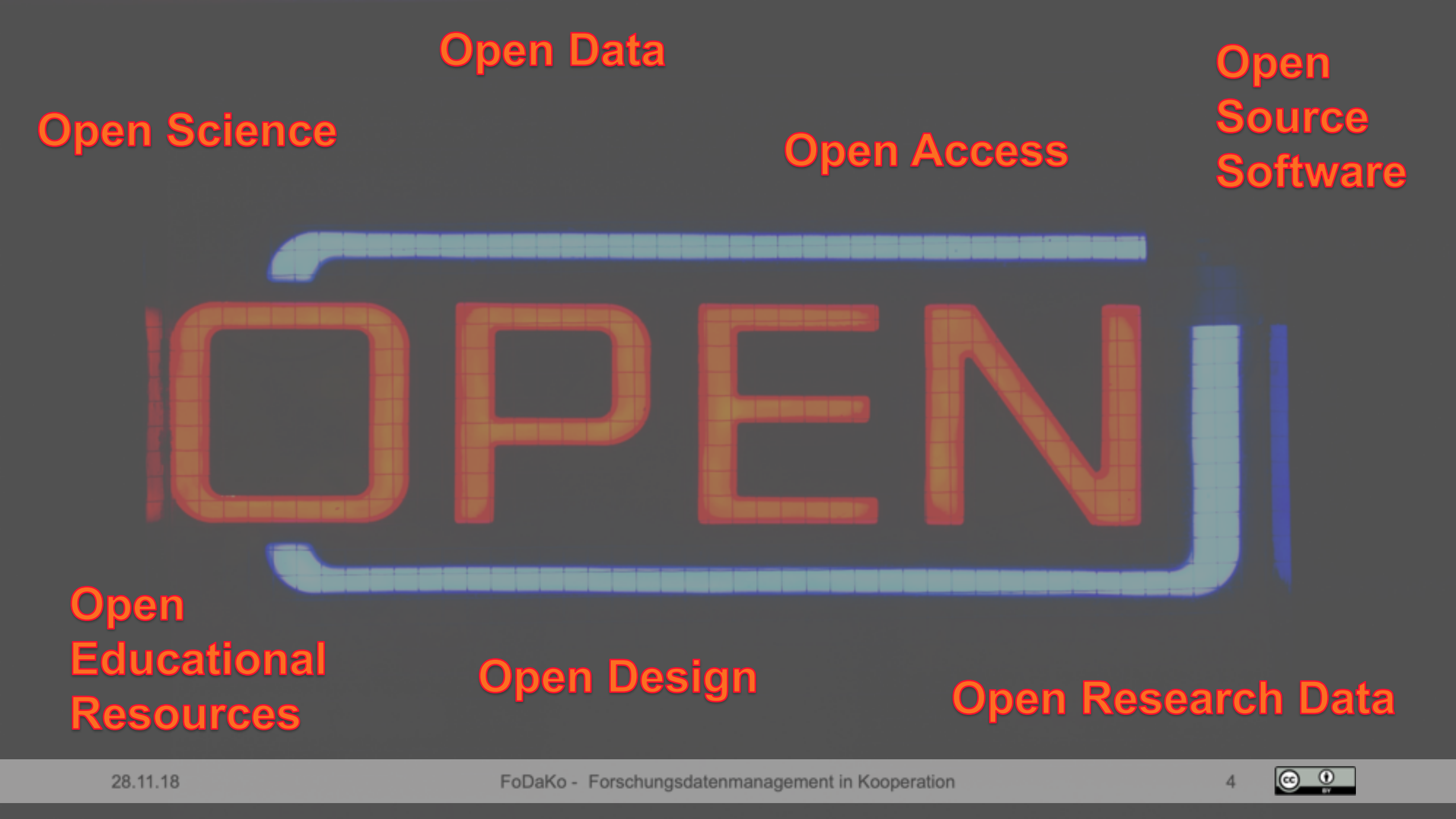
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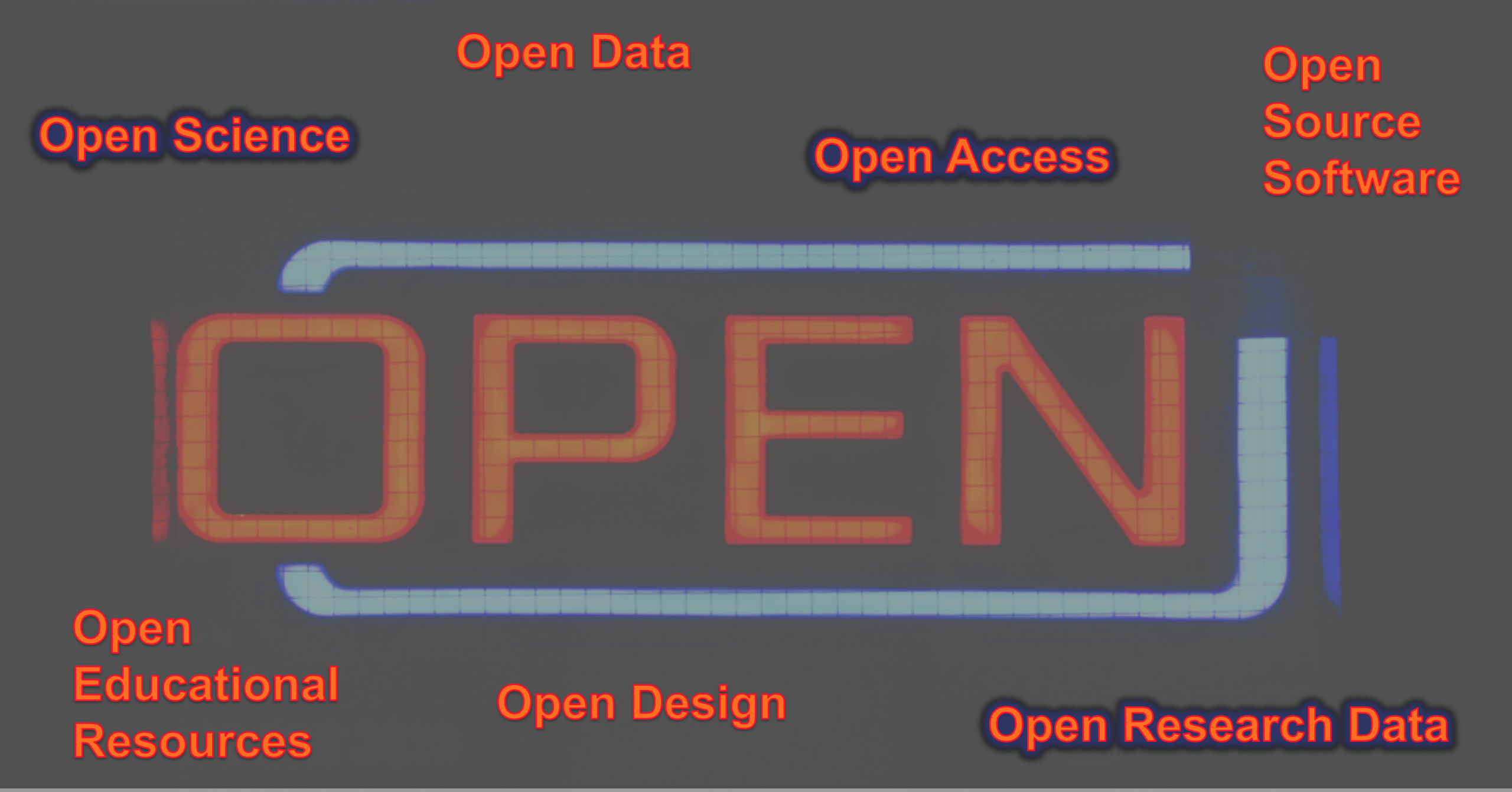
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Reasons for Open Research Data

A GUIDE TO THE TYPICAL LAB COMPUTER

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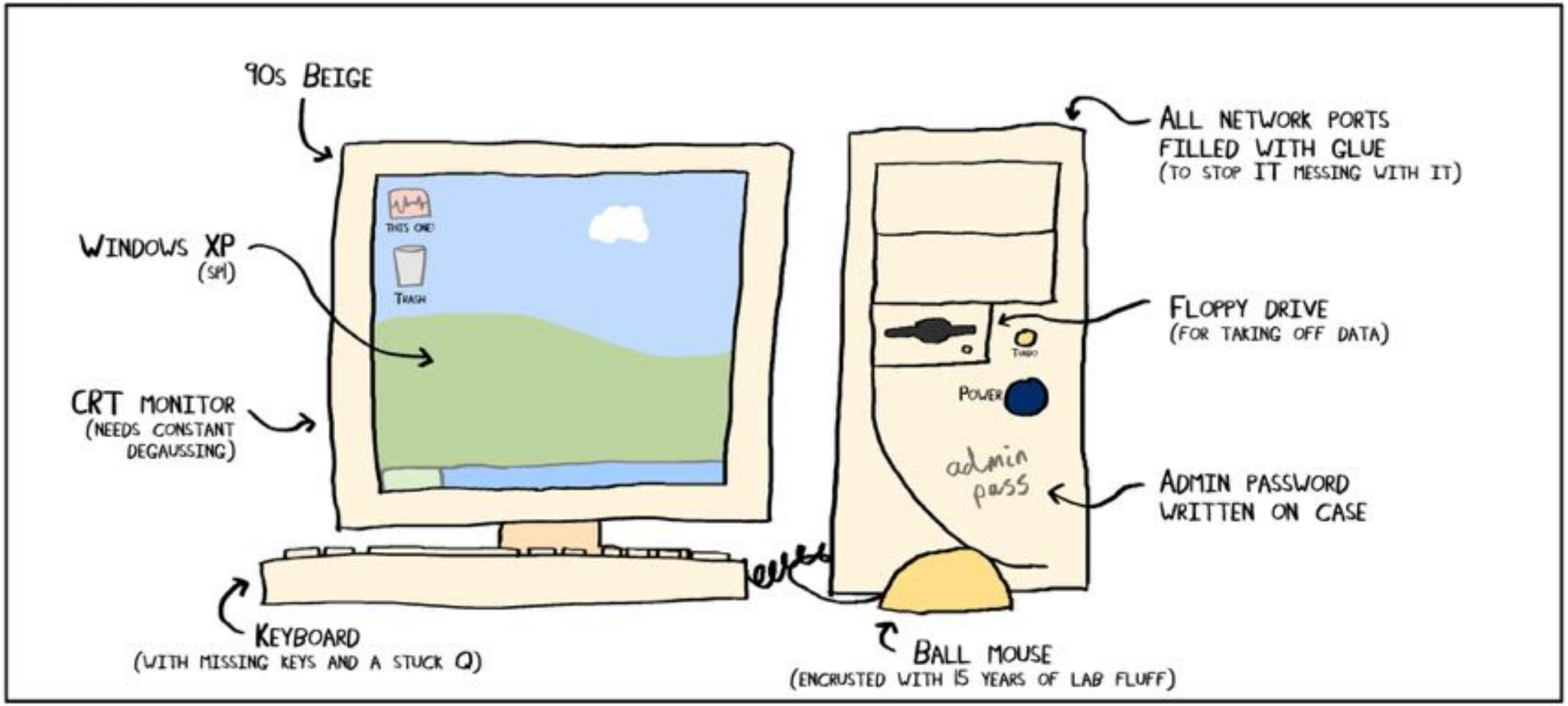
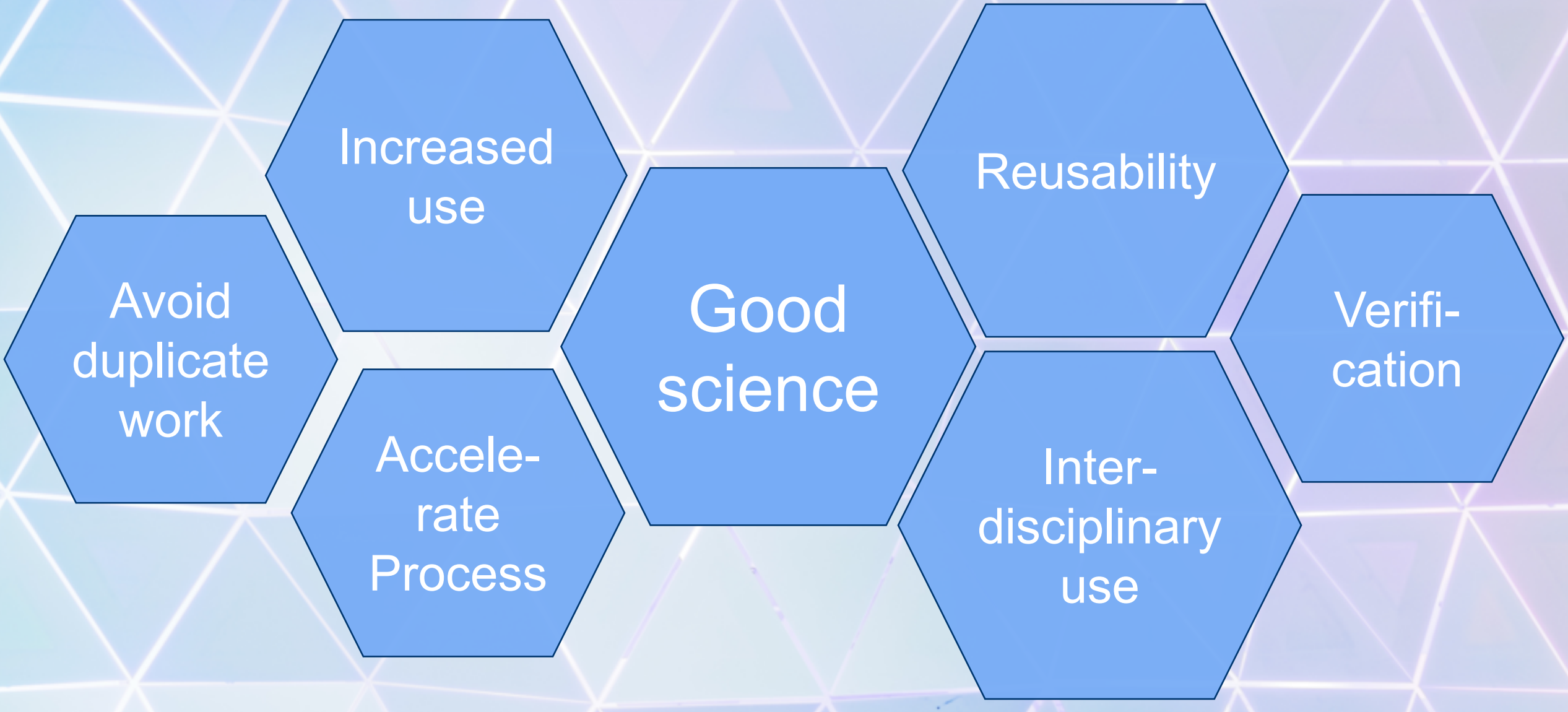
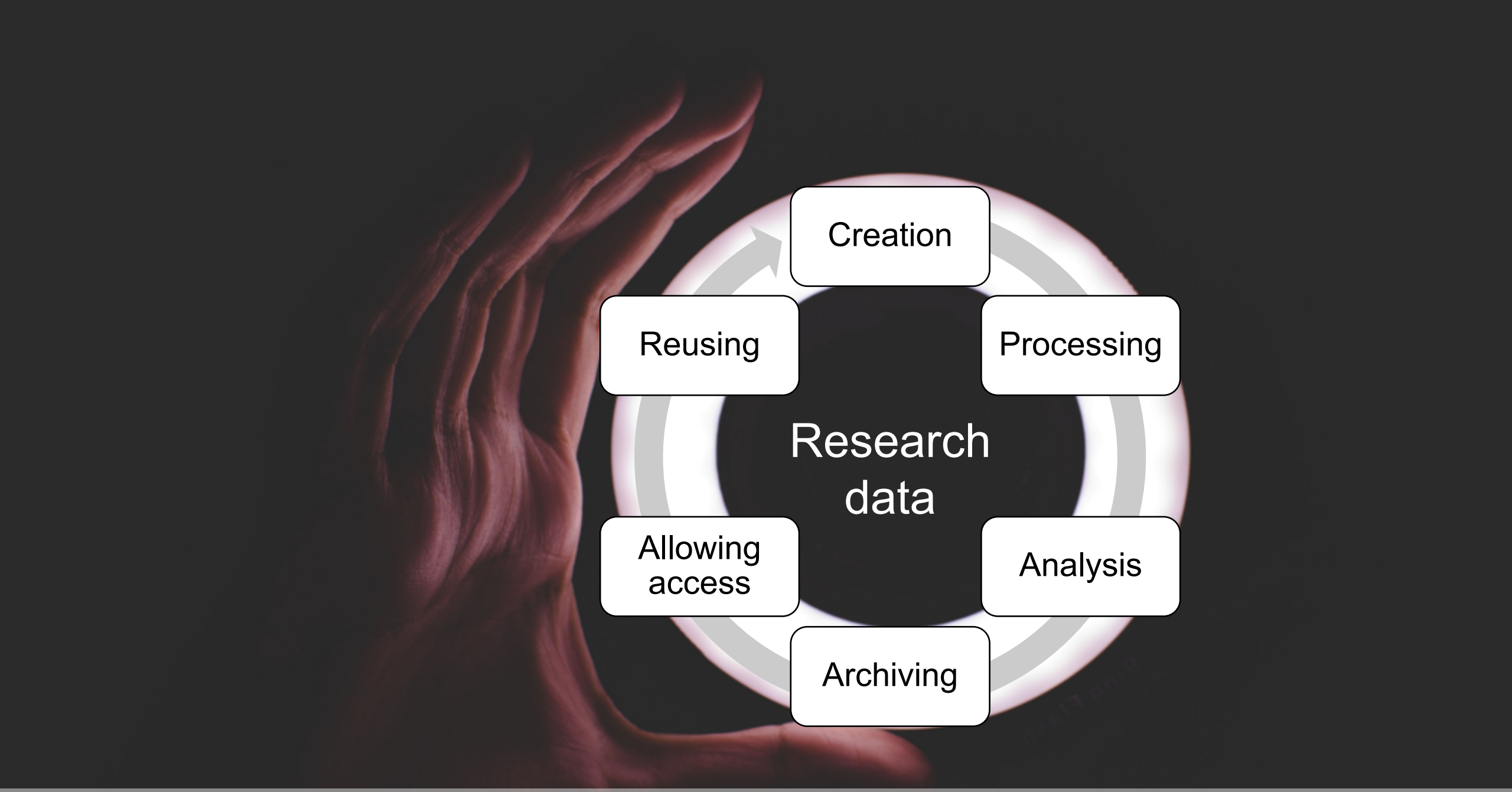
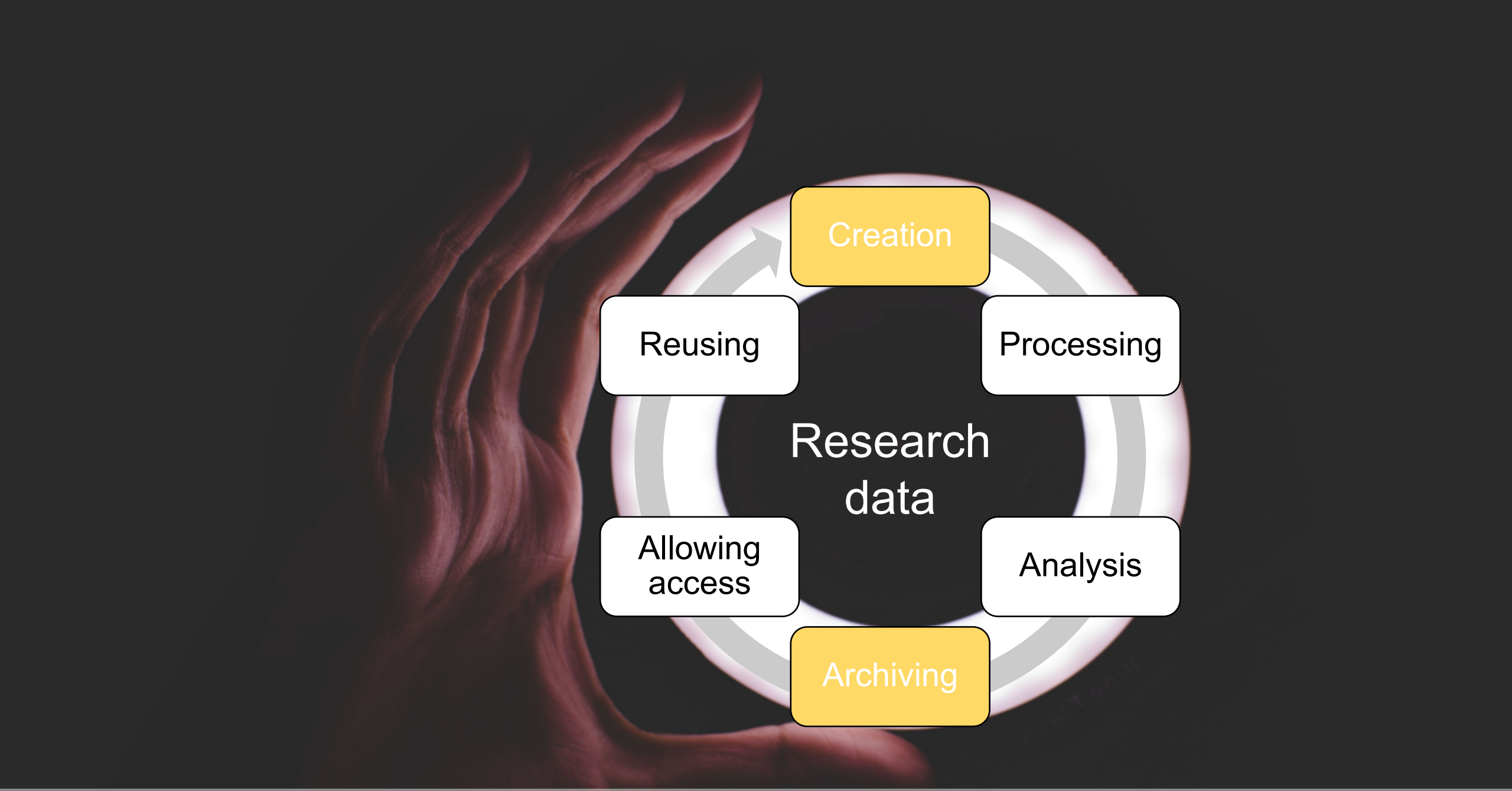



Increased use
Reusability
Avoid duplicate work
Good science
Verifi-cation
Accele-rate Process
Inter-disciplinary use


Creation
Processing
Analysis
Archiving
Allowing access
Reusing
Research data


Creation
Processing
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Archiving
Allowing access
Reusing
Research data

Open Access Repositories

community-specific

institutional

multidisciplinary

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SEARCH SUBMIT ABOUT CONTACT

Citation:

Zhuang, Guang-Chao; Lin, Yu-Shih; Bowles, Marshall W; Heuer, Verena B; Lever, Mark A; Elvert, Marcus; Hinrichs, Kai-Uwe (2018): Distribution and isotopic composition of trimethylamine, dimethylsulfide and dimethylsulfoniopropionate in marine sediments of Aarhus Bay. *PANGAEA*, https://doi.pangaea.de/10.1594/PANGAEA.888371 *(DOI registration in progress)*,

Supplement to: Zhuang, G-C et al. (2017): Distribution and isotopic composition of trimethylamine, dimethylsulfide and dimethylsulfoniopropionate in marine sediments. *Marine Chemistry*, **196**, 35-46, https://doi.org/10.1016/j.marchem.2017.07.007

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Abstract:

Methylated amines and sulfides are ubiquitous organic nitrogen and sulfur compounds in the marine environment and could serve as important energy substrates to methanogens inhabiting anoxic sediments. However, their abundance and isotopic values remain largely unconstrained in marine sediments. In this study, we investigated the distribution of trimethylamine (TMA), dimethylsulfide (DMS) and dimethylsulfoniopropionate (DMSP) in Aarhus Bay, Denmark and provided the first report for their stable carbon isotopic composition. Simultaneous measurement of those two compounds in small volumes of pore waters and sediments was accomplished with gas chromatography in combination with either a purge and trap system for quantification or a headspace method for carbon isotopic analysis. TMA in the solid phase (exchangeable pool, 0.3-6.6 µmol/kg wet sediment; base-extractable pool, 2-18 µmol/kg) was much more abundant than the dissolved pool (< 20 nM), indicating strong adsorption of TMA to sediments. Likewise, total base-hydrolyzable DMS(P)t (including DMS and base-released DMS from DMSP) in sediment was at least three orders of magnitude higher (11-65 µmol/kg) than the dissolved pool of DMS(P)d in the pore water (including DMS and dissolved DMSP; 1-12 nM). TMA and DMS(P) contents in the solid phase peaked in the surface sediment, consistent with their phytodetrital origin. TMA was more 13C-depleted than DMS(P) (TMA: -36.4 per mil to -39.2 per mil; DMS: -18.6 per mil to -23.4 per mil), presumably due to different biological or biosynthetic origins of the respective methyl groups. Both compounds showed a downcore decrease in their solid-phase concentration, a feature that was attributed to microbial degradation, but progressive enrichment in 13C (up to 4 per mil) with depth was observed only for DMS(P). The considerable pool size of TMA and DMS(P) outlined in this study and geochemical evidence of their degradability suggested these two compounds could be potentially important substrates for methane production in sulfate-reducing environments.

Coverage: *Median Latitude:* 56.110600 * *Median Longitude:* 10.402400 * *South-bound Latitude:* 56.103300 * *West-bound Longitude:* 10.346800 * *North-bound Latitude:* 56.117900 * *East-bound Longitude:* 10.458000

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Size: 2 datasets

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Download **ZIP** file containing all datasets as tab-delimited text *(use the following character encoding:* UTF-8: Unicode (PANGAEA default) *)*

Datasets listed in this Collection

1. **Zhuang, G-C; Lin, Y-S; Bowles, MW et al. (2018):** Distribution and isotopic composition of trimethylamine, dimethylsulfide and dimethylsulfoniopropionate in sediment core M1. https://doi.pangaea.de/10.1594/PANGAEA.888368
2. **Zhuang, G-C; Lin, Y-S; Bowles, MW et al. (2018):** Distribution and isotopic composition of trimethylamine, dimethylsulfide and dimethylsulfoniopropionate in sediment core M5. https://doi.pangaea.de/10.1594/PANGAEA.888370

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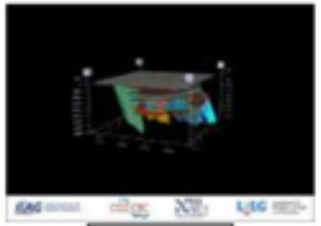
Main Title:	Geological 3-D model as 3-D PDF and mve files
Author(s):	Ziesch, Jennifer
Type:	Generic Research Data
Language:	English
Abstract:	The 3-D PDF shows the 3-D model, including all interpreted stratigraphic horizons and faults as triangulated surfaces. To activate the 3-D PDF, the user has to click once in the black background and wait. After a few seconds it should be possible to get a 360° view around the 3-D model and to toggle horizons/faults/wells on and off. In a standard PDF viewer it is possible to create custom 2-D sections along X, Y or Z axes through the 3-D model. Due to technical issues it is not possible to convert a 3-D PDF into a 3-D PDf with PDF/A standard. The zip folder "Move_projects" contains different .mve files that were used for the retro-deformation of the geological 3-D model. Every single decompaction and restoration step was saved as extra .mve file.

Is Supplement To:	10.14279/depositonce-5386
Appears in Collections:	FG S-Geophysikalisches Processing mit Schwerpunkt Seismik » Research Data

Files in This Item:

File	Description	Size	Format	
Geological_3-D_Model_3DPDF.pdf	3-D PDF shows the geological 3-D model of CO2CRC study area in the Otway Basin, Australia.	6.83 MB	Adobe PDF	 View/Open
Move_projects.zip	The zip folder contains different .mve-files that were used for retro-deformation of the geological 3-D model.	452 MB	ZIP Archive	View/Open

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April 23, 2018

Dataset Open Access

Reproducibility Package for "Reproducible research and GIScience: an evaluation using AGILE conference papers"

Nüst, Daniel

Researcher(s)

Granell, Carlos; Hofer, Barbara; Konkol, Markus; Ostermann, Frank O.; Sileryte, Rusne; Certutti, Valentina

Data and code for analysis and plots used in the manuscript "Reproducible research and GIScience: an evaluation using AGILE conference papers": https://doi.org/10.7287/peerj.preprints.26561v1

The deposited archived includes a Dockerfile and an R Markdown document suitable for use with Binder: https://mybinder.org/v2/gh/nuest/reproducible-research-and-giscience/2

Preview

reproducible-reserach-and-giscience.zip

.git	
HEAD	41 Bytes
branches	
config	289 Bytes
description	73 Bytes
hooks	
applypatch-msg.sample	478 Bytes
commit-msg.sample	896 Bytes
fsmonitor-watchman.sample	3.3 kB
post-update.sample	189 Bytes
pre-applypatch.sample	424 Bytes
pre-commit.sample	1.6 kB
pre-push.sample	1.3 kB
pre-rebase.sample	4.9 kB
pre-receive.sample	544 Bytes
prepare-commit-msg.sample	1.5 kB
update.sample	3.6 kB

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April 23, 2018

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DOI 10.5281/zenodo.1227761

Keyword(s):

GIScience

Related identifiers:

Versions

Version 2	10.5281/zenodo.1227761	Apr 23, 2018
Version 1	10.5281/zenodo.1227261	Apr 23, 2018

Cite all versions? You can cite all versions by using the DOI 10.5281/zenodo.1227260. This DOI represents all versions, and will always resolve to the latest one. Read more.

https://www.re3data.org

2118 Open Research Data Repositories - As of 28.11.18

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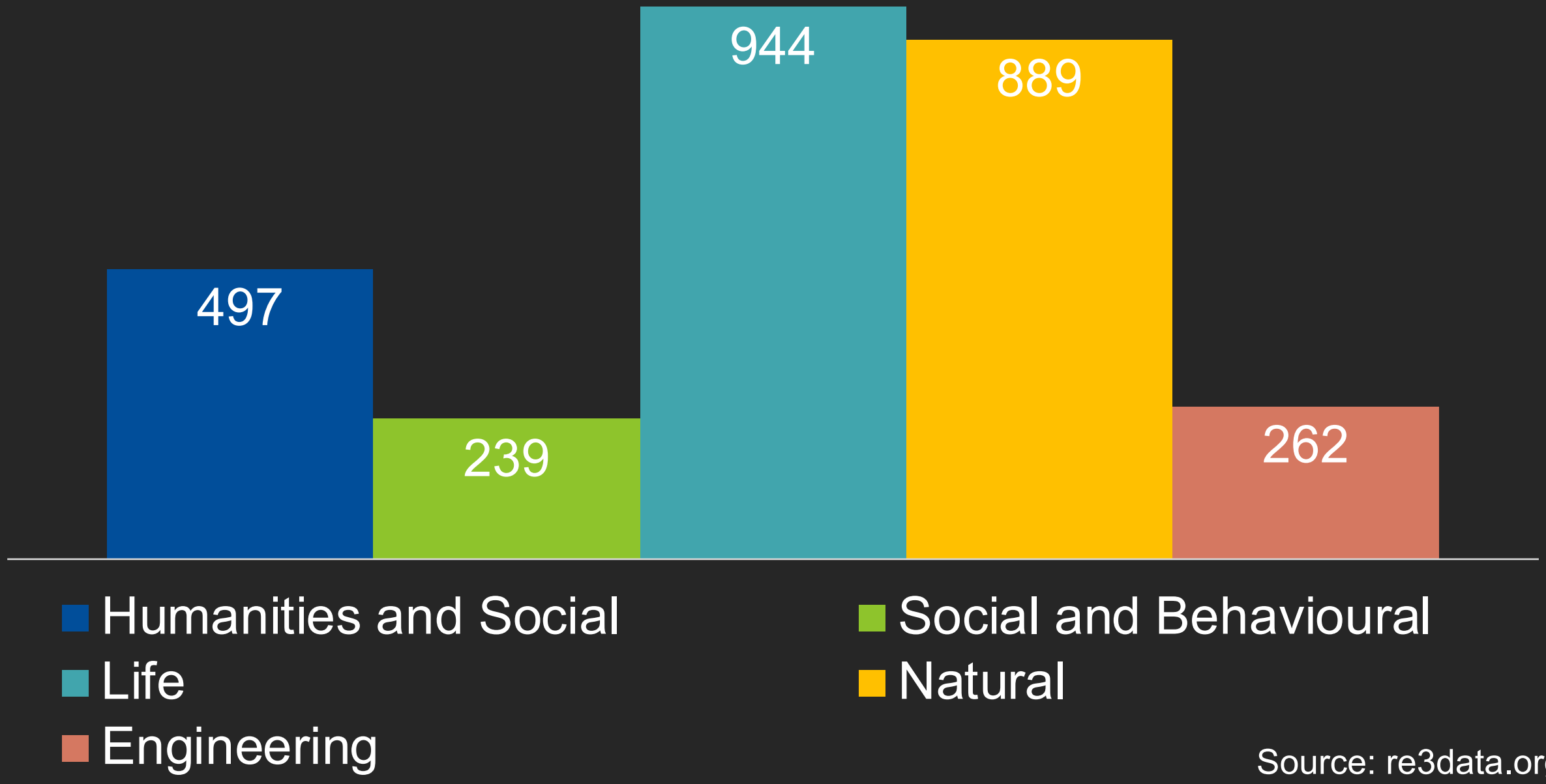

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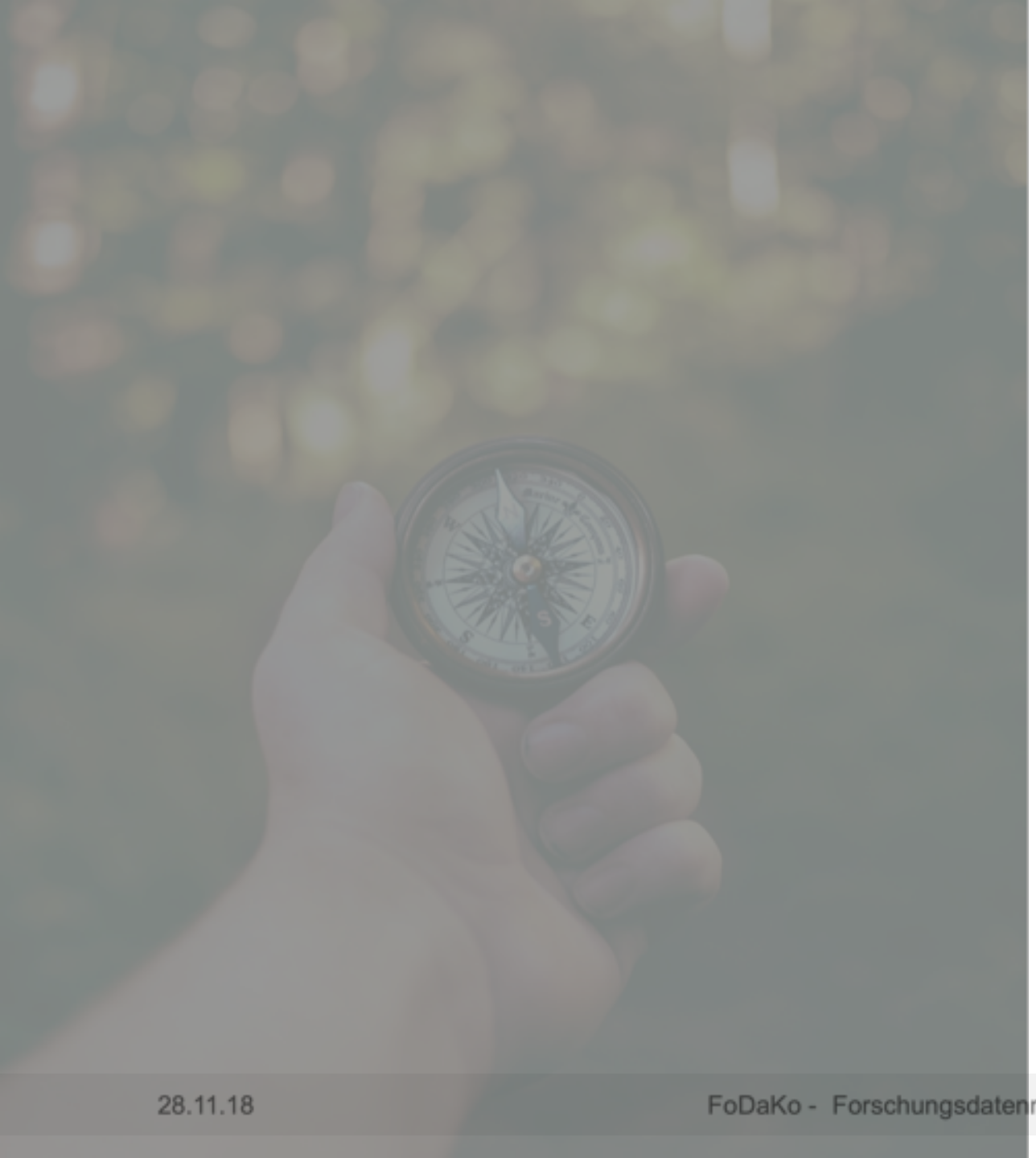

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