



**CS³
MESH⁴
EOSC**

Connecting European Data



Sciebo RDS

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Richard Freitag Sunet

Reducing friction of FAIR data handling for researchers



CS3MESH4EOSC has received funding from the European Union's Horizon 2020 Research and Innovation programme under **Grant Agreement No. 863353**.

Funded by

DFG Deutsche
Forschungsgemeinschaft
German Research Foundation

Who we are

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Background

University of Münster

- Major German University with 44.585 students (2022/23)
- Runs the **Sciebo** Sync'n'Share service


Sciebo

- OC10 based, federated Sync'n'Share
- Ca. 230.000 users across about 40 universities
- 30GB per student, 500GB per employee, 30-2.000GB for project boxes
- Ca. 3,9 PB of storage

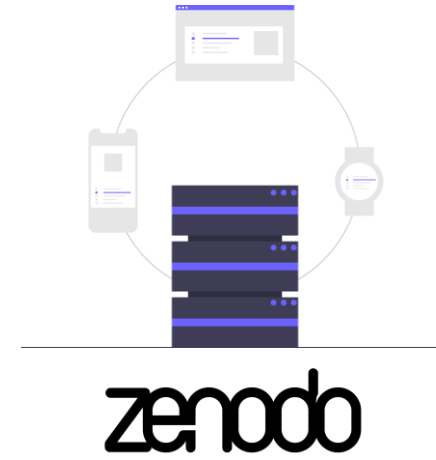
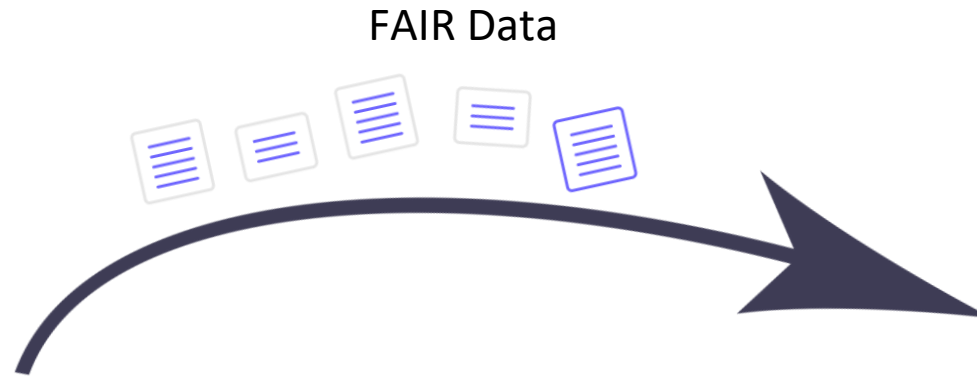
SUNET – Swedish University Computer Network

- Founded in the 1980s as a research project for Swedish computer scientists
- National and international data communication services
- 8400 km nationwide fiber, 750 000 users and 110 connected organisations.

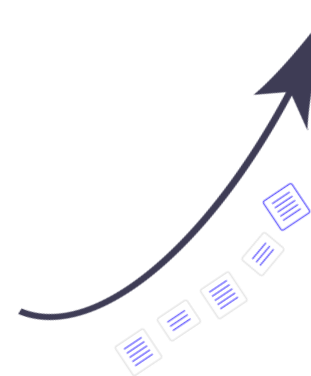
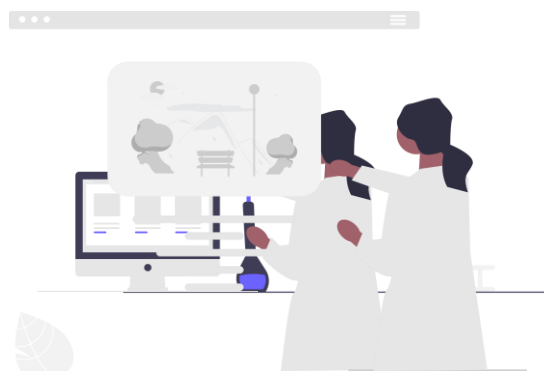
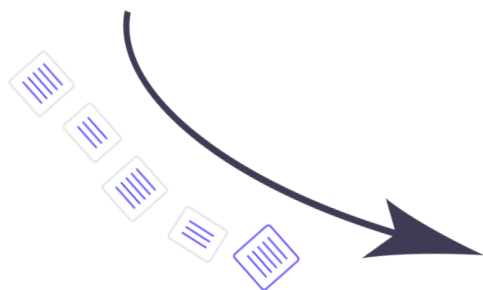
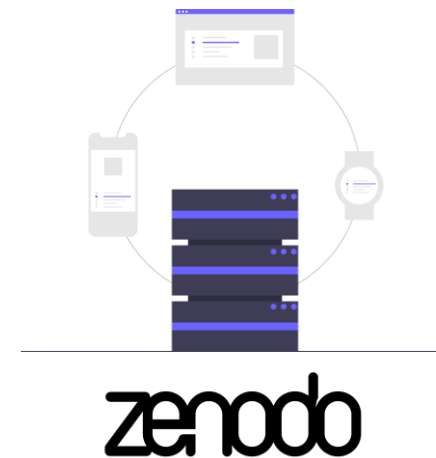
SUNETDrive

- NC25 based, federated Sync'n'Share
- Ca. 2000 users across 54 universities
- 2 PB available, ca. 120TB used, 0.5TB per day
- (* The population of NRW is 16M vs. 10M in Sweden )

What we want



What we have

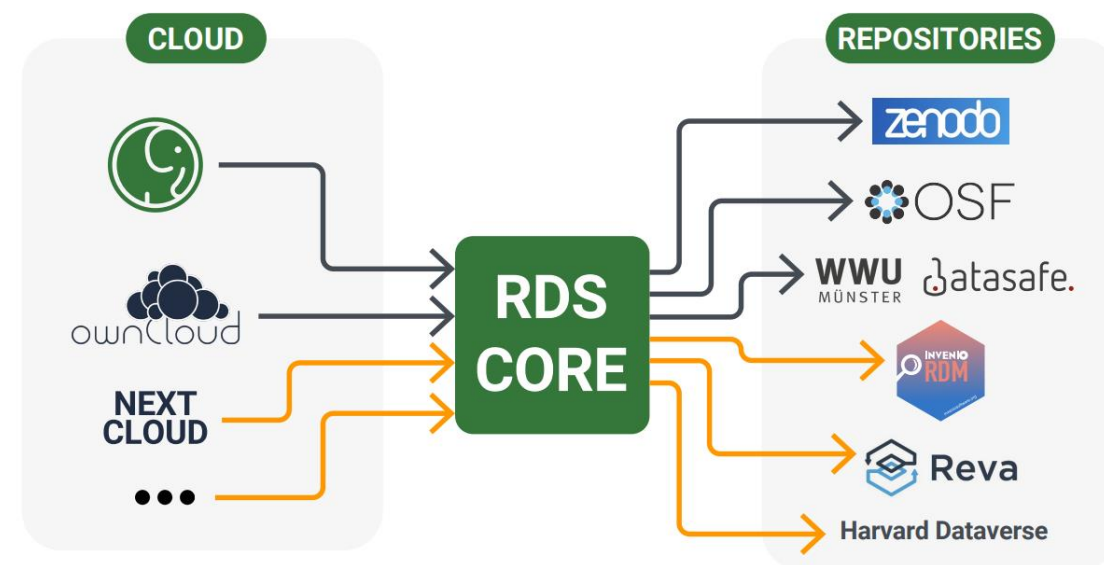


Sciebo RDS

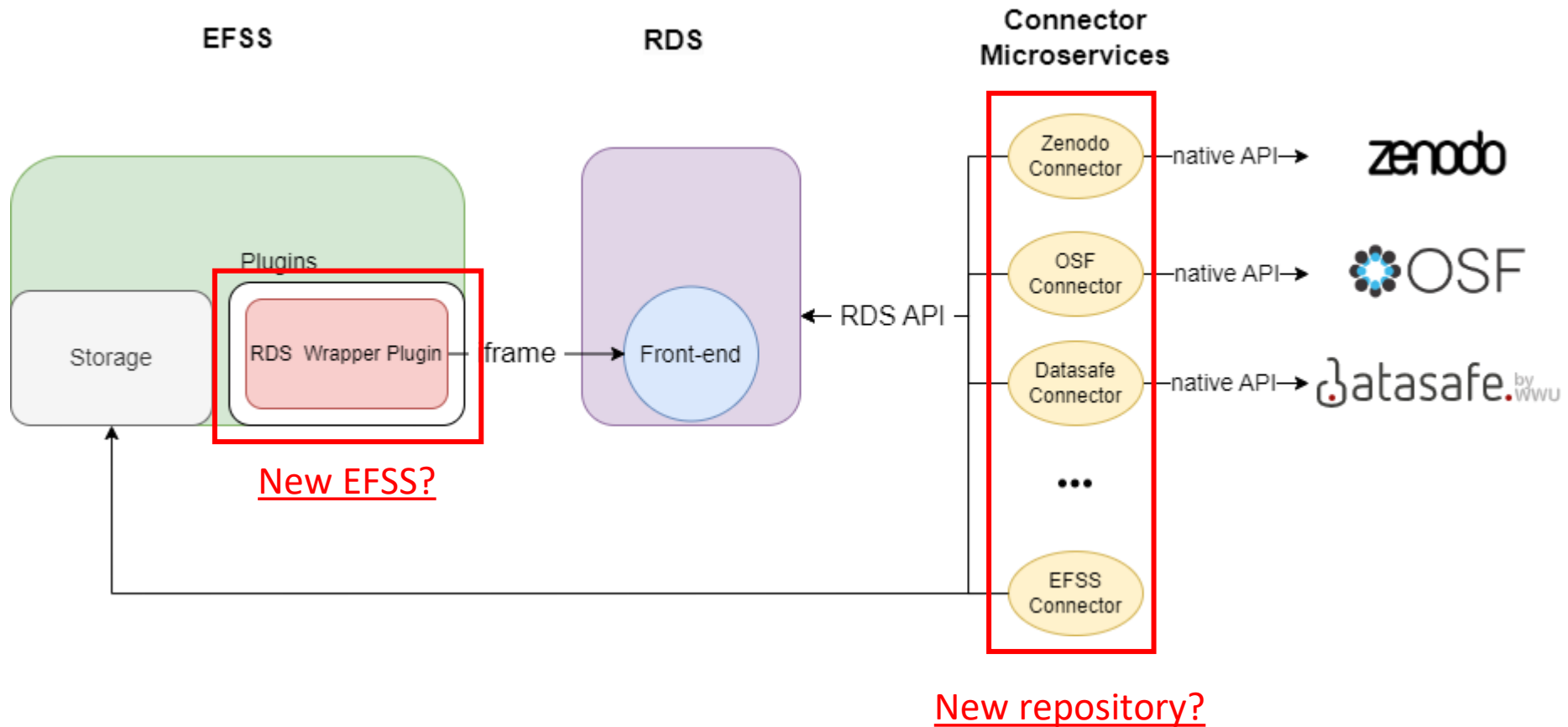
- Compatibility layer between a host (EFSS) and research data repositories
- Provides metadata annotation via describo, metadata stored as RO-Crate
- Integration via native EFSS plugin system
 - Plugin acts as a wrapper around standalone RDS web app
 - Utilizing basic EFSS functionality like filepickers and oauth for user management
- Each storage provider / repository is implemented as it's own microservice

➔ Easily extendable for your EFSS by writing a native wrapper plugin

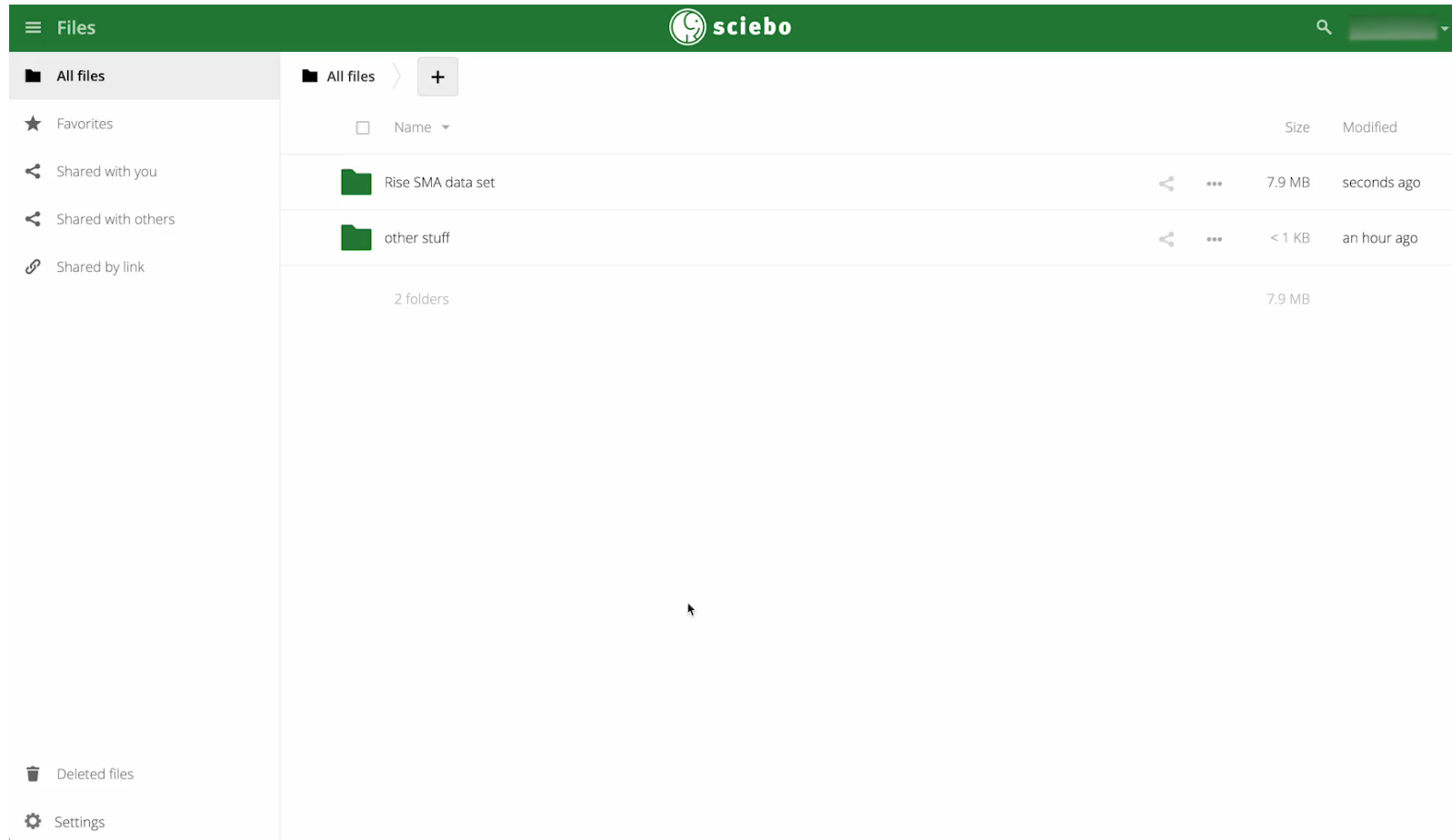
➔ Easily extendable for your data repository by writing a microservices that maps to your API



Schema



Demo: Publish data from Sciebo



The screenshot shows the Sciebo file management interface. The top navigation bar is green with the Sciebo logo and a search icon. The left sidebar contains navigation options: 'All files', 'Favorites', 'Shared with you', 'Shared with others', 'Shared by link', 'Deleted files', and 'Settings'. The main content area displays a list of files and folders. The current view is 'All files'. The list shows two folders: 'Rise SMA data set' (7.9 MB, modified seconds ago) and 'other stuff' (<1 KB, modified an hour ago). Below these folders, it indicates '2 folders' with a total size of '7.9 MB'.

Name	Size	Modified
Rise SMA data set	7.9 MB	seconds ago
other stuff	<1 KB	an hour ago

Development

- Core Components developed at the University of Münster
 - **RDS Core**
 - **Owncloud** plugin
 - Connectors for **Zenodo, OpenScienceFramework and WWU Datasafe**
- Adaption and extensions by Partners like Sunet, SND and SURF
 - **Nextcloud** port for the Owncloud plugin (Sunet)
 - **Doris** connector (SND)
 - **Figshare** connector (SURF)
 - **Harvard Dataverse** connector (SURF)
- **Everything openly available on Github**

Sciebo RDS is Open Source – why not develop your own connector?! :-)

Porting Sciebo RDS to Nextcloud (Sunet Drive)

Sunet – RDS Infrastructure

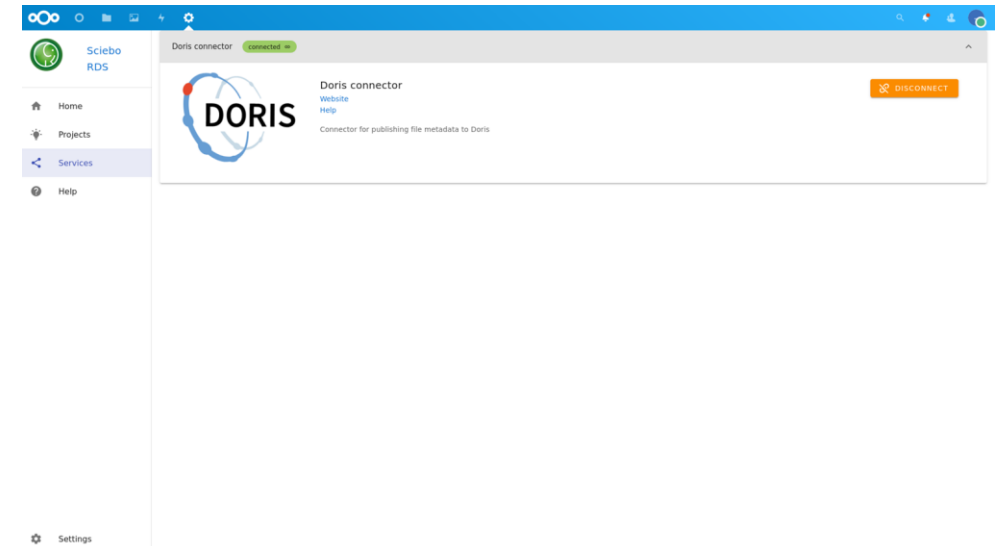
- WWU streamlined infrastructure setup
- Prepare deployment using Sunet infrastructure

RDS App for Nextcloud

- Initially only minor changes necessary
- Nextcloud updates required further customizations

SND/Doris Connector

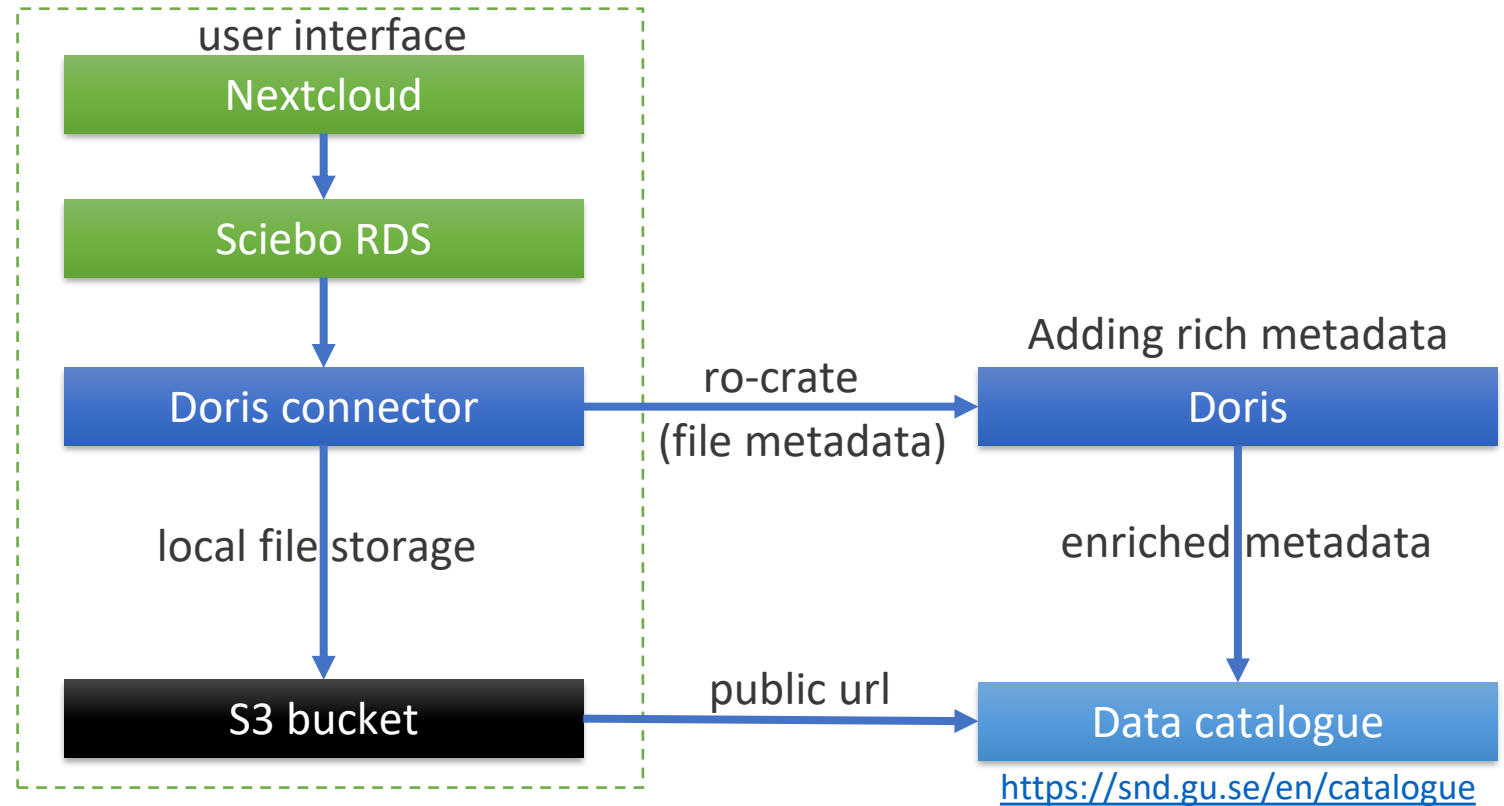
- Define architecture and design within the context of both Doris and Sunet Drive
- Specify integration into storage architecture (S3), ideally avoiding a dependency on Nextcloud
- Deploy app to be used by reference users



Most components still require some development effort, but we are getting there!

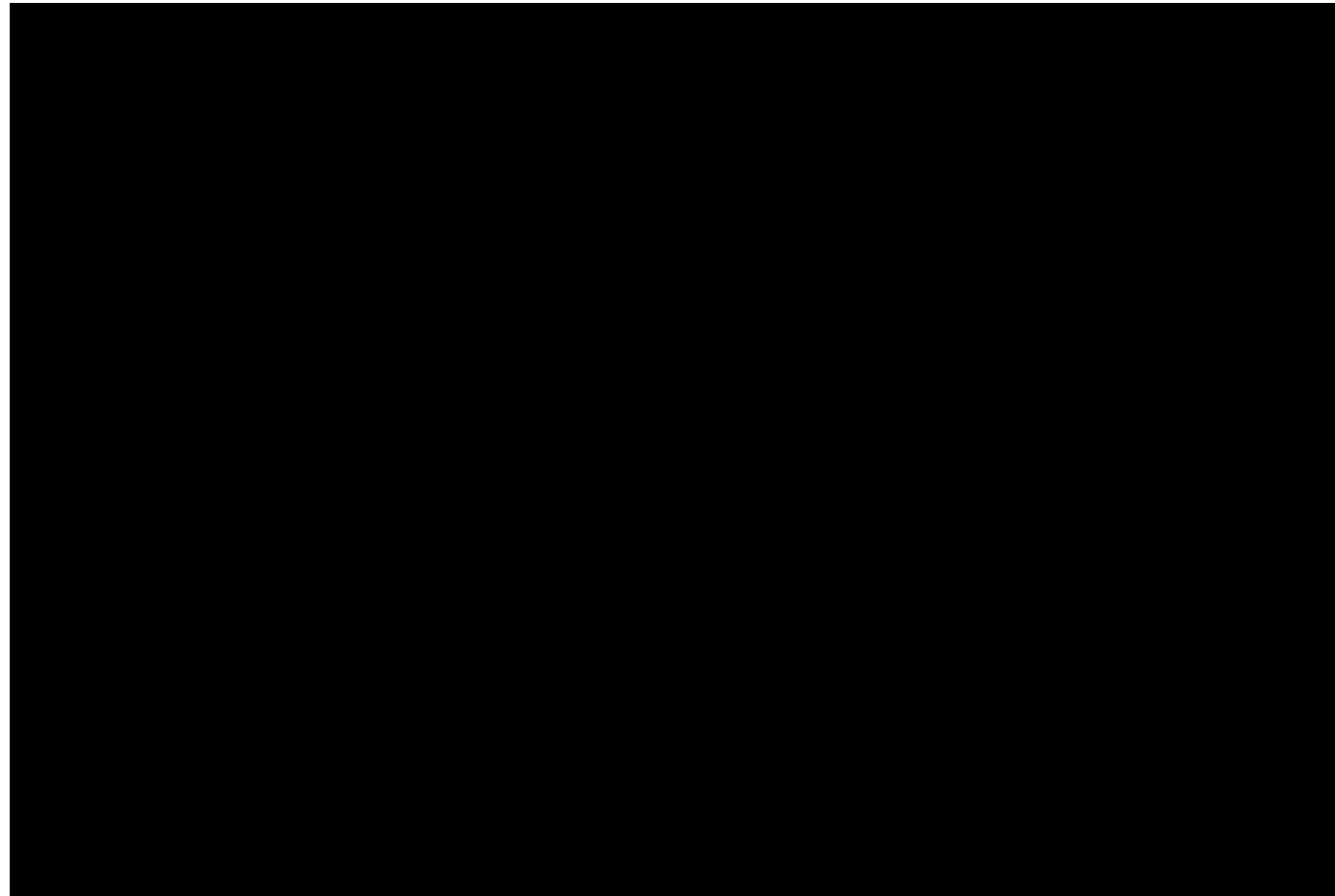
DORIS

- Metadata management system
- Cross discipline
- Heavy use of controlled vocabularies



More information about sharing data via DORIS
<https://snd.gu.se/en/describe-and-share-data>

Demo: Publish from Sunet Drive (Nextcloud)



Get in touch



www.research-data-services.org



gitter.im/Sciebo-RDS



github.com/Sciebo-RDS



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Thank you!
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