



# Workshop on Cloud Services for Synchronisation and Sharing

A Summary

by Pedro Ferreira

# 8th edition!

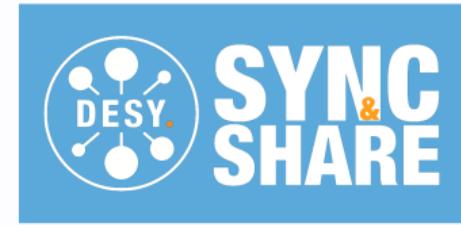
24 - 27 Jan 2022

- 2014 - Genève
- 2016 - Zürich
- 2017 - Amsterdam
- 2018 - Kraków
- 2019 - Roma
- 2020 - København
- 2021 - **Virtual**
- 2022 - **Virtual**



# What is it about?

- **Sync & Share Cloud Storage, on-premises, FOSS**
  - Sites and Services: *DESY Sync & Share, CERNBox, BNLBox...*
  - Storage Technology: *EOS, GPFS, CEPH, dCache, ...*
  - EFSS Companies: *ownCloud, Nextcloud, Seafile...*



Nextcloud



# What is it about?

- **Integrated Services**

- Collaborative Tools:  
*OnlyOffice, Collabora, ...*
- Research Services: *Jupyter, Open Data Repositories, FAIR metadata ...*

- **Projects and Federations**

- *European Open Science Cloud, ScienceMesh, HIFIS ...*



# What is it about?

- New: **Decentralized Web and Storage**
  - IPFS, Solid, ...
  - web3, Fediverse...
- **Thematic workshops**
  - Interoperability protocols and APIs
  - ScienceMesh



## Attendance

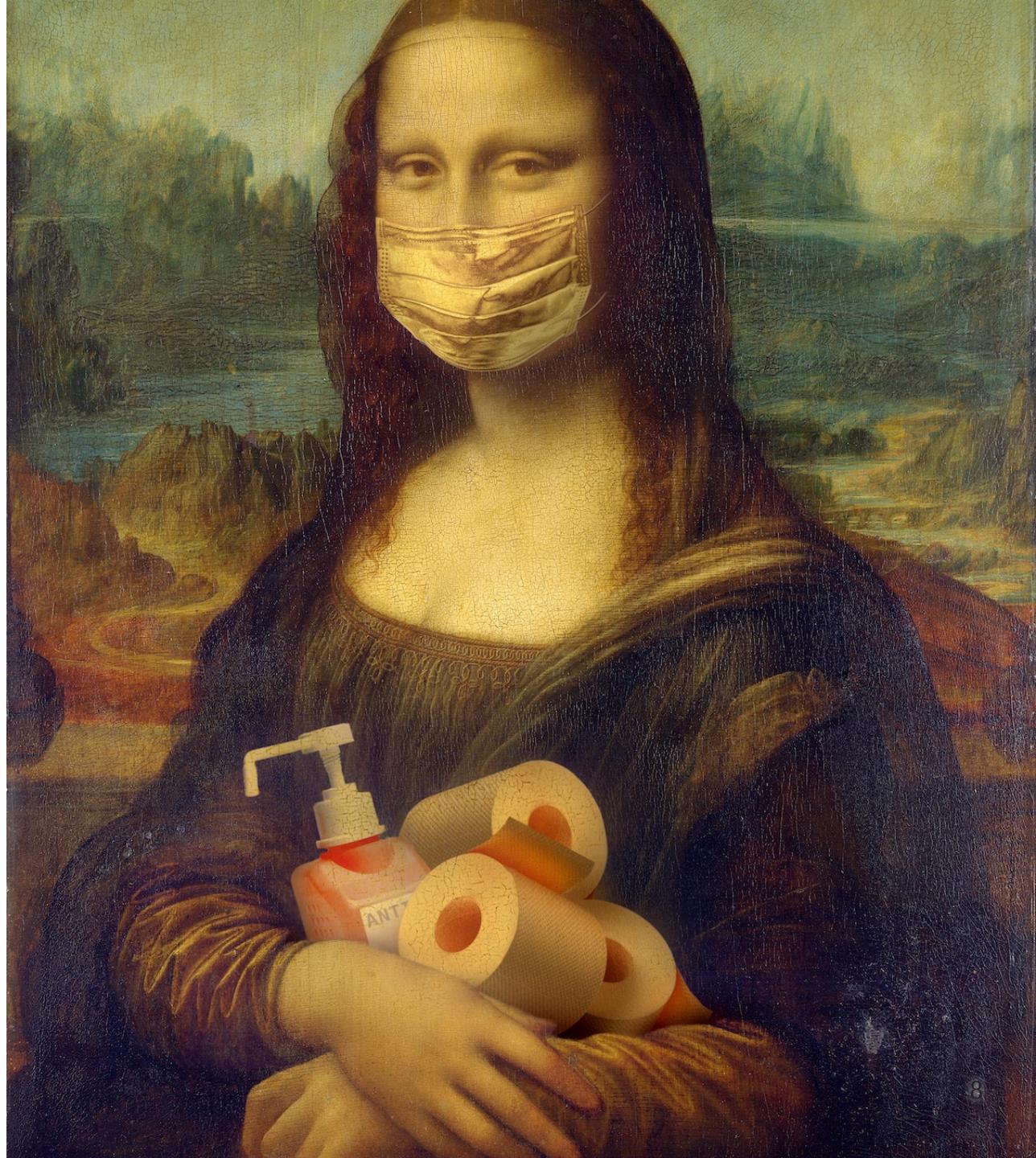
- **280+** registered participants (~310 previous year)
- **~120** different organizations
  - Universities, International Organizations, NRENs, Computing Centers, SMEs, Enterprises, European Commission...



# 2021 - 2022

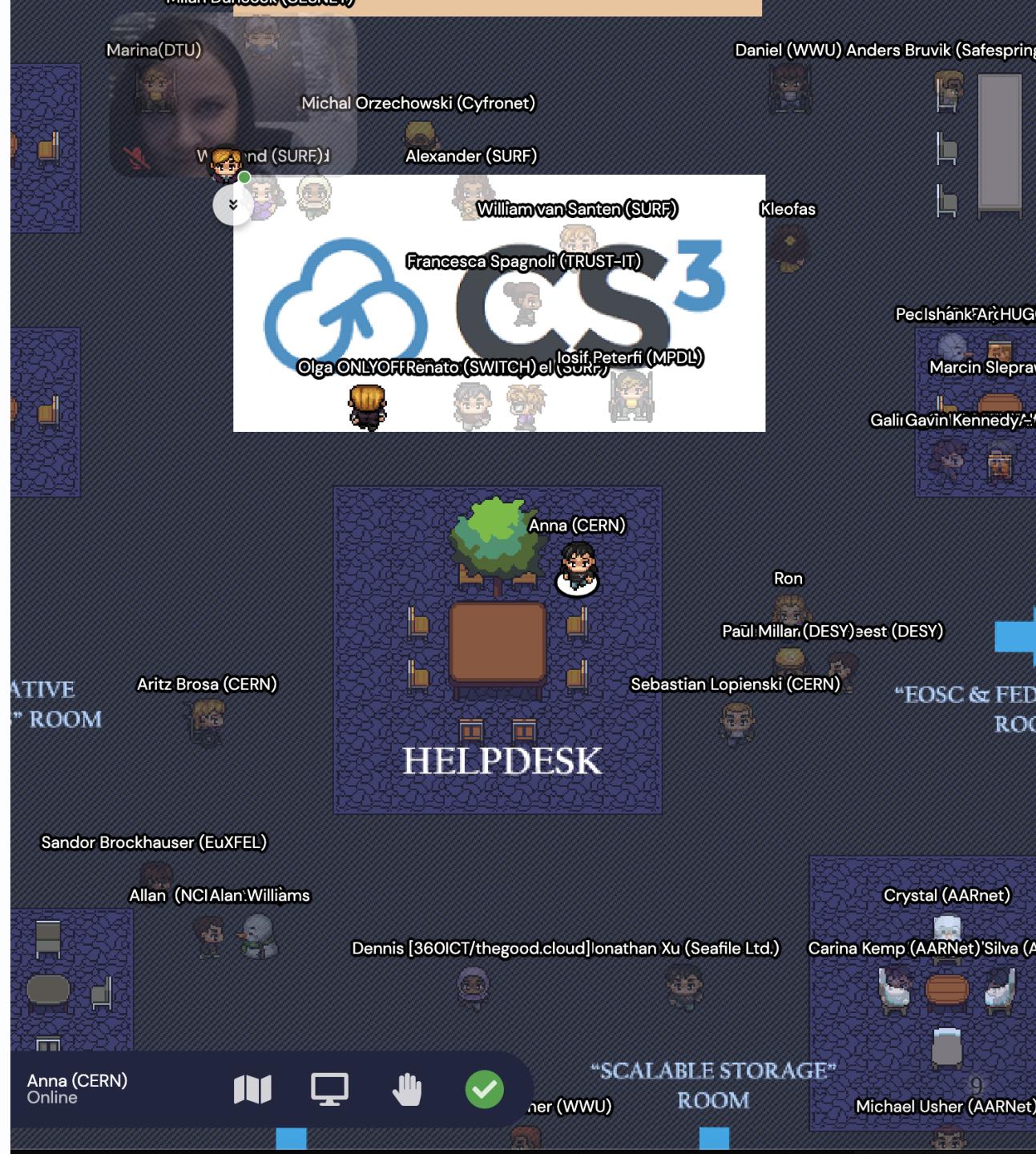
- Needed to go **full virtual** (Zoom)
- Collaborative **tools** (Zoom, gather.town, Indico)

Photo by Yaroslav Danylchenko from Pexels



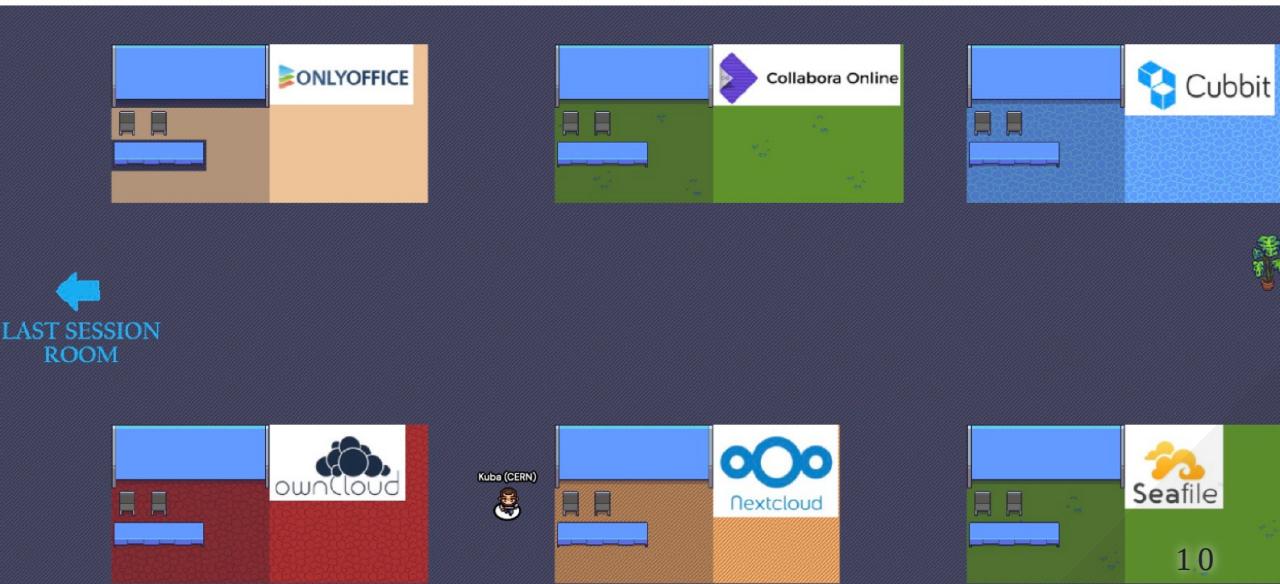
# gather.town

- 8-bit-RPG-like interface 🎮
- Game-like controls (arrow keys)
- "Line of sight" video chats



# This time

- More or less same layout
- Rooms for discussions + exhibitor **booths**
- Usage visibly **lower** than previous year...
- Maybe "Zoom fatigue"?



# Schedule

Monday, 24 January 2022		Tuesday, 25 January 2022		Wednesday, 26 January 2022		Thursday, 27 January 2022	
08:45	Good Morning Coffee	08:45	Good Morning Coffee	08:45	Good Morning Coffee	08:45	Good Morning Coffee
09:00	Introduction and Welcome	09:00	Keynote	09:00	Keynote	09:00	Decentralized Web and Storage Architectures
09:15	Keynote	09:45	Coffee break	09:45	Coffe Break	09:36	User Stories
10:00	Coffee break	10:00	Federated Infrastructures & Clouds	10:00	Scalable Storage Backends	10:00	Coffe Break
10:20	Site Reports	11:30	Lunch break	11:20	User Stories	10:15	User Stories
11:30	Lunch break	11:30	Lunch break	12:20	Lunch break	11:15	Coffe Break
13:00	EFSS Products	13:00	Collaboration Products	14:00	ScienceMesh Workshop	11:30	Technology for Application Integration
14:30	Coffe Break	14:00	Coffe Break	14:15	CS3 Org: Governance Campfire Discussion (CS3APIs, REVA, OCM, WOPI,...)	12:30	Summary and Conclusions
15:00	OCM Interoperability Workshop	15:45	Chat-away Coffee	17:45	Chat-away Coffee		
16:40	Chat-away Coffee						

# Highlights

# Keynote: IPFS: Interplanetary filesystem

Yiannis Psaras (ProtocolLabs)

The Interplanetary File System  
A fresh look at distributed storage and delivery

An introduction to IPFS

Dr Yiannis Psaras  
Research Scientist  
Protocol Labs

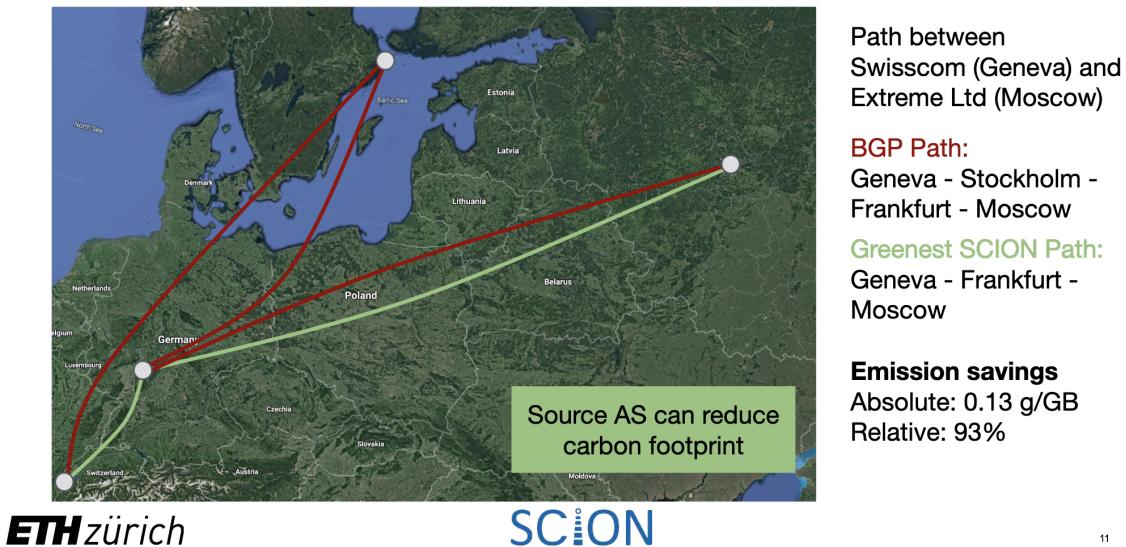
TOUR

ResNetLab

# Keynote: SCION: Experiencing a new Internet Architecture

Adrian Perrig (ETHZ)

## Carbon-intensity difference between paths (1/2)



# Keynote: Digital Market: a level playing field for EU Tech sector

Frank Karlitschek (Nextcloud)

## User Data Manifesto 2.0

Defining basic rights for people to control their own data in the internet age



**Control**  
over user data access

Data explicitly and willingly uploaded by a user should be under the ultimate control of the user. Users should be able to decide whom to grant direct access to their data and with which permissions and licenses such access should be granted.



**Knowledge**  
of how the data is stored

When the data is uploaded to a specific service provider, users should be informed about where that specific service provider stores the data, how long, in which jurisdiction the specific service provider operates, and which laws apply.



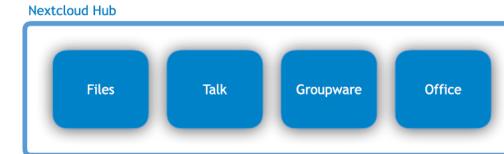
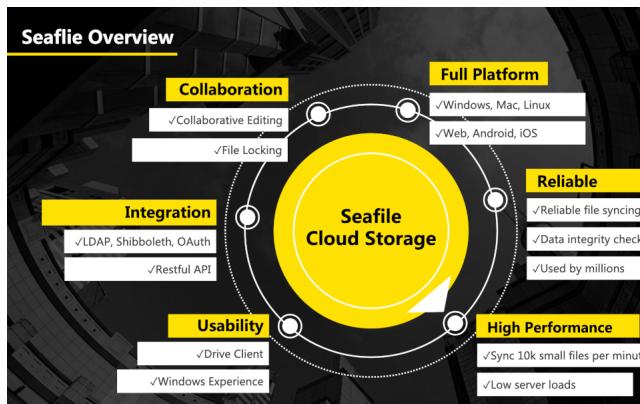
**Freedom**  
to choose a platform

Users should always be able to extract their data from the service at any time without experiencing any vendor lock-in. Open standards for formats and protocols are necessary to guarantee this.

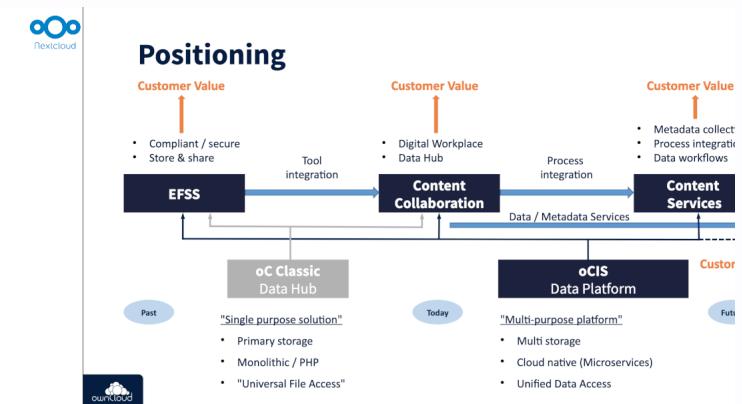
[Read more & participate!](#)

# EFSS Platforms

## ownCloud, Nextcloud, Seafile



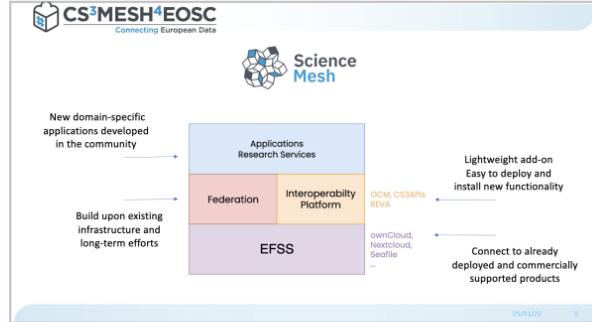
Productivity, Security, On Premises, Open Source



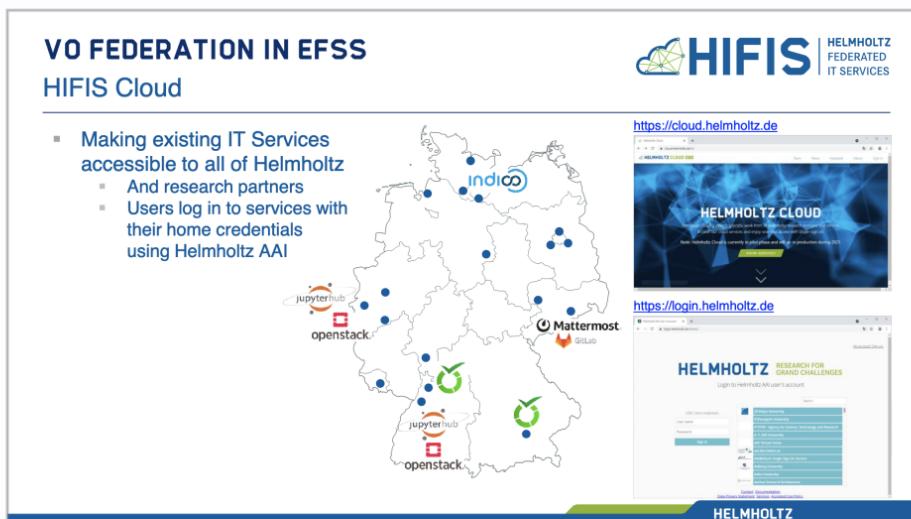
# Federated Infrastructures and Clouds



P. Szegedi - Update from the European Comission on Future Evolution of Digital Landscape in Europe

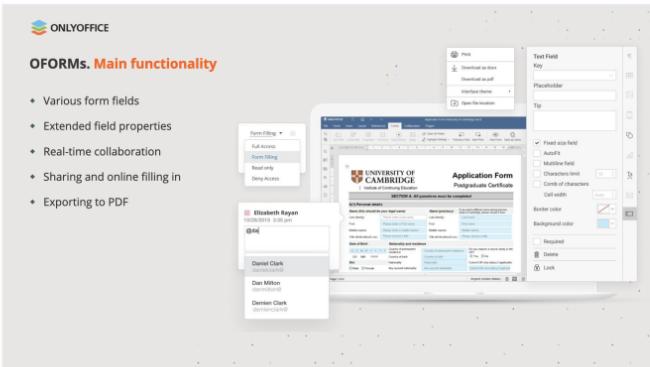


P. Ferreira - ScienceMesh: An Interoperable Federation of EFSS services for European Open Science Cloud



A. Klotz - HIFIS: VO Federation for EFSS

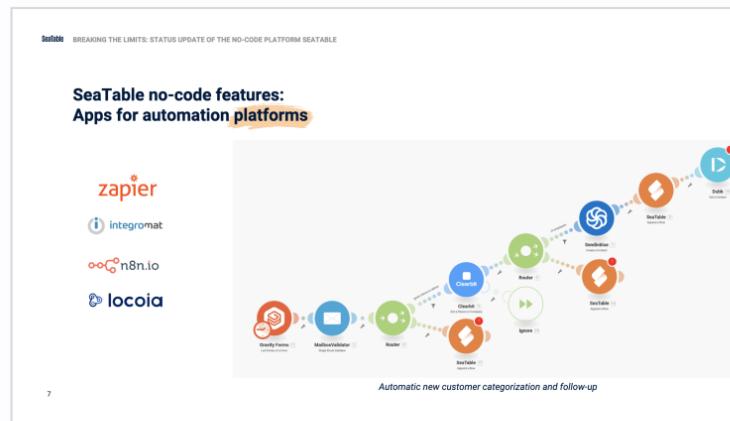
# Collaboration Products



G. Goduhina - Introducing ONLYOFFICE Forms

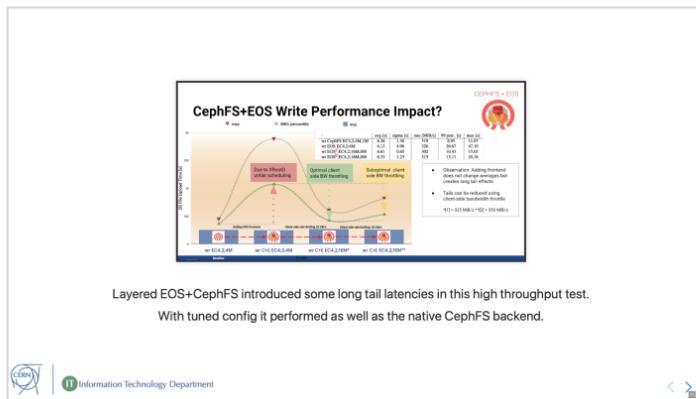


M. Meeks - Collabora Online: easy to deploy and manage document collaboration

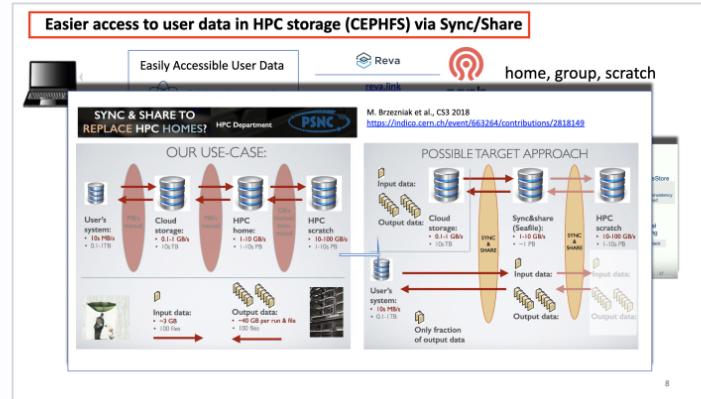


C. Dylllick-Brenzinger - Breaking the limits: short status update of the online spreadsheet solution SeaTable

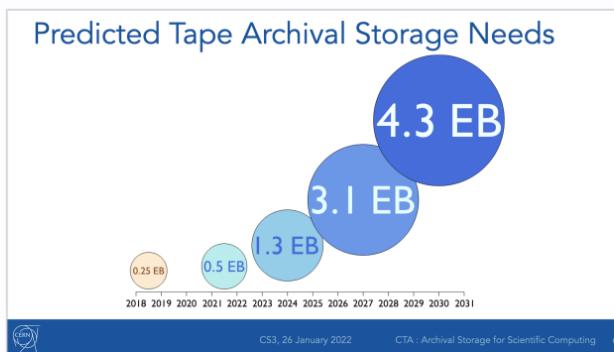
# Scalable Storage Backends



**R. Valverde** - Converging Storage Layers with Virtual CephFS Drives for EOS/CERNBox



**D. van der Ster, T. Mouratidis** - Sync and Share Access to HPC Resources at CERN



**M. Davis** - The CERN Tape Archive (CTA): Archival Storage for Scientific Computing

# User Stories



**J.Dreyer - Infinite scale is a design principle**

Attendance

- 193 registered users
- 172 unique users in Zoom
- Peak of ~90 concurrent users
- 56+ institutions
- 31 speakers
- All CERN departments represented

CERN CH de des fréq. Education FR Fundação GARR GR

institute investigations Jardin Johannes Juiz la Lancaster Le

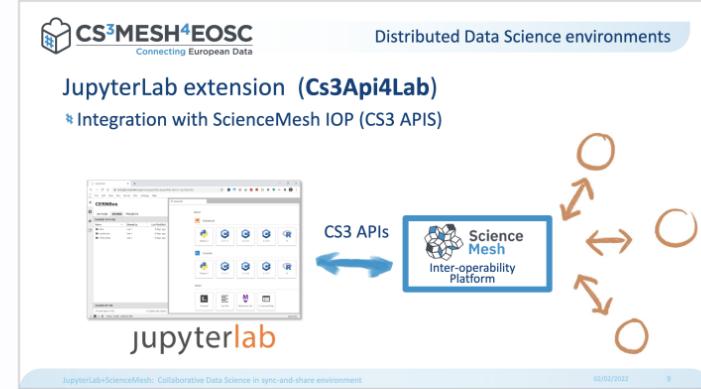
Nether NISER NL Normal Norwegian Paris-Saclay Particles Physics pour

Science Sciences Prague PR Recherche RESEARCH Regi RU Ruder Boskovic

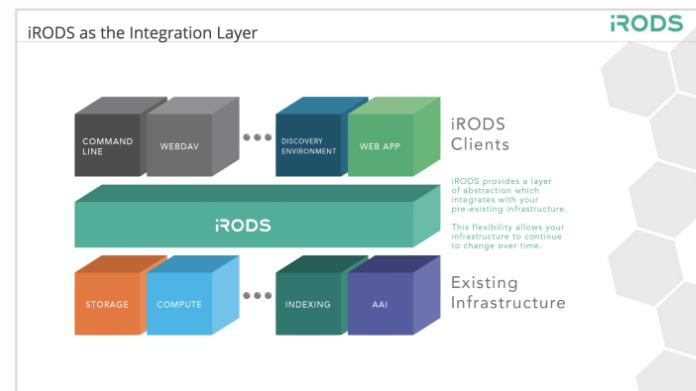
Scienze SE SIESTI Smith STFC Subatomic Technical Technology Technologiae

Technologicas Univ Universitat Université Universite University

**H. Labrador - CERNBox User Forum**



**M. Sieprawski - JupyterLab+ScienceMesh: Collaborative Data Science**



**T. Russell - iRODS Research Community Requirements Drive Expanded Scale Data Management Features**

# Thematic Sessions

# CS3 Org: Governance Campfire Discussion

- Governance of software products and standards - e.g. CS3APIs, REVA, OCM,...
- Request from industry for a more active role in governance.

## Governance



Repositories under the CS3 GitHub Organization are governed by CERN for the benefit of the community. CERN strives to make the projects under this organization collaborative, open and transparent to ensure that everyone can contribute and have their say on the directions of the projects.

...  
*The current governance model puts in words how the collaboration currently works in practice today and sets a basic framework for how we collaborate and take decisions in the project. If the nature of the community or contributors changes this governance model may be reviewed and changed if necessary.*

 <https://github.com/cs3org/.github/blob/master/GOVERNANCE.md>

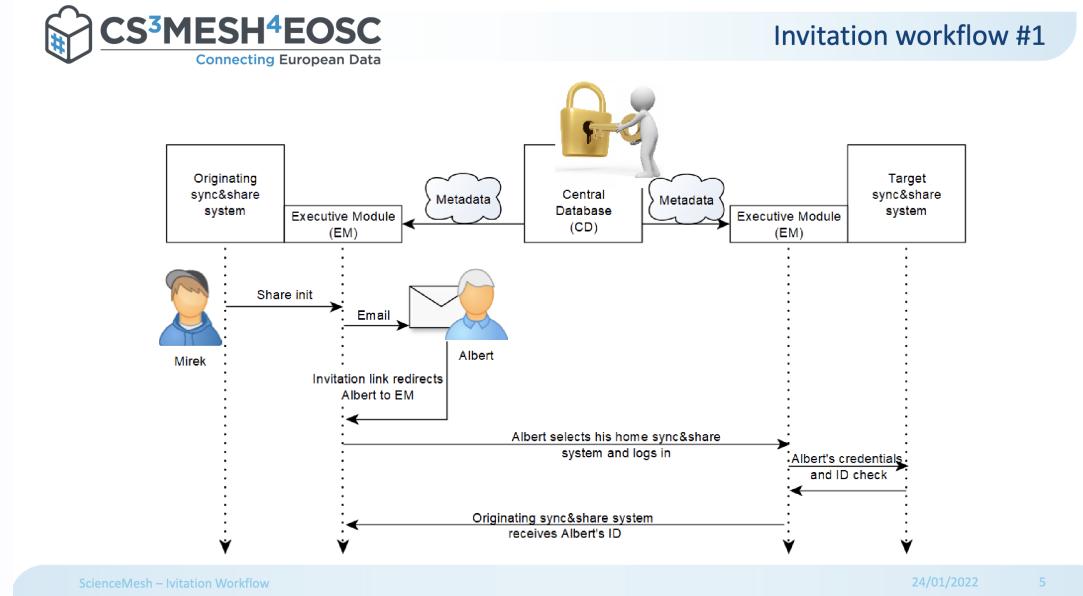
With the increasing maturity of the project we should discuss the governance model.



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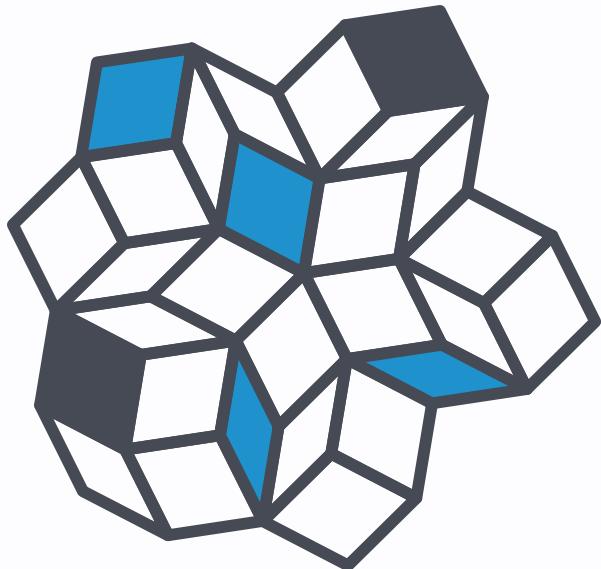
# OCM Workshop

- *OpenCloudMesh* - sharing of files between EFSS systems
- Extensions done in the context of ScienceMesh



<https://indico.cern.ch/event/1075584/contributions/4662258/>

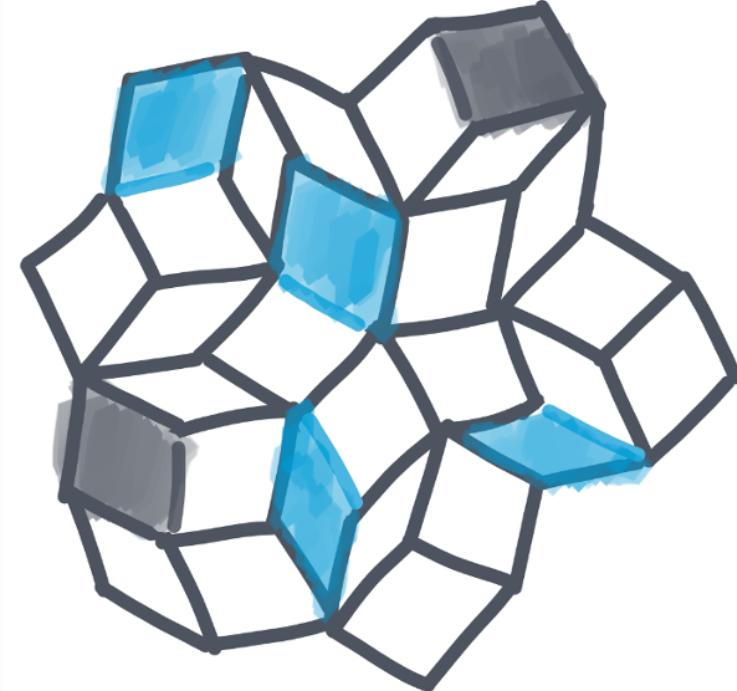
## ScienceMesh Workshop



Science  
Mesh

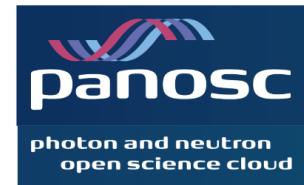
# ScienceMesh Workshop

- Two parts:
  - "Status updates"
  - Presentations by EOSC Task Forces and Research Initiatives representatives



# ScienceMesh Workshop

- Progress validated by community
- New synergies and prospective partners/communities



# CS3 2022 Organizing & Programme Committee

Rita Meneses, TRUST-IT



Anna Manou, CERN IT



Ron Trompert, SURF

Hugo Gonzalez, CERN IT



Pedro Ferreira, CERN IT



Tilo Steiger, ETH Zurich



Kuba Moscicki, CERN IT

Guido Aben, AARNet



**It's all online!**

<https://indico.cern.ch/e/cs3/2022>

**Thank you!**

Questions?