

Federated

Data

Architectures

Michiel de Jong

post-growth
entrepreneur

@ Ponder Source

Michiel de Jong

Founder

@ Unhosted

Michiel de Jong

co-author

@ remoteStorage

Michiel de Jong

Ex Team Member

@ Solid OS

Michiel de Jong

Maintainer

@ Solid Test Suite

Michiel de Jong

Maintainer

@ OCM Test Suite

Michiel de Jong

Board Member

@ DAPSI

Michiel de Jong

Co-founder

@ PDS Interop

Part 1 of 2:

Personal Data Store

Interoperability

ALIGNMENT

IS

HARD

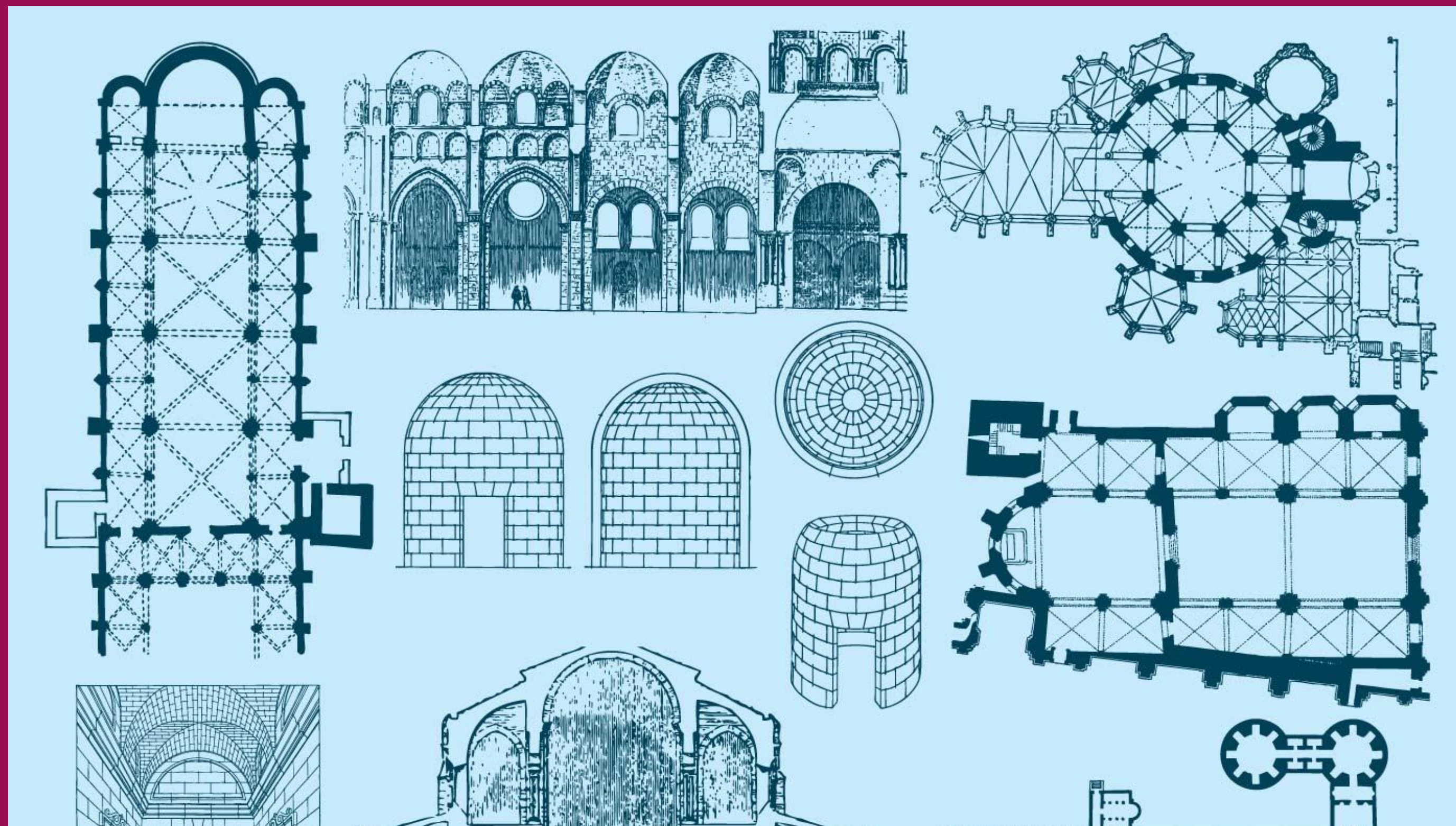
BUT WE'LL

KEEP

TRYING

1. ARCHITECTURE
2. BRIDGES
3. DATA MOVES
4. PROGRESS
5. OUTLOOK

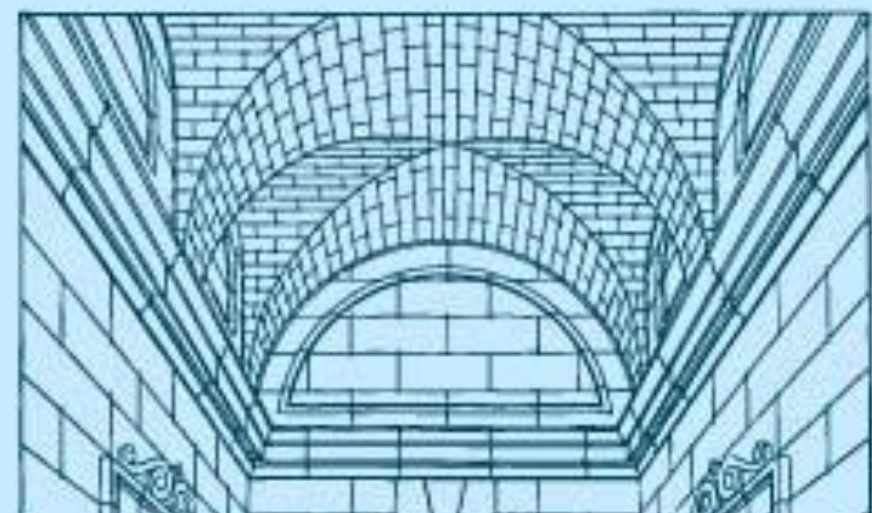
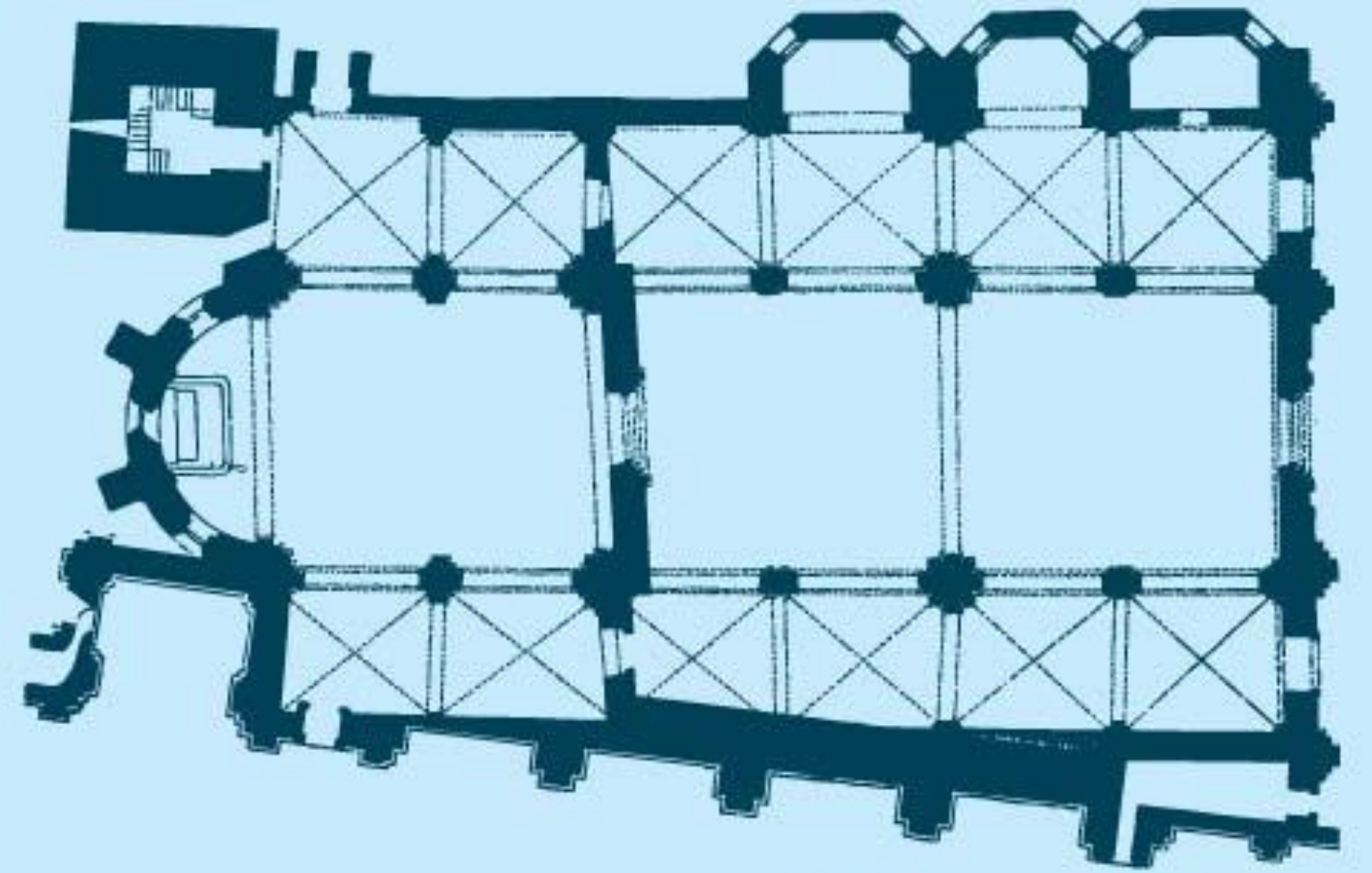
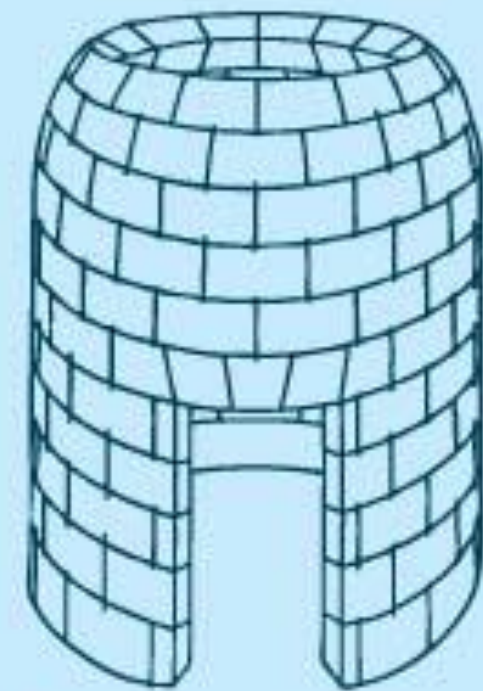
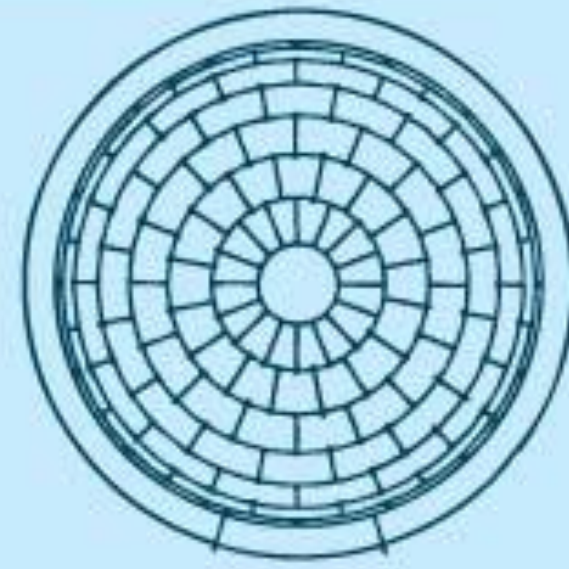
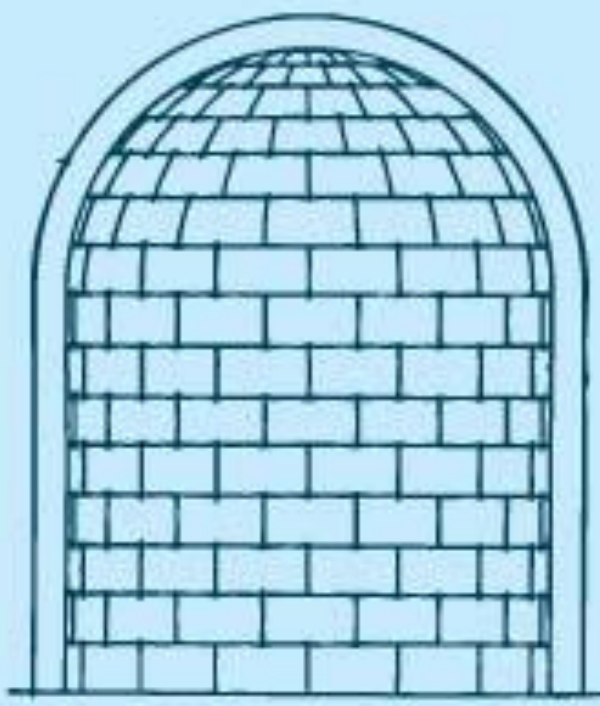
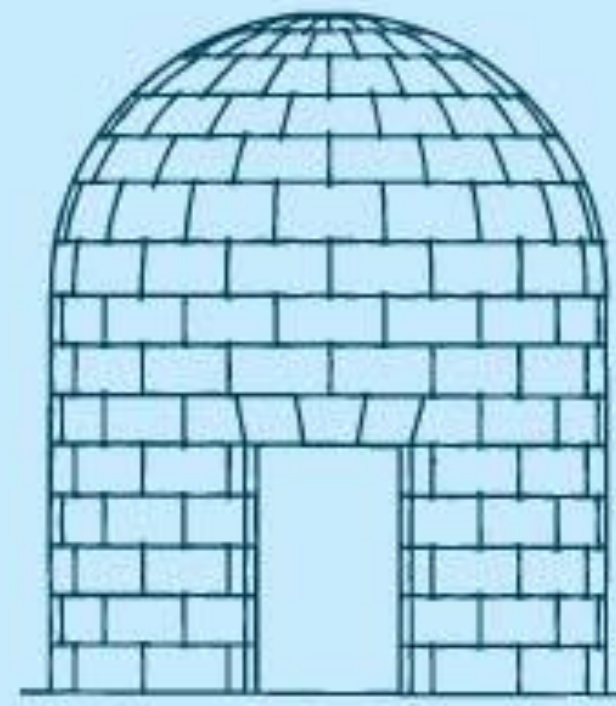
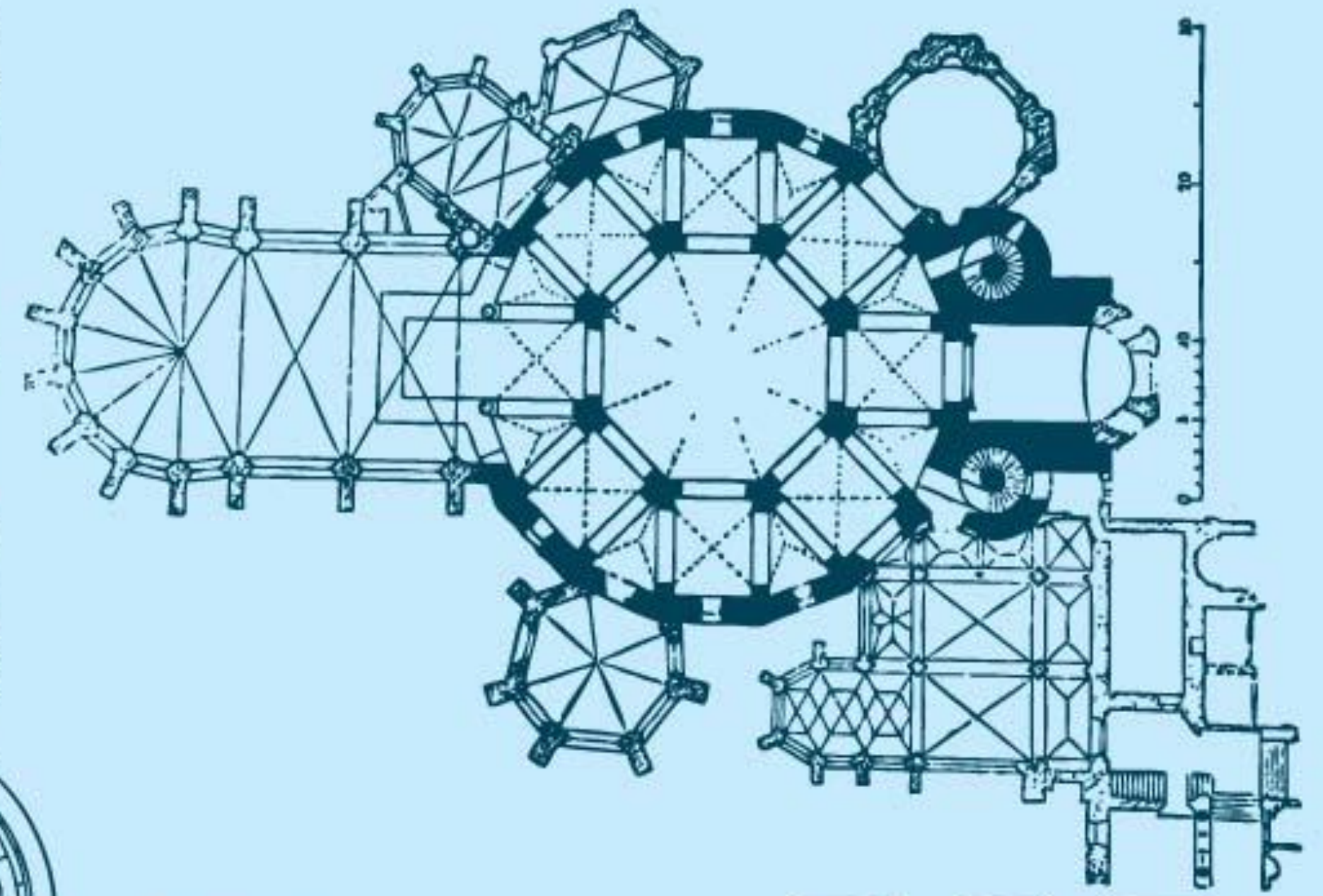
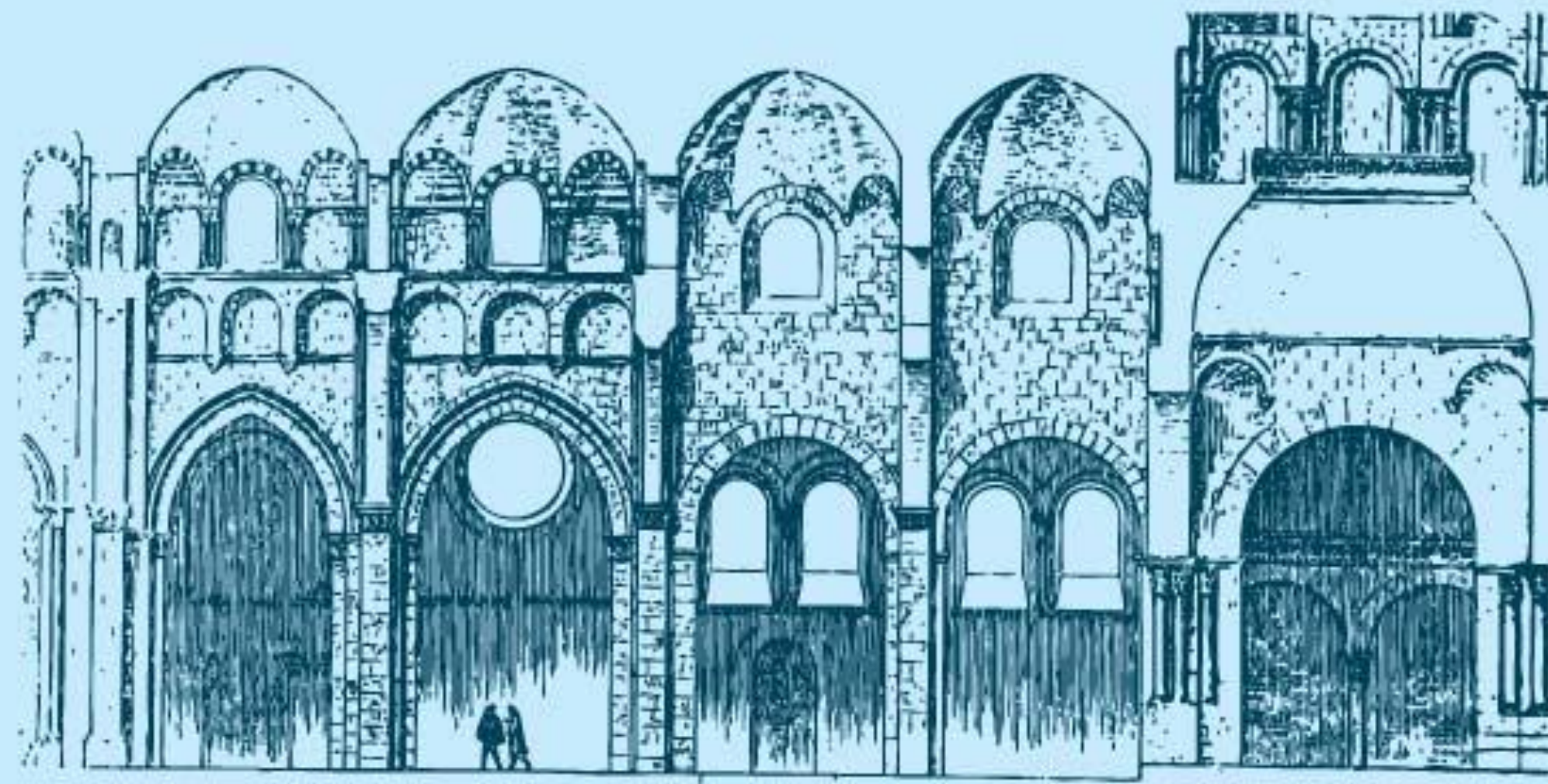
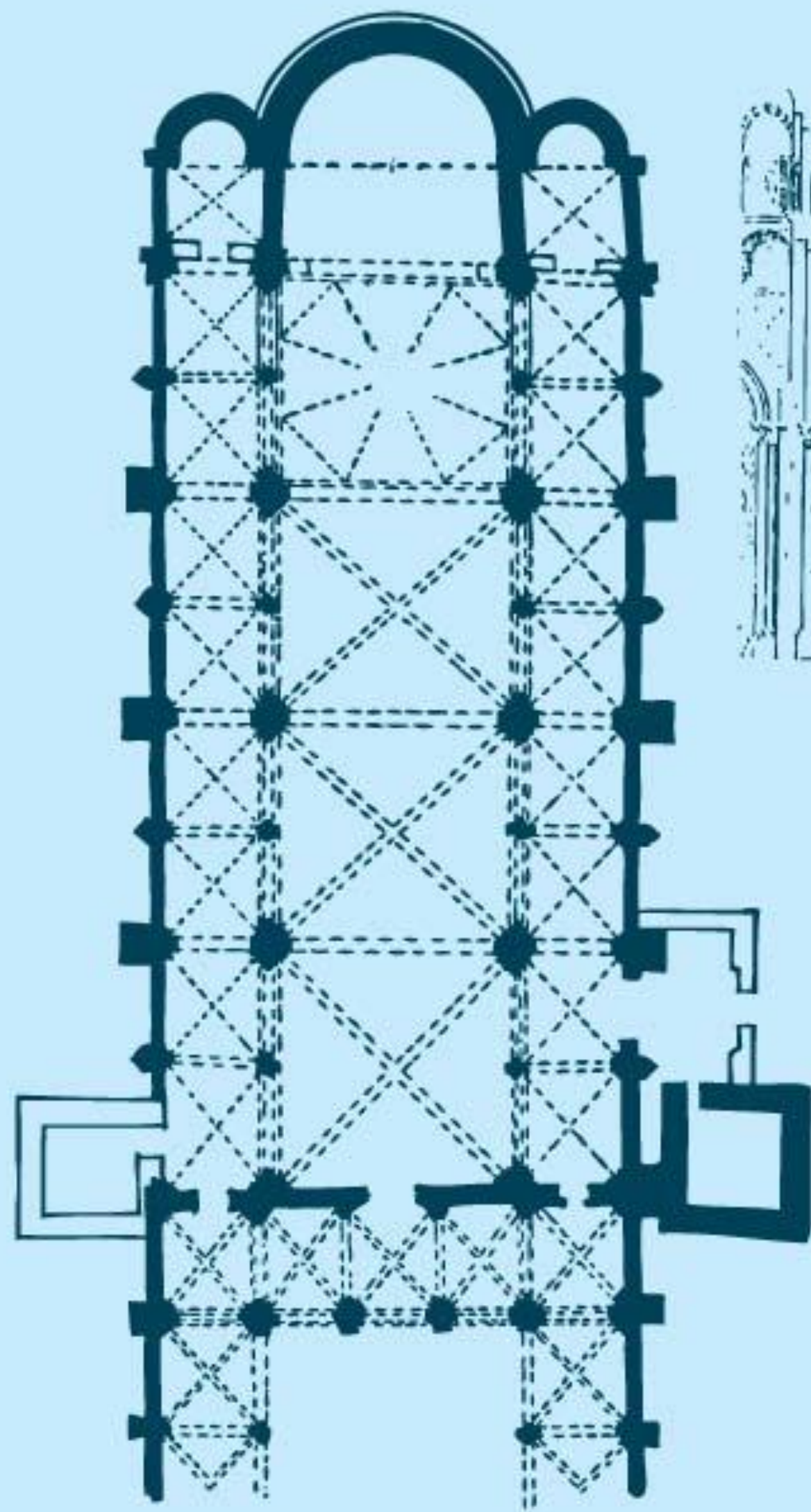
1. ARCHITECTURE



software

has moved

online



store user data

at the

software provider?



personal

data

Stores

personal

cloud

servers

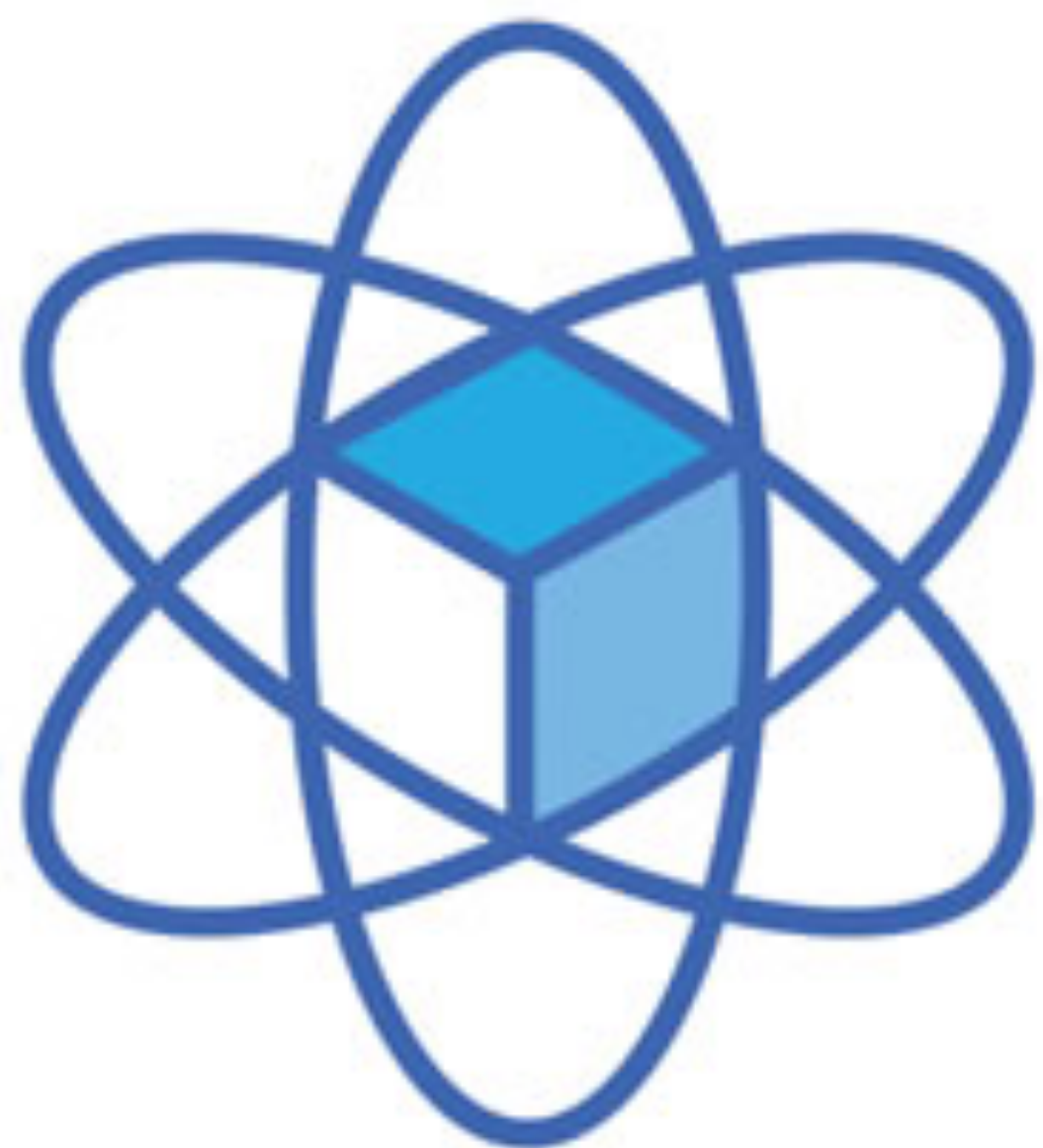


css3

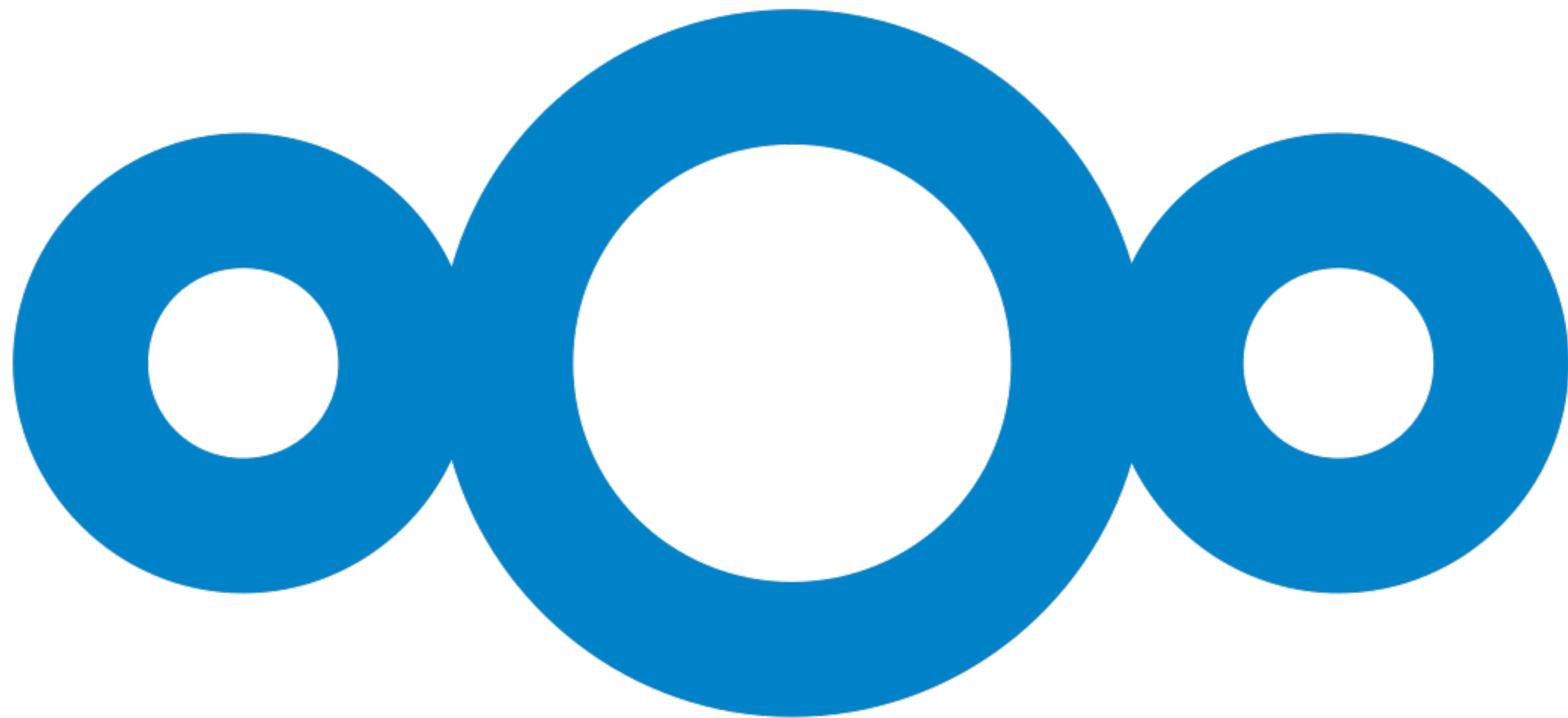
enterprise

file synchronisation

and sharing



CERNBox



Nextcloud

data portability

for end-users

switching services

DAPSI



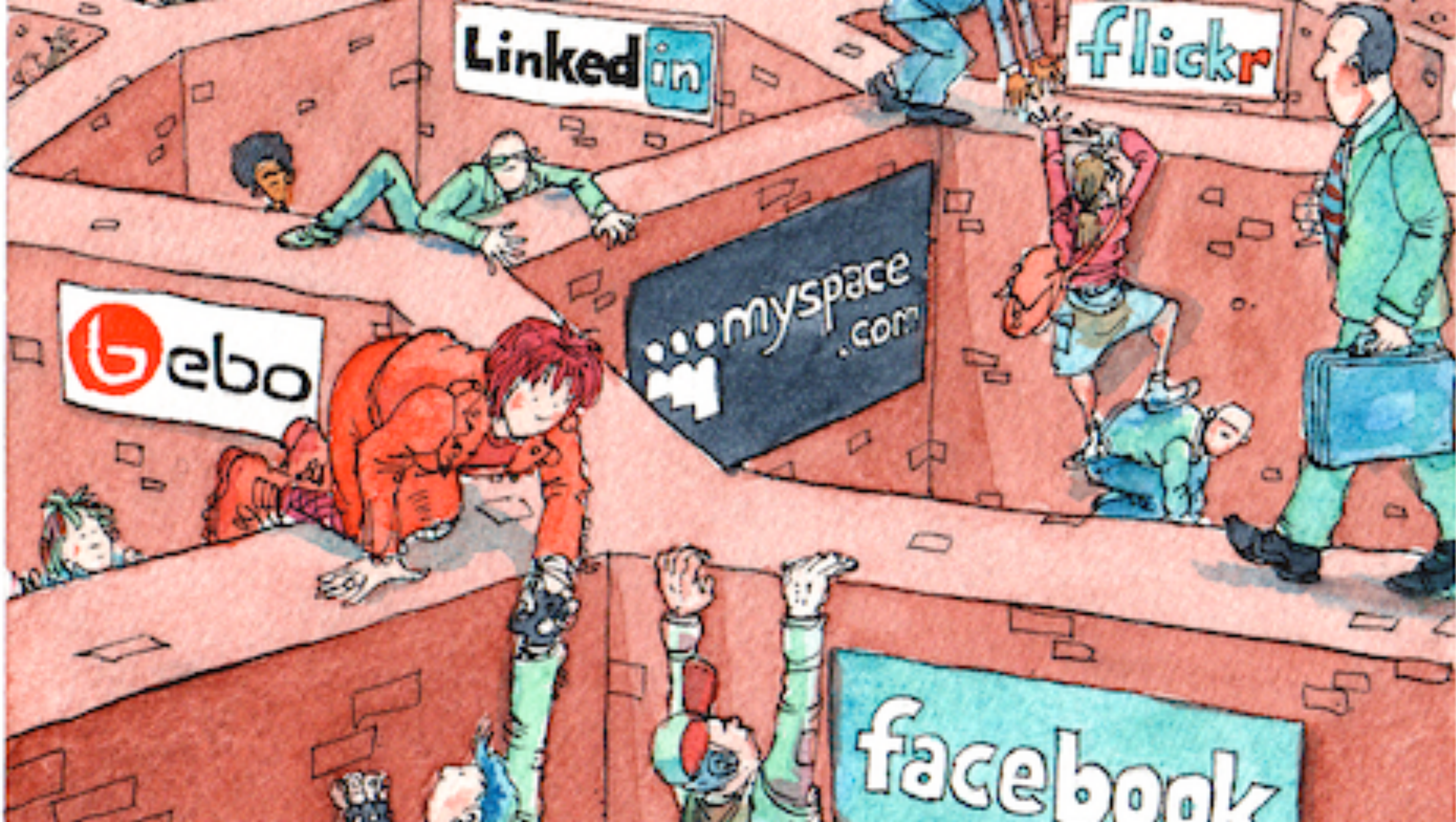
Meet the brightest
ideas for solving
Data Portability
challenges!

federation

between

networks





Open

Cloud

Mesh



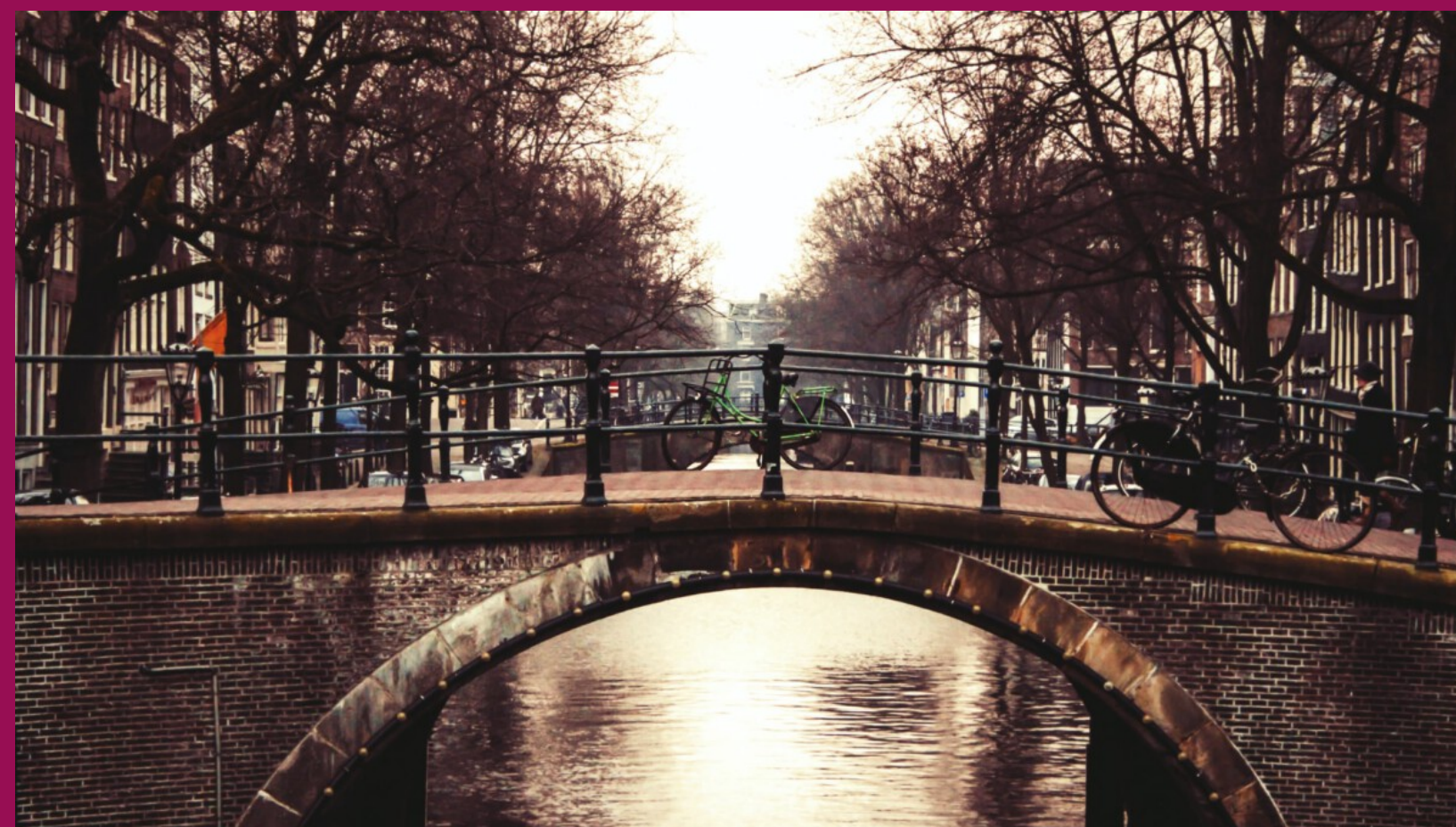
OPENCLOUD **MESH**

Invites

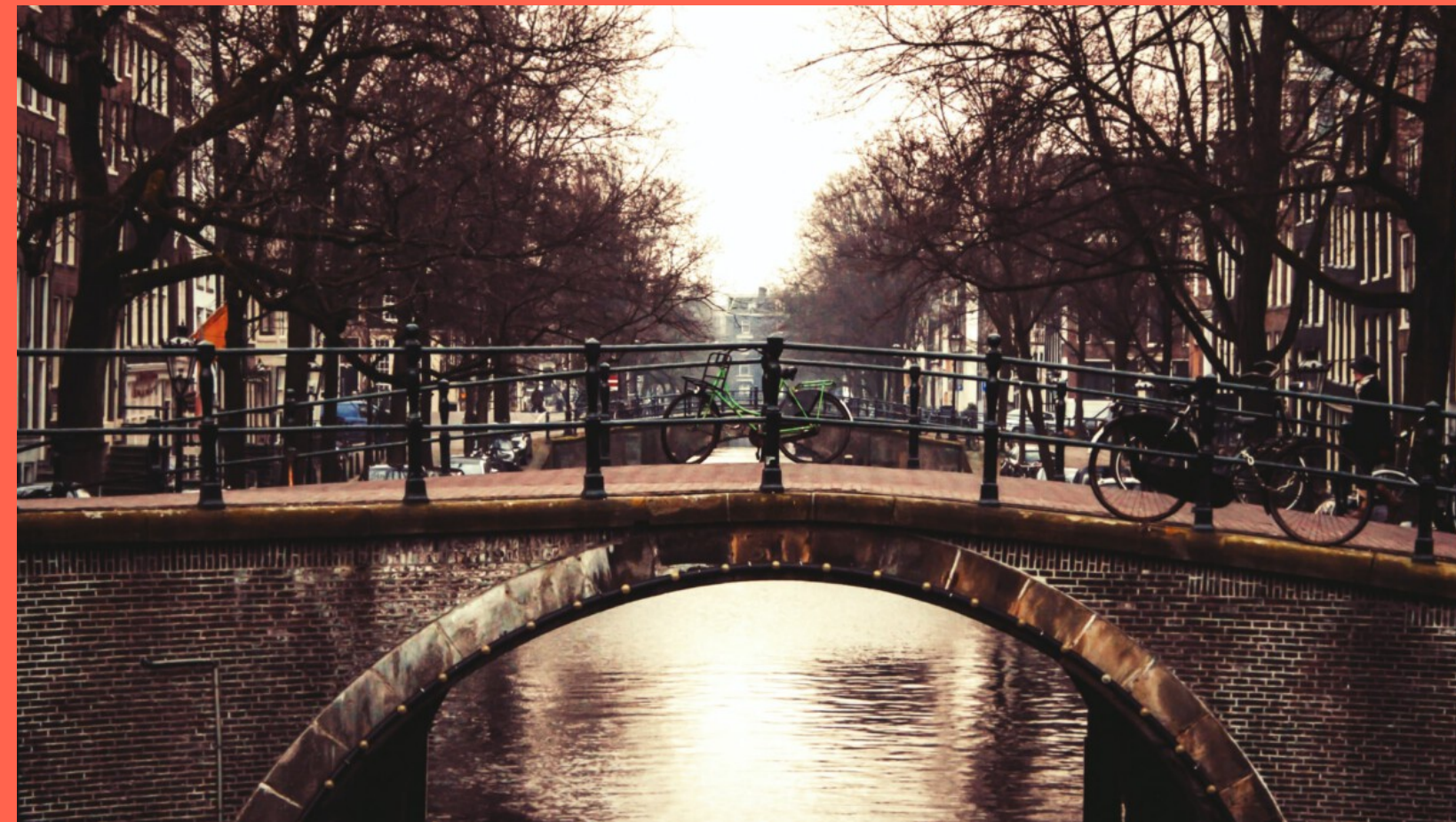
Notifications

WebDAV

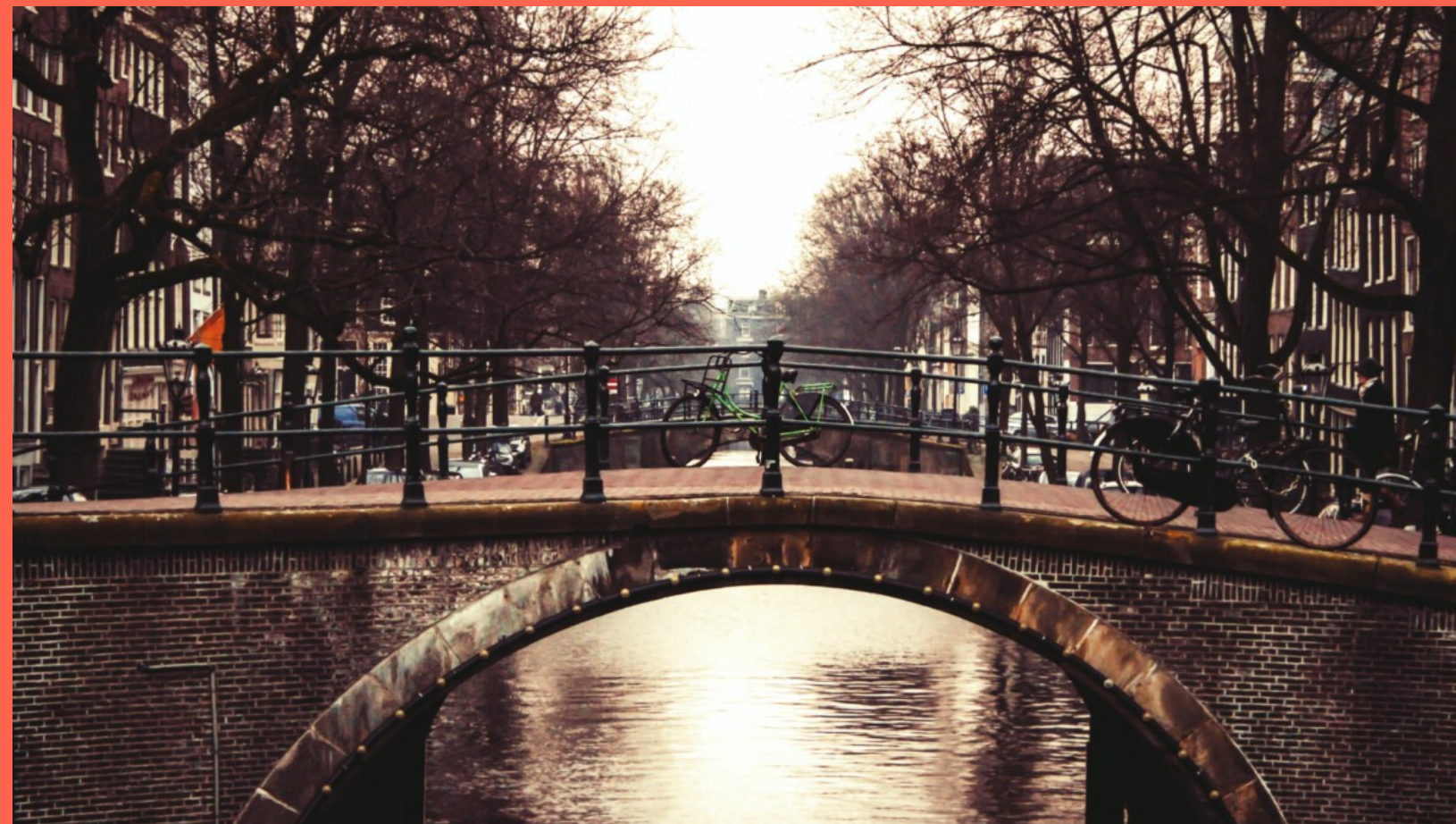
2. BRIDGES



SOLID-Nextcloud



ScienceMesh-Nextcloud



remoteStorage.js



Google Drive



Dropbox

polyglot client lib

3. DATA MOVES



Distributed

Versioning



Linked Data

IPFS

CRDT

The Oracle Problem

BLOCKCHAIN
NETWORK



SELLER



SMART CONTRACT

BLOCKCHAIN
NETWORK

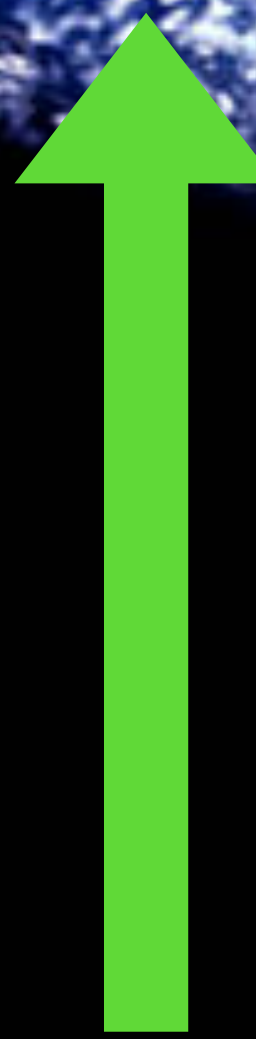
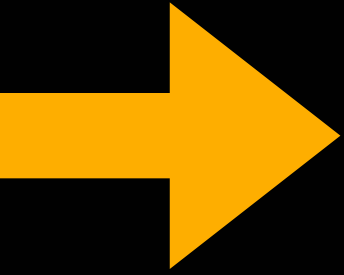
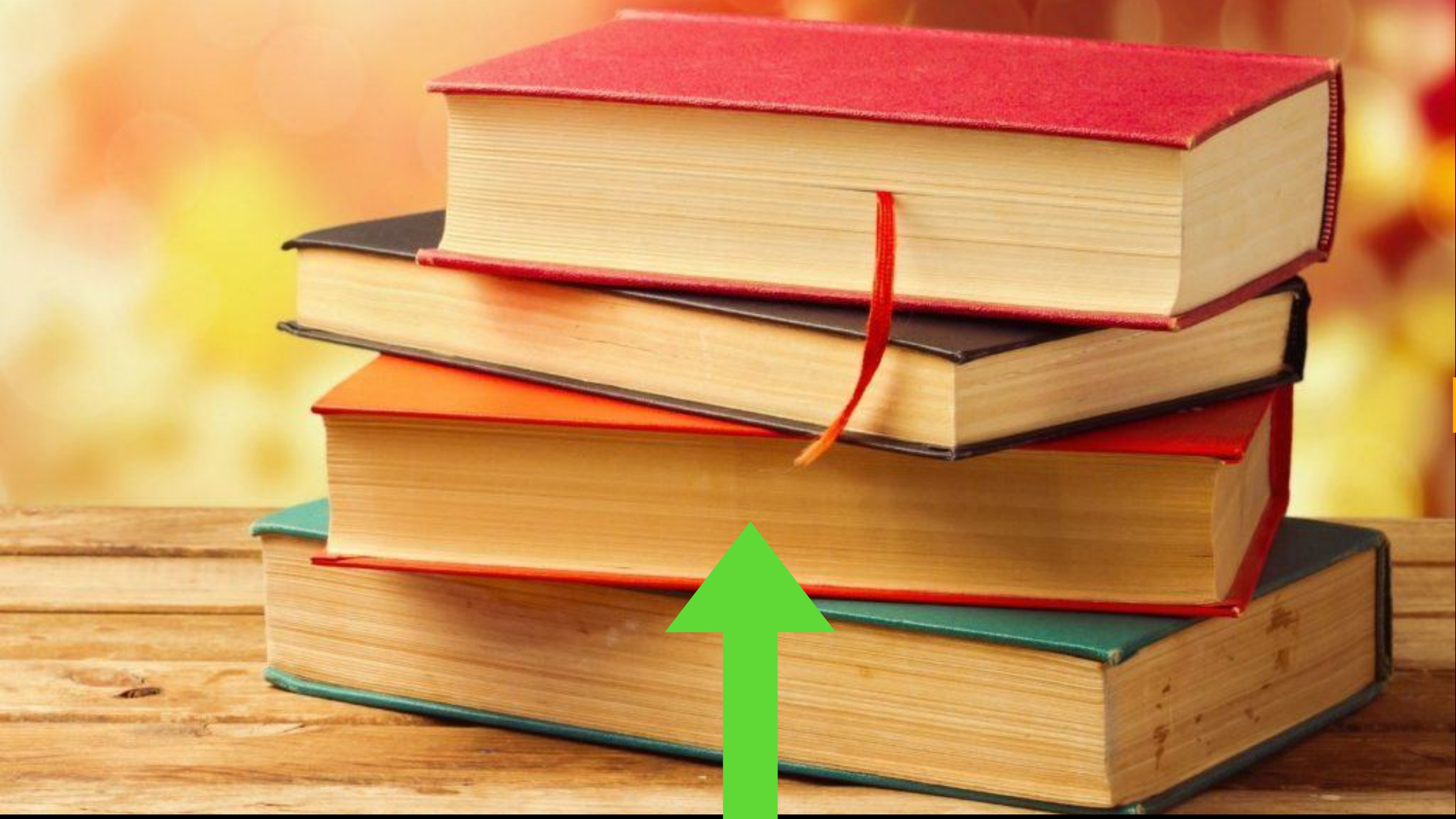


BUYER

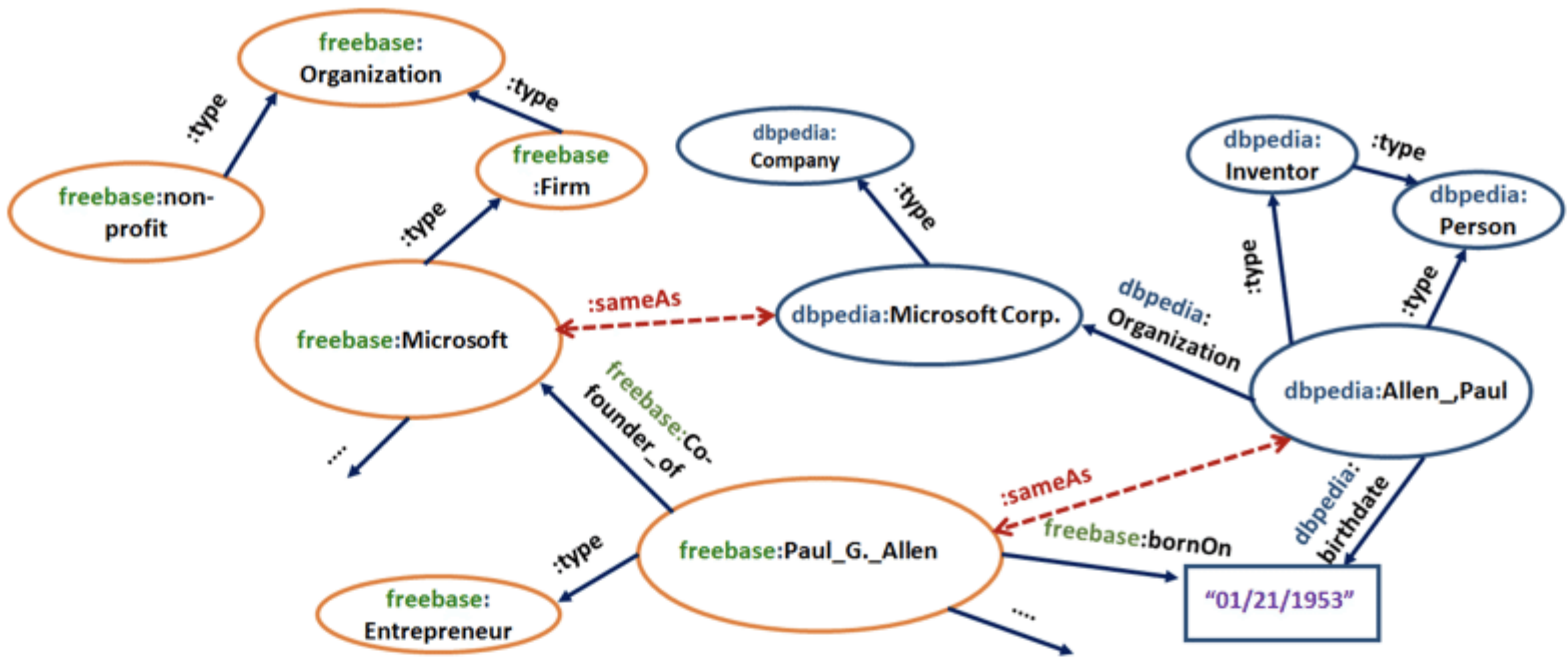
The Web

Vs

The World



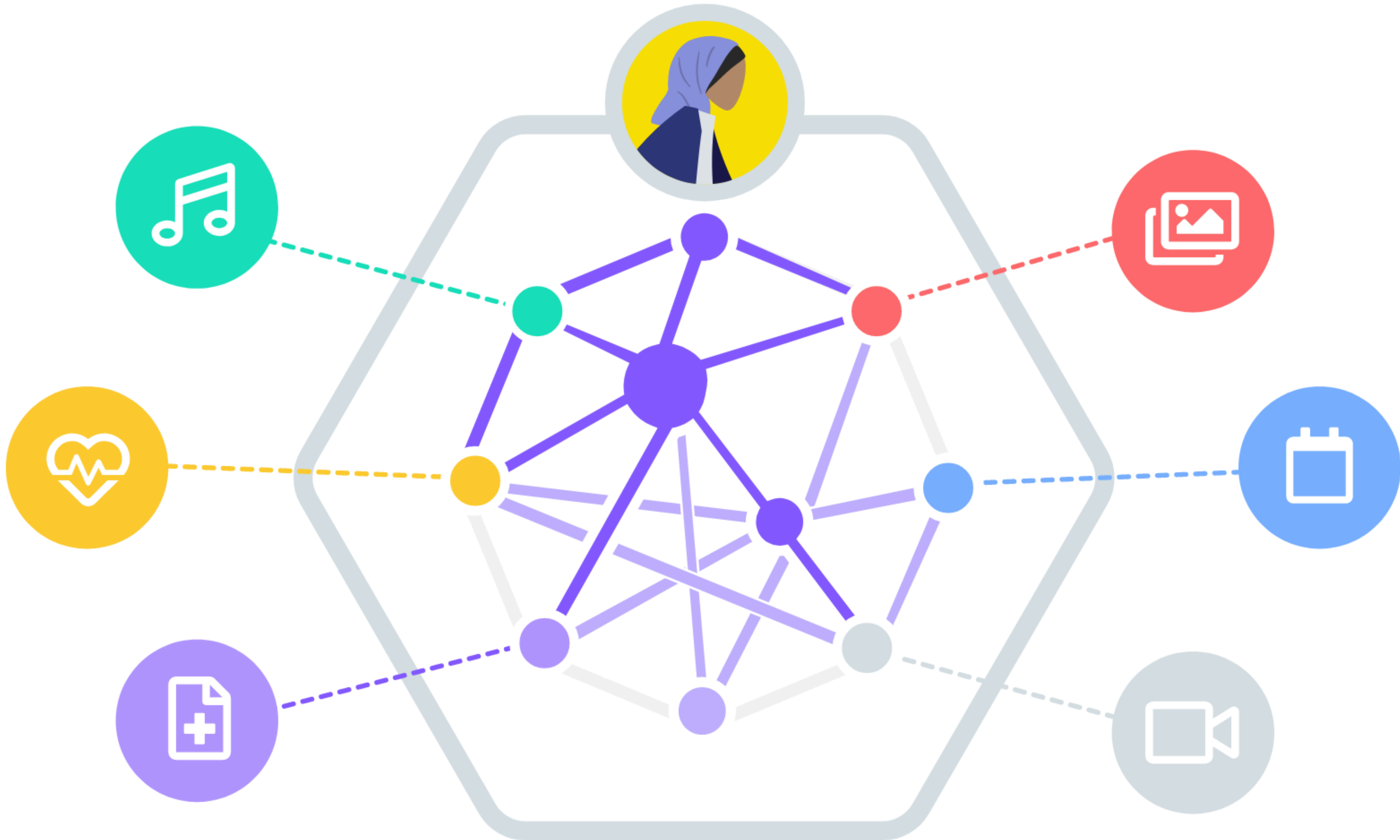
The
sameAs
Problem



data

moves

around



software

architecture

matters

server

architecture

matters

application

architecture

matters

4. PROGRESS



The
CURSE
of Freedom





Discussions

Experiments

Test Suites

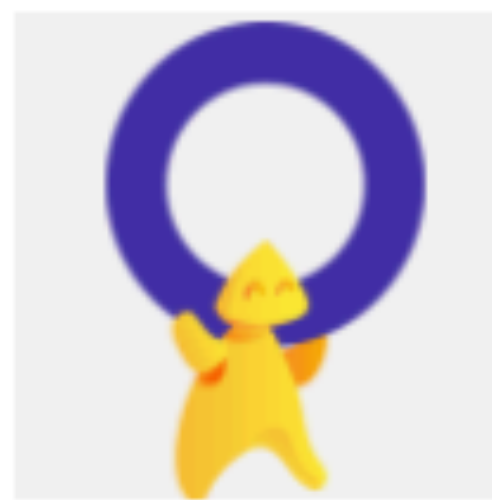
Solid Test Suite

Current Sponsors

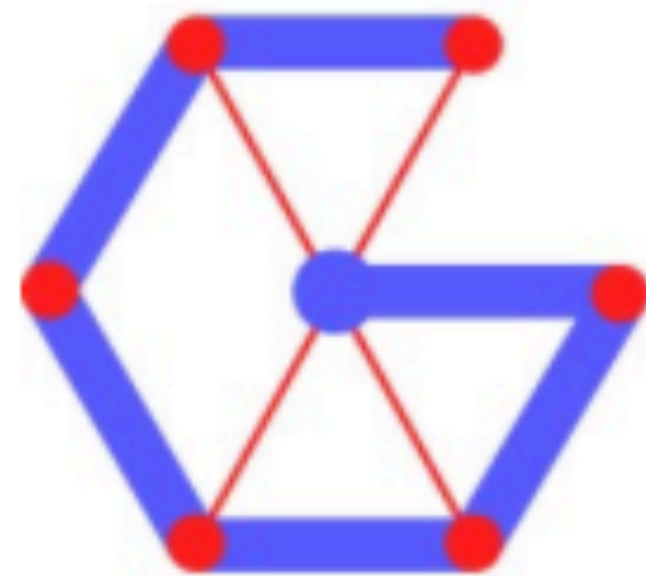
These awesome *Solid-related startups* collectively sponsor the maintenance of the independent Solid test suite through our [Open Collective](#), click on their logos to check them out!



Digita



O Team



GraphMetrix



Interition



Ontola



Understory



Startin'blox

Solid Test Suite

#	name	version	prog.lang	IDP	CRUD	WAC	(WPS)	(CON)	(MON)
1.	Node Solid Server	(each PR)	JavaScript	✓	✓	✓	✓	✓	✓
2.	PHP Solid Server	(each PR)	PHP	✓	✓	✓	✓	✓	
3.	Solid-Nextcloud	(each PR)	PHP	✓	✓	✓	✓	✓	
4.	Community Solid Server	v1.1.0	TypeScript	1)	✓	6)	✓	✓	
6.	TrinPod	stage.gr...x.net	Lisp	1)	✓	✓		2)	
5.	Inrupt ESS	pod.inrupt.com	Java	1)	✓	3)	4)	5)	
7.	Reactive-SoLiD	(coming soon!)	Scala						
8.	DexPod	(coming soon!)	Ruby						
9.	Disfluid	(coming soon!)	C						

documentation

pdsinterop.org

(and other places!)



Search Conventions

Awesome Solid >

Conventions ^

Addressbook

Chat

Finance

Images

Meeting

Notepad

Addressbook

NB: this currently mainly describes how Solid OS stores data on a S

You can create an addressbook containing persons and groups, by
RDF documents on your pod. To create an addressbook, create a d
e.g., `/address-book/index.ttl`, and add the following triples to that d

```
</address-book/index.ttl#this> a vcard:AddressBook .  
</address-book/index.ttl#this> dc:title "New address Book" .  
</address-book/index.ttl#this> acl:owner </profile/card#me> .
```

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Versions: [00](#) [01](#) [02](#) [03](#) [04](#) [05](#) [06](#) [07](#) [08](#) [09](#) [10](#) [11](#) [12](#)
[13](#) [14](#) [15](#) [16](#) [17](#)

INTERNET DRAFT

Document: [draft-dejong-remotestorage-17](#)

Michiel B. de Jong
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F. Kooman
(independent)
S. Kippe
(independent)
14 June 2021

Intended Status: Proposed Standard
Expires: 1 December 2021

remoteStorage

Abstract

This draft describes a protocol by which client-side applications, running inside a web browser, can communicate with a data storage

5. OUTLOOK



PDS

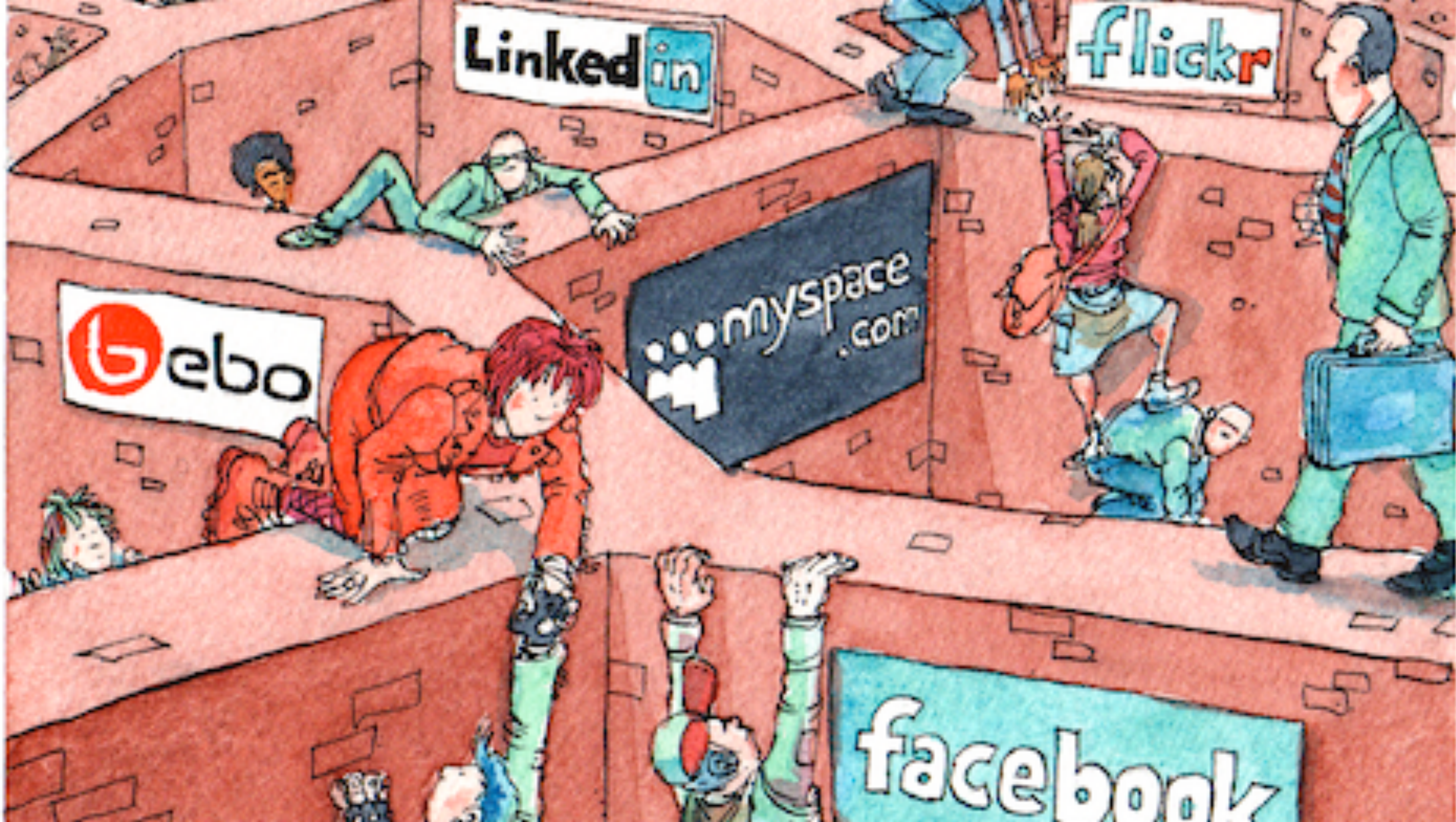
Interoperability

For Files?

PDS

Interoperability

For App Data?



ALIGNMENT

IS

HARD

BUT

schema

on

read!

continuous

polyglot

import!

WE'LL

KEEP

TRYING

THANK YOU!

@michielbdejong