Personal Learning in the Age of AI

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Every technology we use represents a choice

- Who makes that choice?
- Could there ever be an opt-out?
- Considering the harms…
  - Data security
  - Privacy and surveillance
  - Stress of change
  - Accessibility

→

- Brenna Clarke Gray
- https://drive.google.com/drive/folders/1y5oXw-3RcoHYf_R0dHqQrHRg1Ow5FghN

The logic of education is one which values knowledge as a public good, a commons, and a shared human inheritance - Bonnie Stewart - Beyond BigAI: Agency as Educational Practice

The problem with platforms

In the LMS era, the platform organized the learning experience.

Today, we're just adding AI to the platform.

Learners do not define their own learning environment. It is defined for them by institutions, vendors, recommender systems, or AI defaults.

Image: LMSpedia https://lmspedia.org/lms-components-explained-core-features-architecture/

We have often make the wrong choices in education

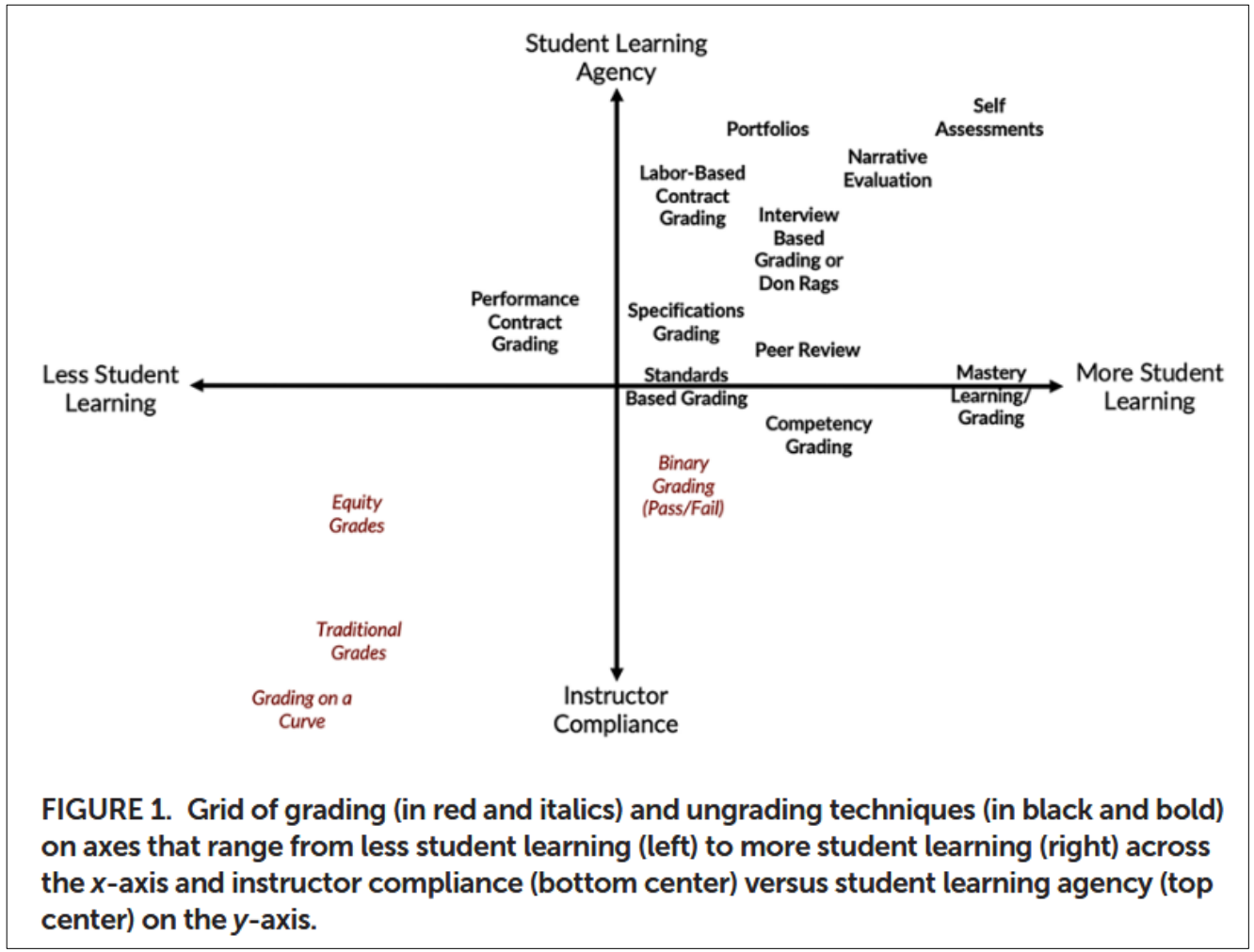


FIGURE 1. Grid of grading (in red and italics) and ungrading techniques (in black and bold) on axes that range from less student learning (left) to more student learning (right) across the *x*-axis and instructor compliance (bottom center) versus student learning agency (top center) on the *y*-axis.

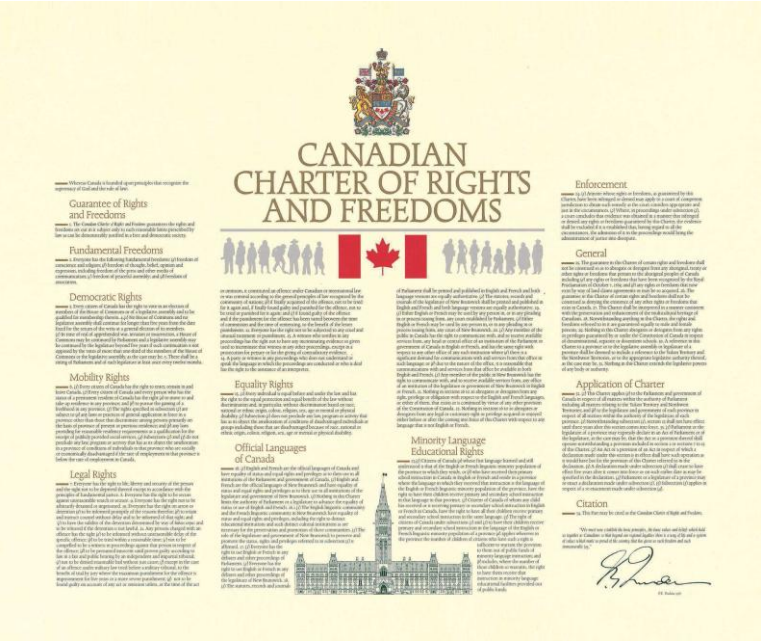
The point of learning in an asset frame is not to fill a hole in the student or assume that they have the wrong knowledge upon entry to higher education classrooms, but to enable students to share their knowledge openly and to build on that knowledge in ways that benefit the learning of student and the learning of the class

Clarissa Sorensen-Unruh
https://www.lifescied.org/doi/pdf/10.1187/cbe.24-01-0031

Digital Platform Charter of Rights

A declaration of fundamental rights and principles for ethical digital platforms, ensuring privacy, dignity, and fairness in online spaces.

https://respectfulplatforms.org/



- Right to privacy
- Freedom from surveillance
- Safeguards against hate speech
- Strong protections for vulnerable communities
- Data portability and user agency
- Transparency and accountability
- Safety and well-being
- Transparent cybersecurity posture
- Fairness in algorithmic systems
- Inclusive community and governance
- Continuous improvement and evolution

Here’s what I want to say

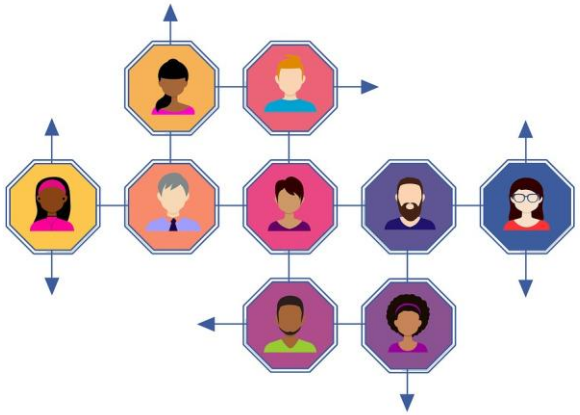
A personal learning environment in the age of AI should be an architecture of agency.

It should be a learner-defined environment in which people choose and connect their sources, tools, identities, storage, publishing destinations, collaborators.

The role of AI is to help individuals and institutions overcome the barriers to personal learning that have led to disappointing technology choices in the past.

Personal Learning

Personalization	*Personal Learning*
The system adapts to the learner	The learner shapes the system
Vendor-defined pathways	Learner-defined architecture
Platform owns and controls the data	Learner owns and controls the data
AI recommends	AI is directed
Optimization	Agency



How to Help Students Succeed by Taking Ownership of Their Learning Online Through Personal Learning https://www.downes.ca/presentation/524

Image: Nexus https://nexus-education.com/blog-posts/developing-your-personal-learning-network-pln/#

An architecture of agency

Personal learning means the learner has meaningful control over:

- Identity - Who am I across systems?
- Sources - What do I read, watch, follow, or subscribe to?
- Annotation - How do I respond while reading?
- Memory / storage - Where are my notes, credentials, drafts, and records?
- Composition - How do I synthesize, reflect, argue, and create?
- AI services - Which models or agents do I use, and for what?
- Publishing - Where does my work go?
- Social feedback - Who can reply, annotate, remix, or build on it?
- Governance - Who sets the rules, permissions, and defaults?

An architecture of agency doesn't just define mechanisms of choice for each of these, it provides viable *access* to them through common interfaces

An architecture of agency

An architecture of agency defines the interfaces between the elements of a learning environment so people can select, replace, combine, or reject components.

It should allow different learners to build different environments based on their own needs, values, culture and commitments.

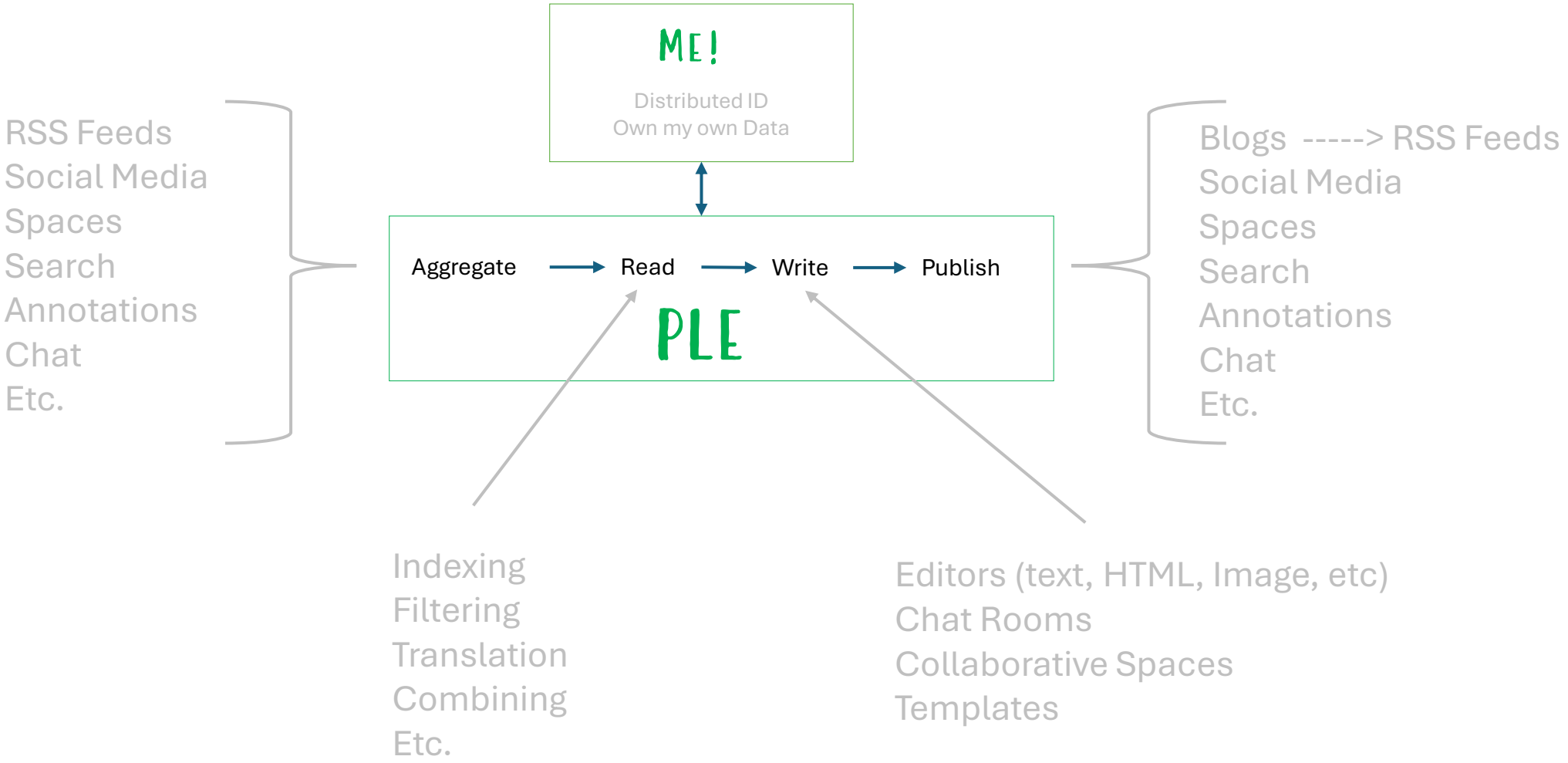
There's a parallel with the open web here:

- Open protocols
- Interoperability
- Permissionless innovation
- User agency and portability
- Decentralization

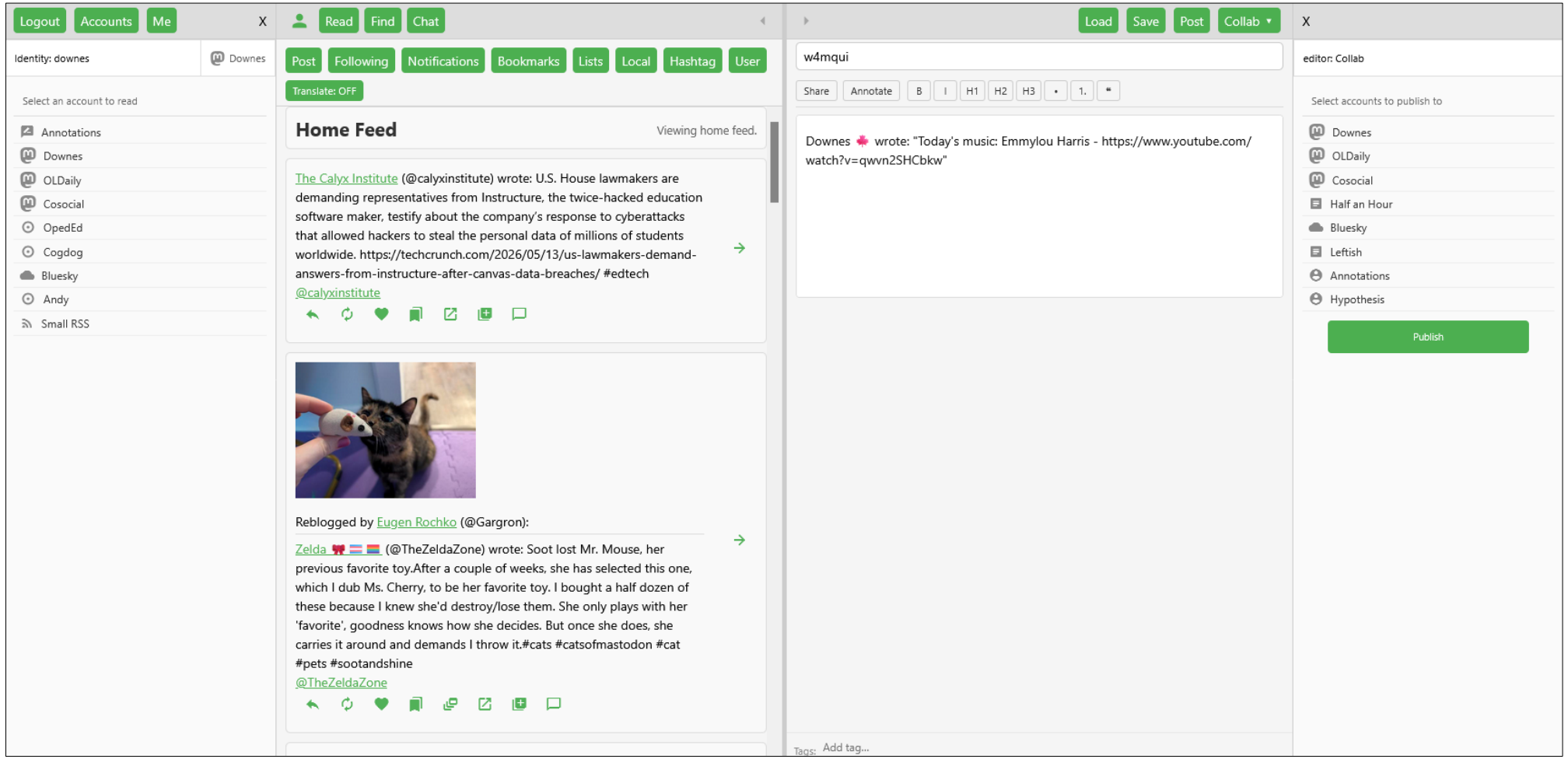
Center for Democracy and Technology
https://cdt.org/insights/preserving-the-open-internet-through-interoperability/

Michael Nolan
https://spectrum.ieee.org/doctorow-interoperability

No single platform, distributed architecture, open Source, personal data ownership



Clist: Building interfaces between these elements



https://clist.mooc.ca

See also Matthias Melcher: https://jellyboard.ca/boards/v8dpkjwr

The core design principles

Browser-based, not platform-based

- no server-side logic, no backend to install
- each user runs their own instance; no central platform, no shared data store
- accounts, credentials, feed collections, and annotations all belong to the user - stored encrypted, private by default
- can be deployed anywhere: a personal server, a CDN, or localhost

Radical decentralization

- no mandatory central server - the app itself is a static bundle of HTML/CSS/JS
- supporting services (credential storage, feed proxy, collaborative editing, peer discovery, annotations) are each independently deployable
- users configure which instance of each service they use, or run their own
- API calls to services are made directly from the browser; CList is never in the middle

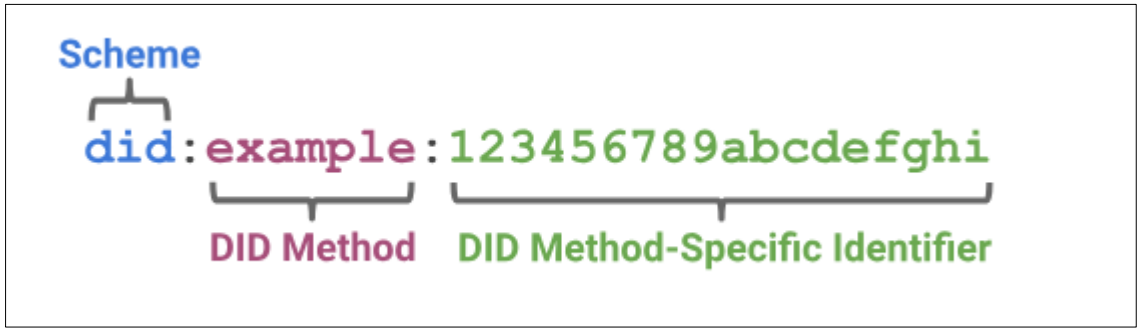
Decentralized identity

Credential store

- all service credentials (tokens, passwords, API keys) are stored in a remote kvstore that holds only AES-GCM ciphertext
- it never sees plaintext credentials - not even its own

DID

“In contrast to typical, federated identifiers, DIDs have been designed so that they may be decoupled from centralized registries, identity providers, and certificate authorities.”

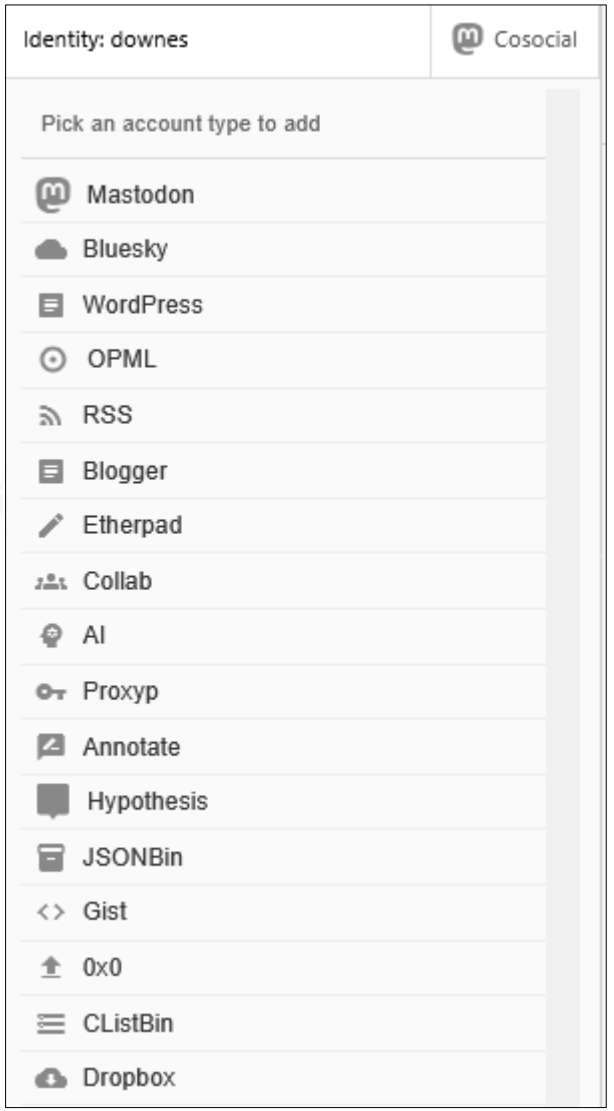


Decentralized Identifiers (DIDs) v1.0 https://www.w3.org/TR/did-1.0/

Accounts and credentials

Account schemas

- Different forms of authentication are supported (key, OAuth, more...)
- Every service that needs credentials registers a schema: field definitions, permissions, form behavior
- Service actions are defined using a set of handlers (one handler for each interface area - feed functions, status actions, publish...)

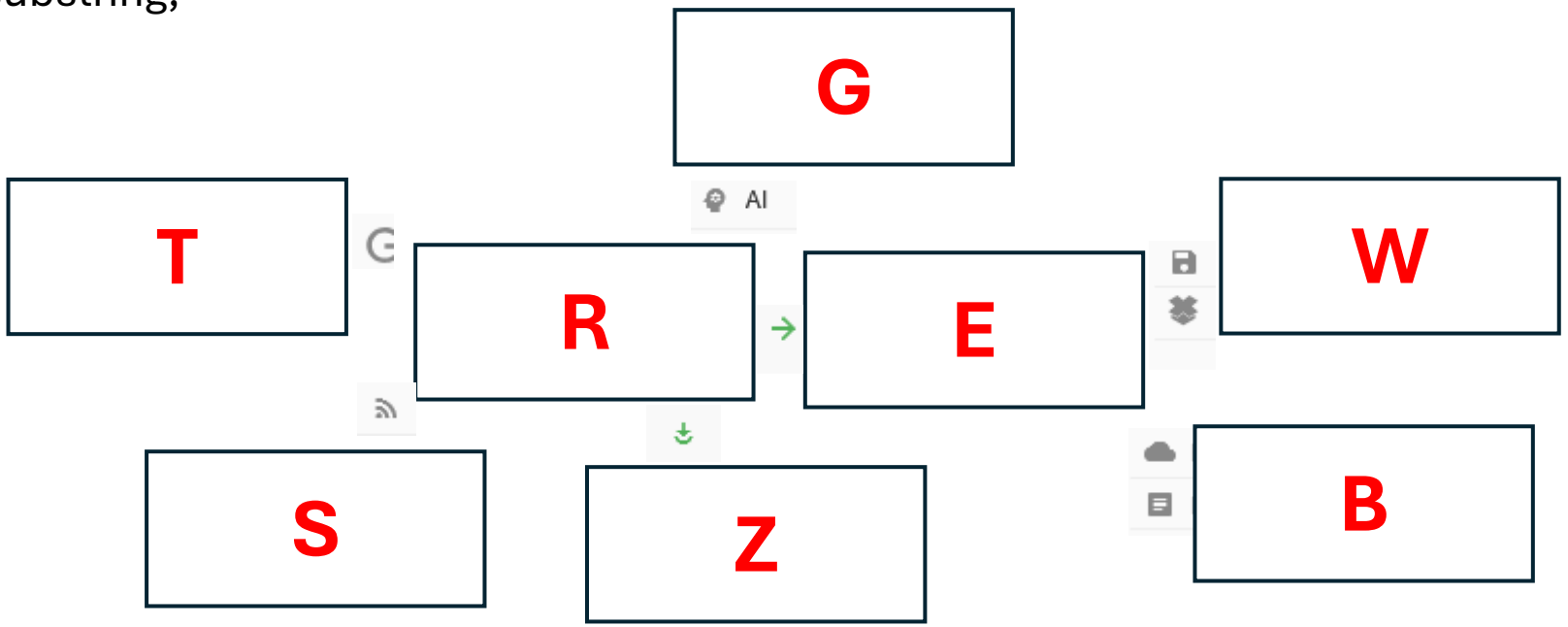


Authentication: https://www.okta.com/identity-101/authentication-protocols/
OAuth 2.0 https://oauth.net/2/

Account types

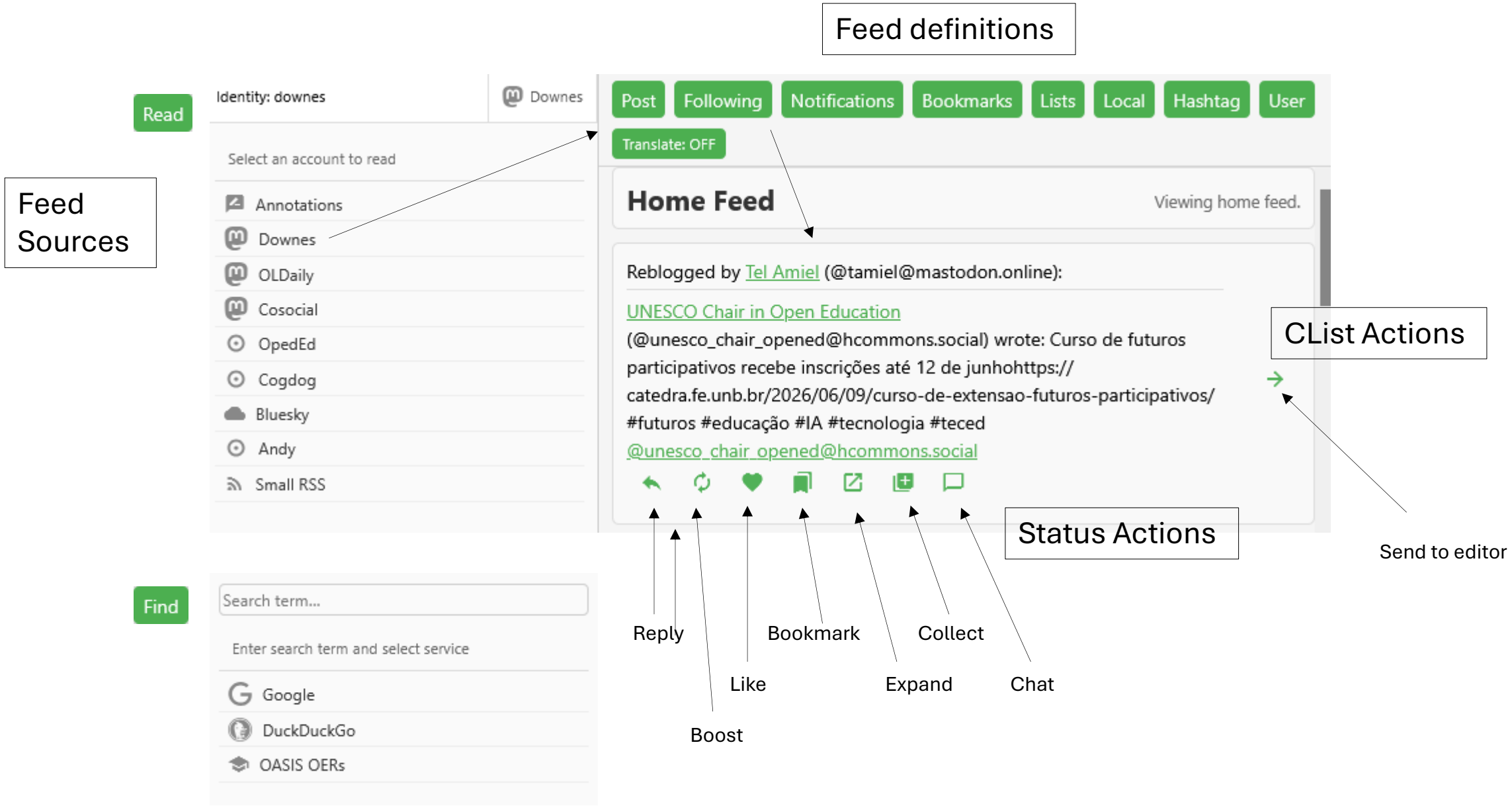
Permissions flags (substring, composable):

- **r** read
- **w** write
- **e** editor
- **t** translate
- **g** AI
- **z** summarize
- **s** RSS relay
- **b** bin/publish



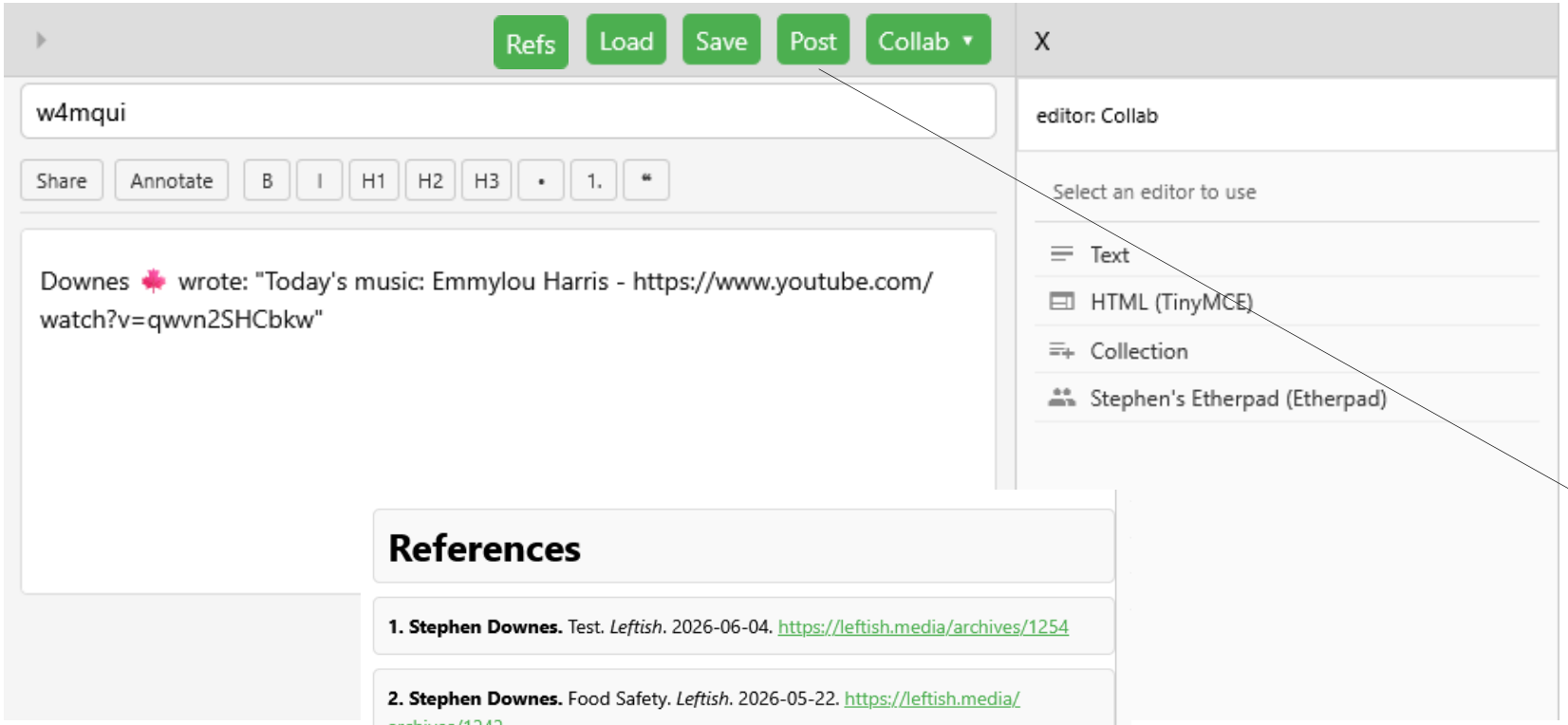
This is probably an incomplete list. Account types are defined by their interfaces and handlers. No specific services are required (not even identity services). Any service that can provide the interface can be a part of Clist.

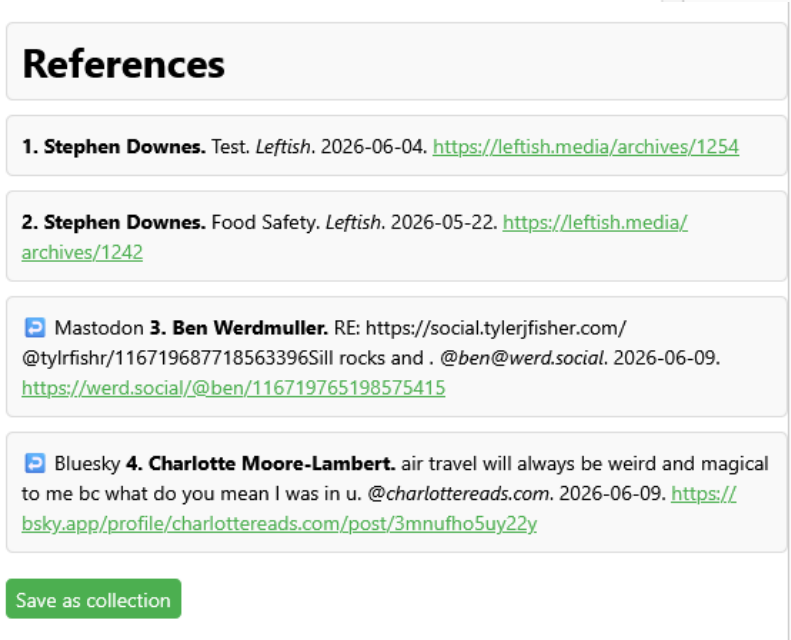
Readers

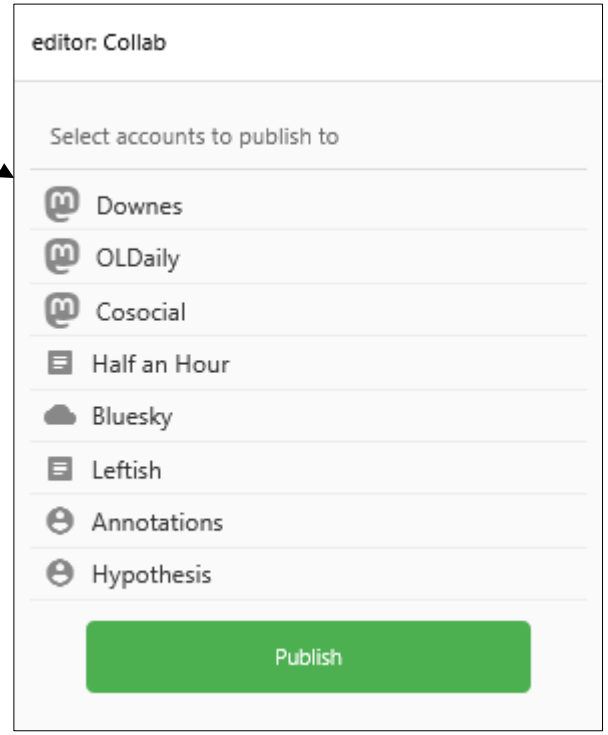

Feed definitions
Read
Identity: downes
Downes
Post
Following
Notifications
Bookmarks
Lists
Local
Hashtag
User
Translate: OFF
Select an account to read
Annotations
Downes
OLDaily
Cosocial
OpedEd
Cogdog
Bluesky
Andy
Small RSS
Feed Sources
Home Feed
Viewing home feed.
Reblogged by Tel Amiel (@tamiel@mastodon.online):
UNESCO Chair in Open Education
(@unesco_chair_opened@hcommons.social) wrote: Curso de futuros participativos recebe inscrições até 12 de junhohttps://catedra.fe.unb.br/2026/06/09/curso-de-extensao-futuros-participativos/ #futuros #educação #IA #tecnologia #teced
@unesco_chair_opened@hcommons.social
CList Actions
Status Actions
Send to editor
Find
Search term...
Enter search term and select service
Google
DuckDuckGo
OASIS OERs
Reply
Boost
Like
Bookmark
Expand
Collect
Chat

Editors

Select Editor







Interaction and Collaboration

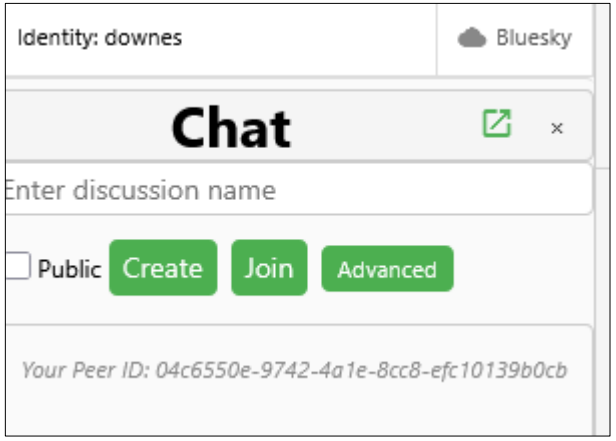
Following
- in CList, people follow other people by DID
- Who you follow is your private information

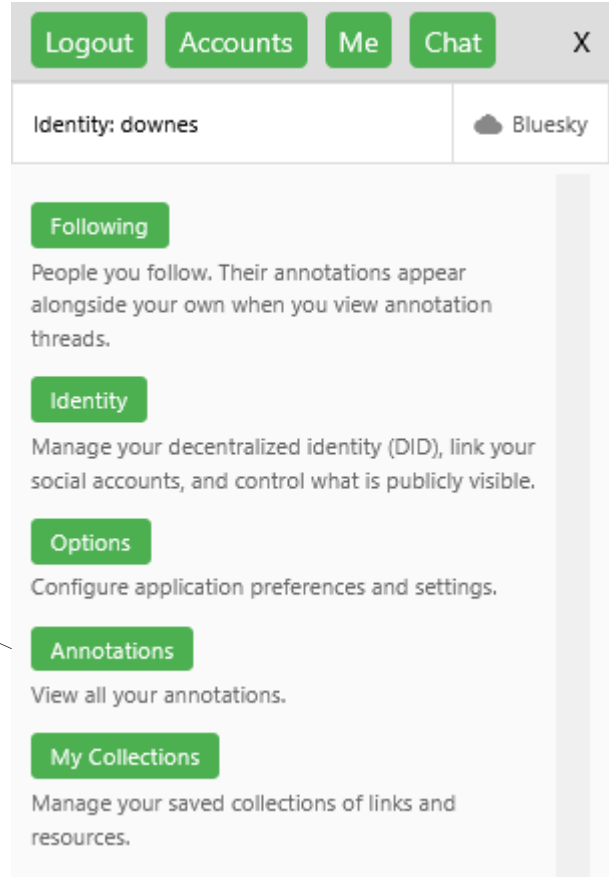
Chat
- Peer-to-peer chat, no central chat server
- Invite to chat, creates opportunities to follow

Annotations
- Attached to any type of content
- No central annotations server
- Viewed by followers

Collections
- Are a document type
- Can be published as RSS, OPML, JSON
- Can be shared and merged

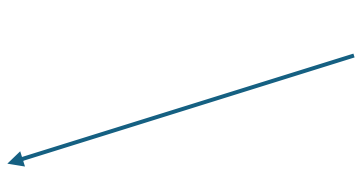
Collaborative Editing
- Is an editor type
- Invite in from chat or via URL





Taking privacy seriously

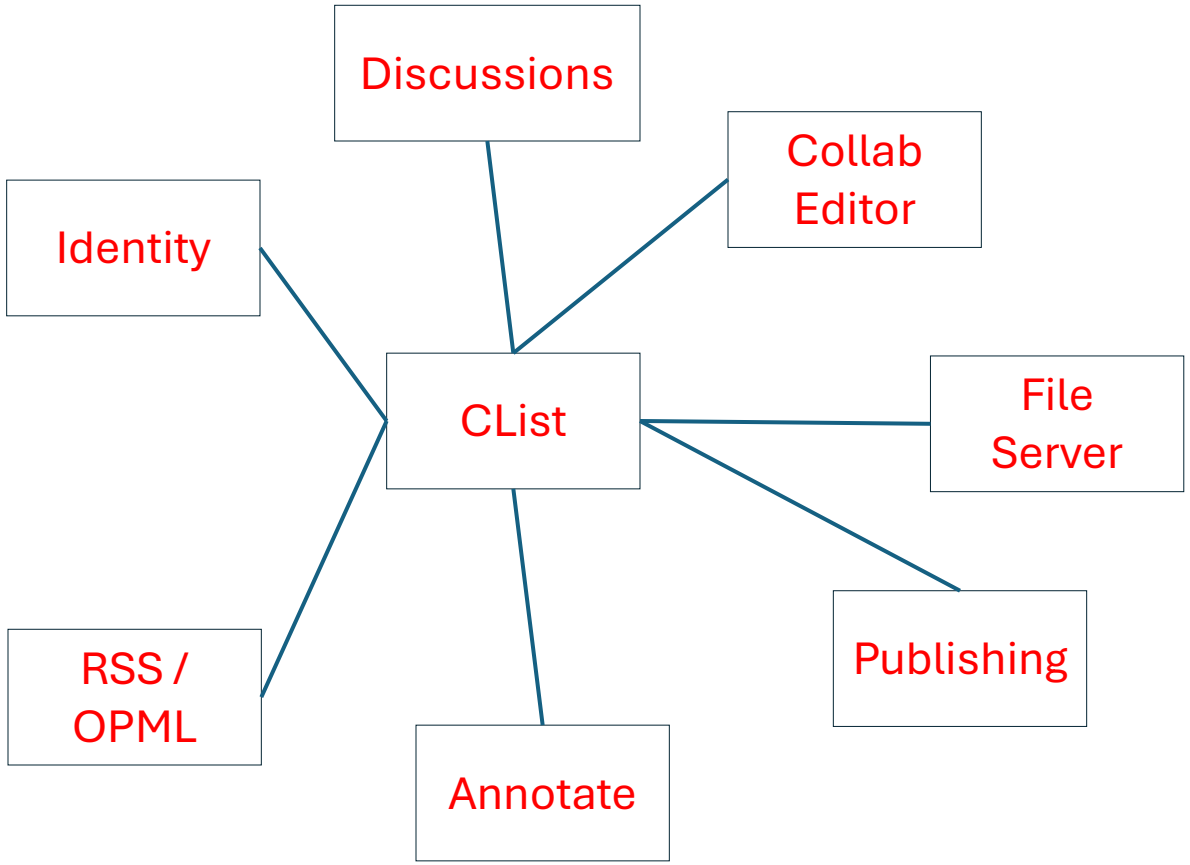
- CList does not aggregate or transmit user activity between services - API calls go directly from browser to platform
- What is private: passwords/API keys (never leave the browser in plaintext), reading history, cross-service correlations, social graph (encrypted in kvstore)
- What is not private: annotation batch checks reveal reading activity to the annotation server; RSS polling reveals IP and timing to feed hosts; social platform API calls are visible to those platforms
- Follow graph is private to the follower - by design, CList never publishes "who follows you" because that would require centralizing follower data
- Annotation visibility: public or private; no followers tier (would require server-side social graph queries, violating decentralization)



But you can host your own

Can’t be commodified or used for advertising

Key services



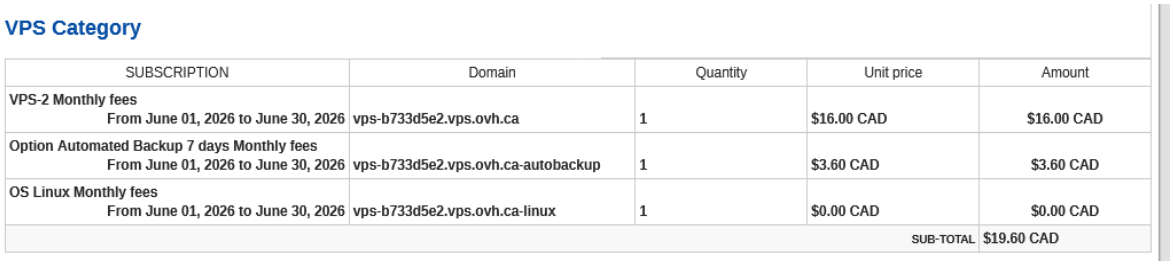
Key services

- kvstore (credentials)
- localRSS (RSS aggregator)
- opml2json (feed parsing)
- annotations (annotations)
- collab (Hocuspocus collab editor)
- pastebin - plain file server
- discussions (P2P discovery)
- proxyp (cross-domain proxy)
- care (publishing on IPFS)

- Clist browser extension (annotate & collect)
- WordPress extension (add DID to RSS feed)

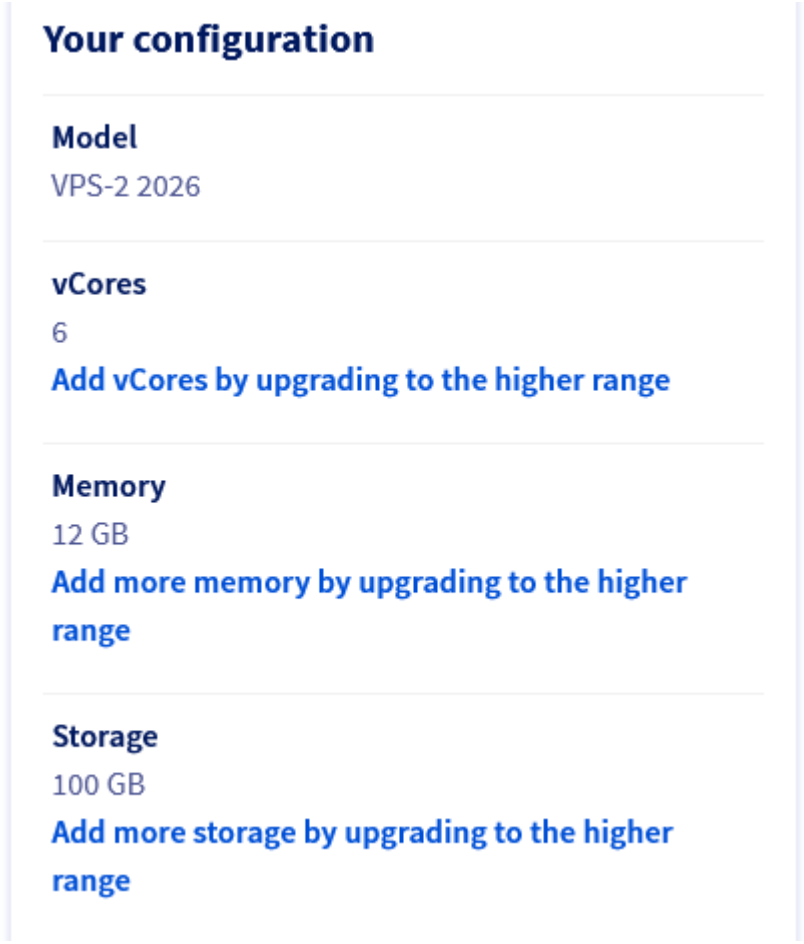
Deployment

- Static files served by Caddy — no server-side processing
- Supporting services run in Docker containers on the same VPS, each on the web network, reverse-proxied by Caddy
- CORS handled entirely in Caddy (not in Flask), to avoid OPTIONS header injection failures with flask-cors
- Desktop launcher: PKCE OAuth flow bridged via callback.html?local_port=PORT to handle HTTP-only localhost



VPS Category

SUBSCRIPTION	Domain	Quantity	Unit price	Amount
VPS-2 Monthly fees From June 01, 2026 to June 30, 2026	vps-b733d5e2.vps.ovh.ca	1	$16.00 CAD	$16.00 CAD
Option Automated Backup 7 days Monthly fees From June 01, 2026 to June 30, 2026	vps-b733d5e2.vps.ovh.ca-autobackup	1	$3.60 CAD	$3.60 CAD
OS Linux Monthly fees From June 01, 2026 to June 30, 2026	vps-b733d5e2.vps.ovh.ca-linux	1	$0.00 CAD	$0.00 CAD
			SUB-TOTAL	$19.60 CAD



Your configuration

Model

VPS-2 2026

vCores

6

Add vCores by upgrading to the higher range

Memory

12 GB

Add more memory by upgrading to the higher range

Storage

100 GB

Add more storage by upgrading to the higher range

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https://www.downes.ca