



Decentralized Social Media Platforms as a Path to a More Resilient Information Ecosystem

Challenges Today and Recommendations
for the Future

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Challenges Today and Recommendations for the Future

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Executive Summary

Centralized social media platforms such as TikTok, Instagram, YouTube and X now define much of the digital public sphere, shaping political debate and social interaction. Their data-driven business models depend on algorithms built to maximize attention, lock in users and encourage addictive patterns of use. These dynamics fuel polarization and amplify social divides. And because a small number of global corporations control these platforms, they also create substantial risks for Europe's digital sovereignty, data protection and democratic resilience.

One way to address these risks is through open, decentralized networks built on protocols **such as ActivityPub (Fediverse) and ATProto (Bluesky)**. These systems enable interoperability across independent instances, local control over data, flexible governance structures, greater competition and innovation, and digital self-determination. Open protocols provide a technical foundation that can break up existing monopolies and restore diversity in digital communication.

For now, however, decentralized networks face substantial obstacles. Their user base remains limited, and the technology can be challenging to navigate. Standards are inconsistent, resources scarce, and key issues such as governance, content moderation, user acceptance, and scalability remain underdeveloped. Without targeted support, much of their potential may go untapped.

Against this backdrop, we propose action on three fronts:

- 1. Improve the product:** Enhance usability, lower entry barriers, and establish transparent governance and common quality standards.
- 2. Strengthening the policy framework:** Mandated interoperability, underpinned by clear legal, institutional, and financial frameworks, is a prerequisite for stable governance and fair competition.
- 3. Broaden the societal uptake:** Increase awareness of the benefits of open networks, expand independent research and ensure meaningful civil-society involvement through advisory bodies and structured dialogue.

Together, these measures aim to position decentralized social media platforms as a more resilient form of digital infrastructure – and to reinforce Europe's digital sovereignty over the long term.

Foreword

Dear Readers,

Social media platforms have become integral to democratic life, much of which now unfolds in digital spaces. Yet the data-driven business models of major, largely non-European providers fuel polarization, deepen social divides and concentrate power in the hands of a few global actors. This concentration poses fundamental challenges for Europe's digital sovereignty and democratic resilience.

At the same time, a meaningful shift is underway. Open, decentralized platforms are gaining traction and giving form to the idea of an "open social web" that puts diversity, participation and democratic oversight back at the center of the digital public sphere.

This report, "Decentralized Social Media Platforms as a Path to a More Resilient Information Ecosystem," examines that shift. It charts the emergence of a digital ecosystem grounded in openness, interoperability and shared responsibility – and outlines the political, social and technical conditions needed to sustain it.

Decentralized platforms differ in structure and governance, but they share core values: participation, transparency and pluralism. A growing community of actors – from nonprofits and educational institutions to companies and media organizations – is beginning to steward digital spaces that operate outside state control yet serve the public interest.

Building an open social media ecosystem is not merely a technical task. It requires supportive political frameworks, robust standards and the recognition that digital infrastructure is inherently democratic infrastructure. European initiatives on interoperability, governance codes and transparent moderation rules mark important steps in this direction.

The broader goal is to revive the Internet's original ideals: openness, decentralization and democratic design. When the digital public sphere once again becomes a shared space – one in which rules are negotiated and responsibility is distributed – the outcome is more than an alternative to Big Tech. It offers a new model of social connection.

This report was written together with Save Social and serves both as a snapshot and an invitation: to reflect, to debate, and to help shape a more democratic social media landscape. We deeply value the work of Save Social and other initiatives that support decentralized social media platforms for strengthening the information ecosystem and hope this report proves both insightful and thought-provoking.



Charlotte Freihse and Clara Ruthardt

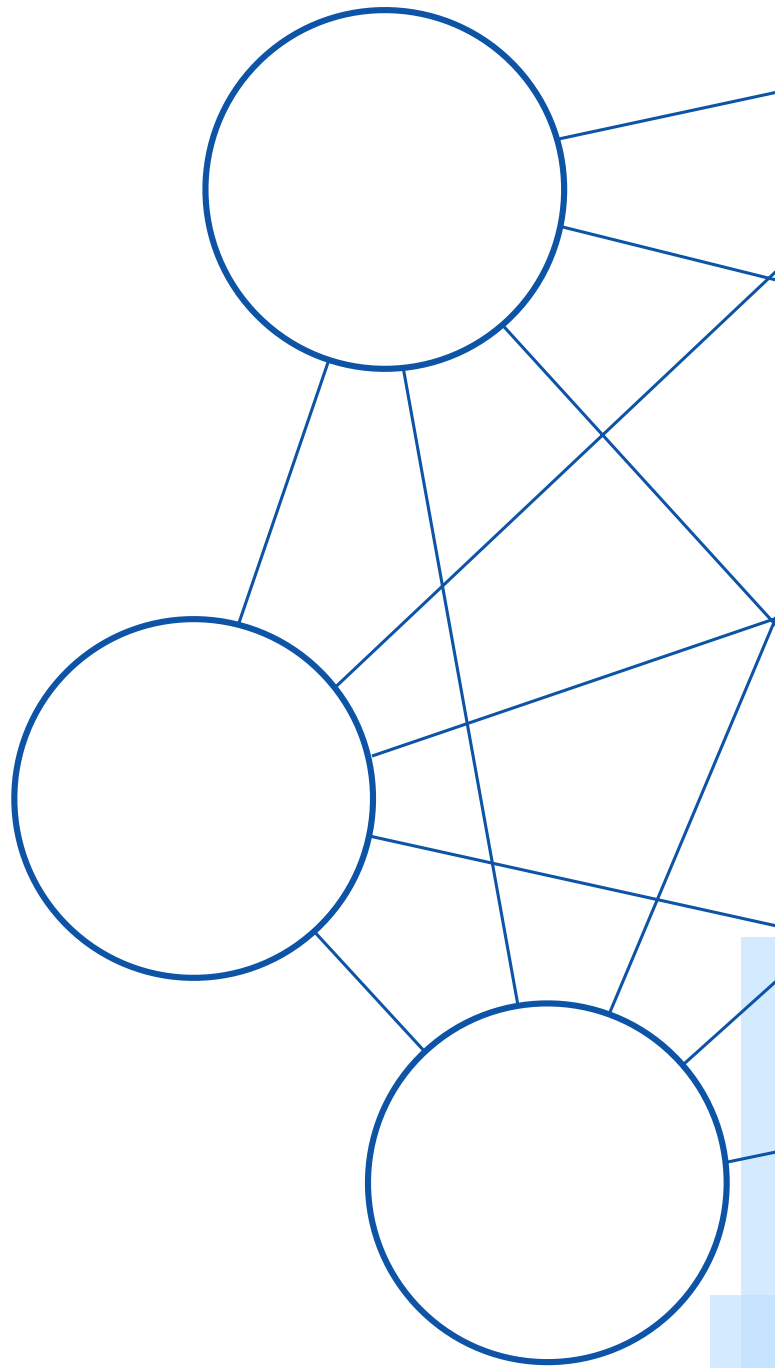
Glossary

- **ActivityPub:** An open, decentralized protocol for social networks and the foundation of the Fediverse. It allows users to interact across different independent servers (“instances”), share content and move their followers while each instance maintains its own rules, moderation practices and data control. ActivityPub is a standardized protocol of the World Wide Web Consortium (W3C) for decentralized social media networks.
- **Alternatives:** In the context of social networks, this refers to platforms or services that use organizational models different from dominant, centralized providers. They often rely on open protocols (such as ActivityPub or ATProto) and enable decentralized communication, stronger user control over data, greater transparency and interoperability across services.
- **Atmosphere:** The ecosystem surrounding the AT Protocol – analogous to the Fediverse for ActivityPub.
- **AT Proto Proto (AT Protocol):** The open, decentralized protocol underlying the social network Bluesky. It connects multiple servers, allowing users to carry their identity and data across them and communicate across platforms. For now, identifiers (DIDs) still run through Bluesky’s infrastructure, meaning that content across the “ATmosphere” is stored, routed and displayed through centralized identifiers. Future developments aim to decentralize identities further, making them independent of Bluesky.
- **Bluesky:** A decentralized social network built on the open ATProto (Authenticated Transfer Protocol).
- **Data portability:** The ability for users to transfer their personal data from one service or provider to another.
- **Decentralized platforms:** Systems, services or networks that can operate independently but still communicate with one another through open protocols and shared standards. Examples include the web, email and the Fediverse, which is also referred to as the “social web.” Different standards enable different forms of decentralization; even decentralized networks may rely on central nodes without which the broader system cannot function.
- **Fediverse:** A portmanteau of “federated” and “universe.” It refers to the constellation of servers and instances that communicate through open protocols (primarily ActivityPub) and together form an open communication space. The Fediverse includes a range of interconnected instances that run different software (such as Mastodon or Pixelfed) but speak a common language: ActivityPub.
- **Federated:** Describes a system composed of many independent yet interconnected units. Each unit (or “instance”) manages its own rules, moderation and data, but can communicate with others through shared protocols.
- **Governance:** The processes and structures that define platform rules, moderation guidelines and operational procedures. Governance determines how control, responsibility and participation are organized.
- **Instance:** An independent server within a federated network. It has its own rules, moderation system and data controls but connects to other instances via open protocols, allowing users to communicate across platforms.
- **Interoperability:** The ability of different systems, platforms or applications to communicate, exchange data and work together based on shared standards – even if they are run by different providers. Email is a common example.

- **Mastodon:** A decentralized, federated social network built on the open ActivityPub protocol.
- **Network effects:** The phenomenon in which a product or service becomes more valuable for each user as more people use it. On social media platforms, the more users are active, the more attractive it becomes – and the harder it is for users to switch.
- **Open protocols:** Communication standards that are publicly accessible and freely usable. Examples include HTTP (Hypertext Transfer Protocol), which enables the retrieval of web pages, and ActivityPub or ATProto for decentralized social networks.
- **Open source:** Software whose source code is publicly available to view, use, modify and redistribute. This allows developers worldwide to contribute to improvements and prevents reliance on a single company. Examples include Linux, Mastodon and WordPress.
- **Protocols:** A specific set of rules for communication between devices.
- **Software Development Kits (SDKs):** Modular collections of tools and libraries that help developers build applications for specific platforms more efficiently.
- **Standards:** Widely accepted norms or technical specifications that ensure different systems can work together. For example, the TCP/IP standard enables computers and servers to form a network. While a standard defines the overarching framework, a protocol implements it by specifying the precise “language” used for transmitting data.
- **Centralized social media platforms:** Networks controlled by a single company that manages servers, rules, moderation and data storage.

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1 | Current context: The challenges behind TikTok, Instagram and other platforms

Social media platforms such as TikTok, Instagram, YouTube and X (formerly Twitter) have become central arenas for public communication in recent years. They increasingly shape how information spreads, how exchanges are organized and how political opinions take form – and, in doing so, define today’s digital public sphere. This makes them critical infrastructure, comparable to energy or water systems. Yet this digital public sphere operates in networks that are almost entirely owned and controlled by a small group of mostly U.S. and Chinese corporations. The resulting concentration of power raises fundamental questions about Europe’s democratic resilience and digital sovereignty (Frapporti 2024; Sander 2021).

Alongside these dominant, centralized platforms, a set of decentralized alternatives has emerged that offer users greater choice, transparency and control – including platforms such as Mastodon and Bluesky. They rely on open communication protocols (ActivityPub and ATProto) that allow different services to interconnect without depending on a single central operator (Berger et al. 2023; La Cava et al. 2021). However, conversations with policymakers show that basic knowledge about these technologies is often lacking: How do they work? What advantages do they offer over dominant platforms? And what potential do they hold for society, democracy and innovation? While the problems associated with centralized systems are broadly recognized, viable alternatives are either unfamiliar or not yet understood as solutions.

This report therefore provides an in-depth overview of existing alternatives and the structural problems associated with centralized platforms, and it assesses the potential of open, decentralized networks. Chapter 2 explains how centralized and decentralized systems function and contrasts their underlying logics. Chapter 3 surveys existing alternatives built on the two most important protocols: ActivityPub and ATProto. Chapter 4 compares these protocols in terms of their development paths, challenges and potential complementarities. Chapter 5 outlines concrete policy recommendations to support open networks and position them as a strategic pillar of European digital policy – advancing data protection, democratic resilience and Europe’s capacity for digital innovation.

1.1 | Attention economies and algorithmic bias: How current platform dynamics shape democratic debate

The growing concentration of public communication spaces poses significant risks to democratic societies. Until the 1990s, media regulation aimed to maintain a level playing field among a broad set of mostly national actors. Today, a small group of global corporations – almost all headquartered outside Europe – dominates the market (Andree 2025, Theil 2022). Their platforms rely on algorithmic systems built to maximize attention and advertising revenue. This logic favors emotional, polarizing or misleading content because such material drives higher engagement. The result is a distortion of political debate and an intensification of social polarization (Lorenz-Spreen et al. 2022; Berners-Lee 2025).

The reliance on proprietary, centralized systems also weakens the resilience of the digital public sphere. Changes to platform rules, algorithmic tweaks or business decisions by a single company can immediately affect information flows and public debate. A growing body of empirical research shows that the algorithmic design of major platforms significantly shapes – and often skews – social and political discussions (Tabia et al. 2025; Global Witness 2025).

1.2 | Data-driven business models and the challenge to Europe's digital sovereignty

The data-driven business models of major platforms stand in fundamental tension with Europe's principles on privacy and democratic governance. Big Tech companies process and analyze vast amounts of personal data – often across multiple services – and monetize it as extensively as possible (Engels and Goecke 2019).

Although these firms formally strive to comply with the GDPR, they typically adjust their systems only after regulators or courts force them to do so (Winter et al. 2020). Their business models conflict with core provisions of the General Data Protection Regulation, especially data minimization, purpose limitation and transparency. Even when formal compliance measures are introduced, the economic foundation remains the same: personalized advertising built on comprehensive user profiling. This creates persistent tensions between global corporate interests and Europe's pursuit of digital sovereignty.

1.3 | European decentralized alternatives for fair competition and democratic resilience

Decentralized and federated networks offer a fundamentally different model. These systems rely on open communication protocols: technical standards that allow data to flow across many independent servers, or "instances". Each server can be run by a different organization or individual, yet all are connected through shared protocols, much like email providers that remain interoperable despite being operated by separate entities (Berger et al. 2023).

Users on one server can follow, interact with and share content with people on other servers without having to register on a single, centralized platform. The result is an interconnected ecosystem that enables interoperability, transparency and local control over data and infrastructure. Administrators can set their own rules, privacy standards and moderation policies instead of being bound to the commercial interests of a single company.

Decentralized platforms therefore promote not only data protection and digital self-determination but also competition and innovation. By relying on open protocols, they help break up monopolistic structures and lower barriers to entry for developers. Their open-source foundations make it easier for civil society organizations and public institutions to use the software – and to contribute directly to its development. This creates an open innovation culture that fosters collaboration across research, civil society and the private sector, strengthening the resilience and competitiveness of Europe's digital single market (Schwarz et al. 2025; Hoffmann, Nagle and Zhou 2024; Blind et al. 2022).

1.4 | Why strengthening decentralized alternatives matters now

Despite their promise, decentralized networks remain structurally disadvantaged compared with the market dominance of Big Tech. Lock-in effects – the tendency of users to remain tied to existing platforms because of strong network effects and the lack of data portability in proprietary systems – make it difficult for people to switch to alternative services. Many decentralized platforms also lag behind centralized ones in usability and intuitive design, limiting their reach and appeal among broader audiences. As a result, decentralized networks currently reach only a small fraction of the wider democratic public (Ciriello et al. 2025).

To shift this dynamic, open social networks need systematic support. They may never fully replace today's dominant platforms, but they can serve as an important political counterbalance – increasing pressure on entrenched monopolies and expanding user choice. Open protocols make it easier for people to move between platforms, reducing the concentration of power in large, centralized services and encouraging real competition. Federated infrastructures, in turn, enhance transparency, user autonomy and democratic oversight in the digital sphere. They also strengthen resilience against monopolistic structures, constituting a critical step toward technological independence, digital sovereignty and broader civic participation (Kranz et al. 2023).

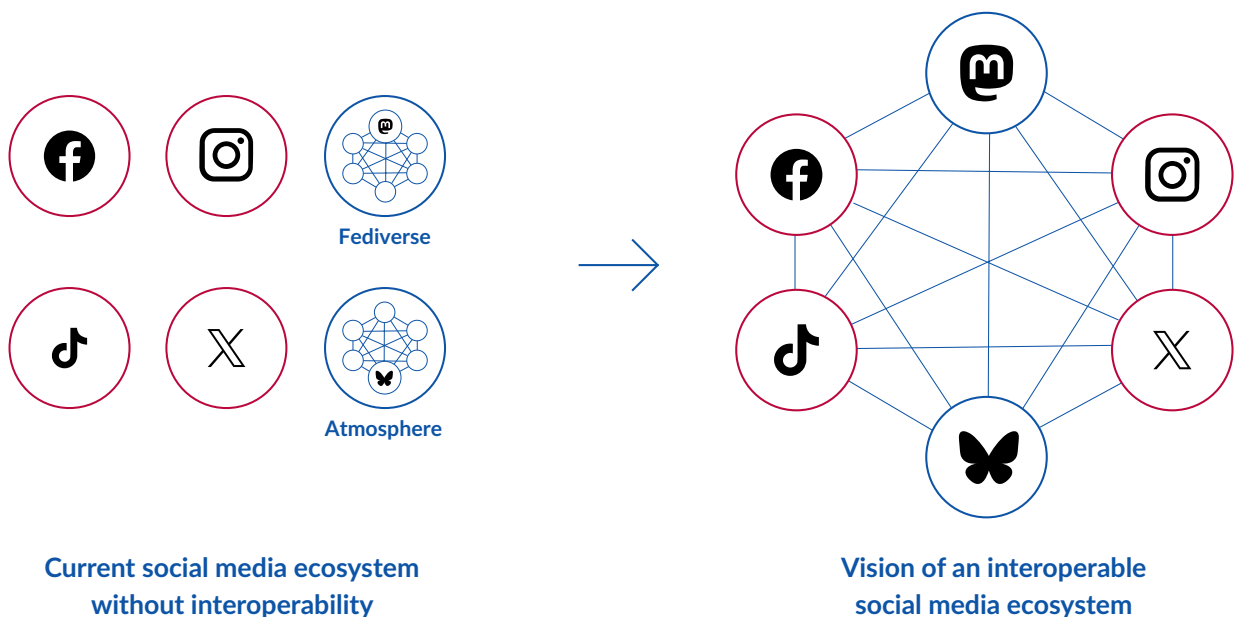


Figure 1: Centralized and decentralized platforms in a closed (non-interoperable) versus open (interoperable) social media ecosystem. (Authors' own illustration, adapted Denault 2025)

2 | Open, decentralized social media platforms – an introduction

Social networks are not just communication tools; they shape the digital public sphere. To understand why centralized platforms are problematic – and what alternatives exist – it helps to look inside the engine room: Who controls the servers? Who sets the rules for moderation and content visibility? And which technical standards determine whether systems can interoperate? At their core, two models can be distinguished: centralized platforms controlled by a single company, and decentralized networks built on open protocols.

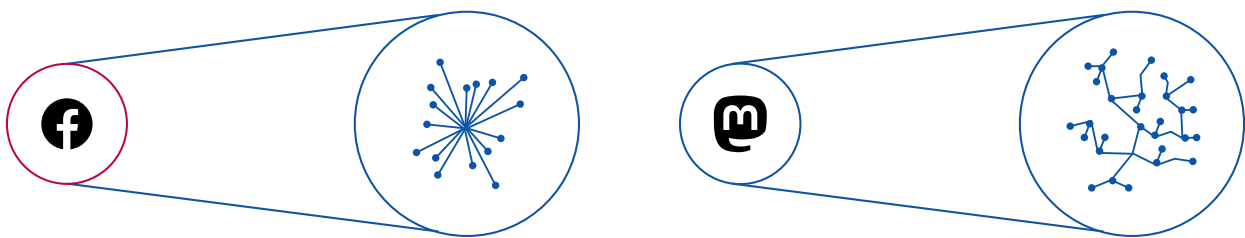


Figure 2: A look inside the engine room: how centralized and decentralized social media platforms work (Source: authors' illustration)

2.1 | Centralized vs. decentralized: A comparison of social media platforms

Today's dominant social media platforms are centrally organized: a single company operates the platform, controls the servers and sets the rules (see Figure 2, left). Platform operators also collect extensive personal data – often beyond their own services – analyze it and monetize it. Decisions about moderation, content visibility and reach, as well as functional changes, are made exclusively by the company and, in some cases, mandated by law. While such centralized networks are easy for users to navigate and offer large audiences, they also create significant dependency. Users find it difficult to switch to other platforms because lock-in and network effects keep them tied to existing centralized services (Guess et al. 2023). At the same time, algorithmic decisions remain opaque – a “black box” – because algorithms are treated as proprietary trade secrets (Gummadi 2015).

Decentralized networks such as the Fediverse or services based on ATProto, by contrast, run on many independent servers (“instances”) that are interconnected (see Figure 2, right). These servers may be operated by companies, associations or individuals. Users can choose where to host their account and still communicate with people on other servers through open protocols. Decisions about moderation, community rules and data practices rest with each instance rather than a single corporation. This gives users greater control over their data and allows them to use the service on their own terms without being forced into commercial data practices. However, decentralized networks remain more fragmented, have smaller overall reach and often lag behind centralized platforms in terms of ease of use. Limited resources for technical development also make it harder for these systems to scale.

2.2 | Open protocols: the “rules of the game” for the Internet

2.2.1 | What are open protocols?

Open protocols are technical standards that define how data is exchanged across different services. They ensure that decentralized networks remain interoperable even though they consist of many independent servers. “Open” means that the standard is publicly accessible, freely usable and typically developed collaboratively. A protocol specifies formats, commands and processes – for example, what a message must look like for other systems to understand it. In this way, open protocols create a shared language for the Internet and allow decentralized platforms to remain connected despite their diversity. They reflect the Internet’s original vision as a free, open and decentralized information network – a foundation for democracy, exchange and social participation (Berners-Lee 2025).

Practical examples include email protocols such as SMTP, IMAP and POP3, or even the telephone network. Anyone can run (or have someone run) a mail server, and messages can be exchanged between Gmail, GMX or self-hosted servers. The telephone network is another example of a decentralized system built on widely accepted, open protocols and operated collectively by many providers around the world. The Fediverse applies this same principle to social networks: users can interact without being registered on a single platform. In such an environment, it could be perfectly normal for someone with a LinkedIn account to comment on or “like” an Instagram post without creating a new profile. Decentralized networks are therefore not just “another platform.” Their defining feature is the open protocols that make interoperability possible – protocols that, in principle, even major tech companies could adopt (see illustration in Figure 1).¹

2.2.2 | Benefits and challenges of open protocols

Open protocols enable interoperability and user choice by allowing people to select their provider freely and take their followers with them when they switch services. They strengthen competition and innovation because new platforms can build on existing protocols without having to recreate the entire communications infrastructure from scratch. Civil society organizations, companies and public institutions can operate their own infrastructure, enhancing their digital sovereignty. By reducing the gatekeeping power of centralized intermediaries, open standards support diversity, pluralism and democratic participation (Freihse 2024).

However, the development of open standards tends to move more slowly than that of centralized platforms, as it requires coordination among many different actors. Closed platforms have historically been quicker to roll out new features and polished user interfaces. Services such as Facebook, Instagram and YouTube would not exist without open Internet standards, yet they built closed ecosystems on top of those standards – ecosystems whose closed design is fundamental to their business models (Berners-Lee 2025).

Decentralized structures can also make it harder to implement consistent moderation or protect users from disinformation and abuse. This presents regulators with new challenges: instead of overseeing a few large corporations, they face a landscape of thousands of independent servers, many of which operate outside European jurisdiction. At the same time, instances intentionally hosted in Europe or Germany are easier to regulate and allow authorities to ensure that legal requirements are actually enforced (Oshinowo 2025).

A further challenge lies in openness itself. Numerous variants of decentralized and open protocols exist, each improving different aspects of decentralization, for example, scalability and searchability, while others prioritize moderation or stronger decentralization. This diversity can lead to fragmentation, preventing any single stan-

¹ The experimental Fediverse integration in Meta’s social media platform Threads shows that large platforms could, in principle, open up to the Fediverse or the broader social web.

dard from gaining sufficient traction. The result may again be the dominance of closed protocols, with many of the same drawbacks as centralized networks.

3 | Existing decentralized alternatives: an overview

Decentralized social networks are gaining traction in the digital space because they offer alternative models for online communication that enable greater independence, diversity, data protection and resilience. This chapter provides a systematic overview of the existing decentralized services and protocols to illustrate how social interaction online can be organized without the control of a single company. The focus is on the two largest ecosystems – Fediverse/ActivityPub and Bluesky/ATProto – along with other relevant open protocols that address different use cases. The goal is to clarify the functional differences, potential and limitations of the various approaches.

3.1 | ActivityPub and the Fediverse

ActivityPub is an open protocol for the social web, developed in the mid-2010s and published in 2018 as a recommendation by the World Wide Web Consortium (W3C). It forms the backbone of the Fediverse, a federated network of many independent servers that communicate with one another. Mastodon is the most prominent software in the Fediverse and demonstrates that decentralized networks already serve as viable alternatives: users can register on different servers, share content and take their followers with them when they move, while moderation, rules and data usage policies are set locally.

Services in the Fediverse differ significantly from centralized platforms. They typically rely on chronological timelines or transparent, locally defined algorithms, whereas Big Tech platforms such as X, Instagram or TikTok operate as closed systems with opaque ranking mechanisms (Berners-Lee 2025, Kucketz 2024).² In this sense, the Fediverse is not only technically decentralized – it also offers more democratic mechanisms for communication and content visibility. At the same time, it is a dynamic space for innovation, with software, standards and user cultures continually evolving.

² Commercial algorithms on conventional social media platforms increase the amount of time users spend on the site, encourage addictive behavior and ultimately optimize commercially valuable ad time – a dynamic reflected in the enormous financial success of the companies behind these networks. Fediverse users can also choose to apply certain algorithms (for example, the “catch-up” feature in the Mastodon client phanpy.social), which sort Fediverse content by different criteria. In these cases, however, users retain control over how the algorithm is applied and for what purpose (Liu et al. 2025).

3.1.1 | Mastodon

Mastodon is the most widely used software for running decentralized social media networks. It is a microblogging service designed primarily for short text posts of up to 500 characters. Communication between Mastodon servers takes place through ActivityPub, an open protocol that allows any social media service integrating the protocol to interoperate across different servers and platforms.

Mastodon was released in 2016 by Eugen Rochko as free and open-source software. The first server, mastodon.social, was launched soon afterward, followed by thousands of additional servers worldwide. Over time, Mastodon became a flagship example of a decentralized social network, demonstrating that federated structures can work in practice. During its first four years, the user base remained modest and grew organically, largely driven by digitally engaged communities. A substantial surge occurred in 2022 following Elon Musk's acquisition and restructuring of Twitter into X. Growth has since slowed again. Mastodon is funded mainly through recurring community donations as well as sponsorships (Mastodon 2023). Limited development resources, minimal marketing and onboarding challenges may contribute to this slower growth. As a result, users who have an underwhelming first experience are often difficult to re-engage (Peña-Fernández, Larrondo-Ureta and Morales-i-Gras 2025).

Current estimates suggest there are roughly 8,200 active Mastodon servers (as of September, 2025), hosting around 8 million registered accounts, of which about 700,000 were active in September 2025 (FediDB 2025).³ Servers typically function as independent communities organized by region (such as bonn.social) or topic (such as chaos.social). Public-sector institutions – including the German federal government (social.bund.de) and research organizations such as the Helmholtz Center – also operate their own instances. Additional examples are listed in Appendix 1 as good-practice cases for communication on decentralized platforms.

3.1.2 | Additional services built on ActivityPub

Alongside Mastodon, a wide range of services has emerged that use ActivityPub as a shared protocol and offer decentralized counterparts to major centralized platforms such as Instagram, YouTube, Reddit or Spotify. These include Pixelfed for photos and stories, PeerTube and OwnCast for videos and livestreams, and FunkWhale and CastoPod for audio content. The ecosystem is further complemented by blog and newsletter platforms such as WordPress and Ghost, federated forums like Lemmy, as well as purpose-built services such as Gancio, Mobilizon or Bookwurm, which enable decentralized coordination of communities, events and book reviews. Whereas centralized platforms operate as closed systems and continually replicate or expand features to keep users on their service as long as possible, ActivityPub-based applications typically form around a specific use case. Because they rely on open protocols, however, they remain interoperable with other services in the ecosystem.

3.2 | ATProto and the development of Bluesky

The development of Bluesky began – later than the Fediverse – in 2019 as an internal research project at Twitter (now X). The goal was to design a social network that would be more resilient to political and regulatory pressure and better equipped to handle growing demands for content moderation, independent of either democratic or authoritarian governments (Kleppmann et al. 2024).

At the same time, the project aimed to create an open, standardized protocol that would enable interoperability between networks, give users greater control over their data, and support global scalability. Twitter deliberately chose not to participate in the existing Fediverse and instead developed its own technically and organizationally

³ Because of the decentralized server structure, all figures are approximate; different evaluations exist.

independent solution (Balduf et al. 2024). After the project spun off in 2021, shortly before Twitter's takeover by Elon Musk, the newly founded Bluesky PBC (Public Benefit Company) continued the work. The result is the Authenticated Transfer Protocol (ATProto), which combines a distributed data architecture (organized in so-called Personal Data Servers, or PDS, linked via relays) with cryptographically secured, though currently still centralized, identity management. According to its developers, ATProto is designed to enable more efficient synchronization and indexing of content and, through the portability of profiles – known as the “credible exit” – to offer users a reliable way to leave individual servers while taking their identity with them (Kleppmann et al. 2024).

3.2.1 | Bluesky

Bluesky PBC operates the largest application in the ATProto ecosystem: the Bluesky app, a microblogging service that resembles Twitter in structure but is technically capable of federation. Unlike Mastodon, Bluesky lets users tailor their algorithmic feeds and choose among alternative moderation and visibility rules. These “switchable” systems are designed to increase transparency and, potentially, create revenue streams (Zeff 2024). Around Bluesky, an open ecosystem of data pools and software development kits (SDKs) has begun to emerge, making it easier for third parties to build their own applications on ATProto. The result is a modular approach that differs technically from ActivityPub but pursues similar goals: interoperability, portability and user control over data.

Although Bluesky offers stronger privacy protections than traditional centralized platforms – its business model does not rely on targeted advertising or large-scale data collection – experts have been more critical of its privacy practices compared with European Mastodon instances (Lemmer-Webber 2024; Rijo 2025; University of Groningen 2025). Certain personal data, such as individual users' blocklists, is publicly visible and processed outside the European Union (Bluesky 2023), making compliance with the General Data Protection Regulation (GDPR) significantly more difficult.

A growing number of app variants are emerging within the Bluesky ecosystem that reshape the user experience while still relying on Bluesky's core infrastructure. Flashes, for example, offers an image-focused interface similar to Instagram, supporting up to four photos or videos per post, along with filters and curated feeds. Spark (formerly Reelo) is a video-first ATProto app that provides video posts, filters, effects and a music library, with plans to add livestreaming. Skylight focuses on vertical short-form videos modeled after TikTok.

3.2.2 | Additional services built on ATProto

Although Bluesky PBC remains the core of the network, a growing number of applications now build on ATProto. Blacksky, a project launched by Rudy Fraser, offers a community-driven microblogging platform aimed particularly at the Black community. It provides algorithmically curated, safe communication spaces. The FreeOurFeeds initiative is developing a European software stack for an ATProto-based network, though progress is challenging due to the protocol's technical complexity and high ongoing operating costs. White Wind is a blogging service that stores content on a user's own Personal Data Server and integrates comments directly from Bluesky. Smoke Signal enables event management within the ATProto ecosystem, allowing users to create events and manage invitations, RSVPs and attendance. OpenMeet, modeled after Meetup.com, supports the creation of groups as well as the organization of gatherings and events. Tangled offers a platform for collaborative programming, similar in functionality to GitHub.

3.3 | Other open protocols relevant to decentralized services

Beyond ActivityPub and ATProto, several other open and decentralized protocols support the development of an interoperable “social web,” each emphasizing different layers of digital communication: from social interaction to real-time messaging, data sovereignty and content distribution. Nostr is built around cryptographic keys and uses relay servers instead of centralized instances. This design enhances resistance to censorship and gives users greater control over their data, but makes moderation significantly more difficult. Matrix enables federated real-time communication – including chats, VoIP and video conferencing – with optional end-to-end encryption. It is used in both personal and institutional contexts. RSS provides a standardized mechanism for the decentralized distribution of web content and podcasts. XMPP, a proven and extensible messaging protocol with a federated architecture, continues to play an important role in open, decentralized communication.

4 | Potentials and challenges: Comparing ActivityPub and ATProto

Among the many open protocols, two stand out as especially relevant for connecting the “social web”: ActivityPub (with Mastodon as its largest service) and ATProto (with Bluesky as its largest service). Although Mastodon has been around longer, the U.S.-based Bluesky grew far more quickly in a significantly shorter period (Balduf et al. 2024). As a result, two promising decentralized social media alternatives have emerged, each representing a different pathway toward the open social web. Both Mastodon and Bluesky offer strengths and weaknesses, and both still face open questions around relevance, resilience and long-term viability.

The coexistence of the two ecosystems is, in many ways, ambivalent. On the one hand, the presence of multiple credible alternatives is encouraging for anyone seeking a more democratic social media environment. On the other hand, competition and mutual criticism can slow down their growth. In current debates, advocates on each side often highlight the weaknesses of the other platform instead of focusing on the broader opportunities that decentralized networks create. Many of these debates are driven more by moral preferences than by evidence-based assessments of long-term development – an issue this report aims to clarify.

Both the Fediverse (ActivityPub) and the “ATmosphere” (ATProto) pursue the same overarching goal: building decentralized alternatives to today’s dominant platforms. They differ, however, in their strategies. The Fediverse is largely the result of decentralized, organic growth, while the ATmosphere follows a more coordinated and structured development model. Given that the Fediverse has been evolving for much longer, the goal here is not to produce a definitive verdict but to offer a transparent comparison of the respective strengths and limitations at different stages of development, with a view toward the key question: How can these open protocols help strengthen digital spaces that support democratic participation?

4.1 | ActivityPub: Decentralization without scalability?

The Fediverse has been gaining traction, including among large platforms and mainstream media. In 2024, Meta enabled limited integration of Threads with the Fediverse in the United States and Canada, allowing users to follow accounts such as @barackobama@threads.net directly from Mastodon (Su 2024). This move highlights the strategic potential of federated networks and open protocols like ActivityPub: they enable direct, cross-platform connections, new ways to manage reach, and greater user autonomy. At the same time, this integration is the subject of intense debate among operators of independent instances (Jeong et al. 2025). Many avoid connecting to major corporations in order to limit data access – past experiences with protocols like XMPP show that participation by dominant firms can slow or even undermine open standards.

Political actors and parties are also beginning to see the platform as a tool for direct public communication. Donald Trump's Truth.social and the Turkish ruling party's Next.sosyal are both built on Mastodon but operate without federated connections (Kolk 2024). These examples illustrate that Mastodon is no longer merely a technical experiment; it is becoming politically relevant. As both software and platform for policymakers and activists, it allows them to bypass traditional media structures (ibid.). In authoritarian systems, this can strengthen freedom of expression, but it also raises questions about responsibility and content oversight.

Structurally, the Fediverse consists of more than 33,000 servers (FediDB 2025) that are operated by a wide range of independent organizations and individuals. This decentralized setup offers clear advantages: diversity, autonomy and reduced vulnerability to centralized censorship. At the same time, early signs of recentralization are emerging: the largest Mastodon server, mastodon.social, has about 270,000 monthly active users (MAU), whereas the second largest, infosec.exchange, has just 13,500 MAU (FediDB 2025). The largest non-Mastodon service, pixelfed.social, reaches only 90,500 MAU (FediDB 2025). As a result, a sizable share of activity is clustering around a few major instances – a pattern familiar from the evolution of centralized platforms, which may limit the network's resilience and diversity.

Mastodon has an international user base. Because of its decentralized structure, geographic distribution can only be estimated. Roughly 25% to 30% of users are believed to be in the United States, 6% to 8% each in Germany and India, 5% to 7% in France, and 5% to 6% in the United Kingdom. Japan also accounts for a significant share of the overall user base (Zuckerman 2017).

The governance structure of the Fediverse differs fundamentally from that of centralized platforms. Administrators of individual instances manage their own servers and form the backbone of a diverse, autonomous digital public sphere. This self-governance enables innovation and democratic oversight, but it also introduces challenges: data portability, technical accessibility and protection against server shutdowns are not guaranteed. Users can take their followers with them when switching servers, but suspensions or outages of individual instances directly affect the communities built around them.

Institutional developments also shape the stability of the network. In 2025, Mastodon gGmbH – the non-profit that operates mastodon.social and serves as the core development entity for the software. Mastodon has also established a non-profit organization in the United States, mainly to support fundraising (Mastodon 2024). It remains unclear how these structural changes will affect independence and governance. Despite improved finances, mastodon.social remains a very small operation, with roughly a dozen staff, which stands in stark contrast to major tech companies. Most other Mastodon servers rely primarily on recurring community donations, membership fees or sponsorships. Mastodon.social has received several corporate donations, most recently \$300,000 from AltStore (Testut 2025), and plans to generate revenue by hosting Mastodon servers (Mastodon 2025).

For the Fediverse to realize its potential as a public-interest, democracy-strengthening alternative to centralized platforms, it will need a sustainable funding strategy and broader support from policymakers, researchers, civil society and public institutions. Open standards, transparent software development and a supportive regulatory framework are essential to ensure that federated networks do not fall prey to the same tendencies toward centralization and market concentration that they were designed to overcome.

4.2 | ATProto: Between openness and centralization

Bluesky describes its service as decentralized. In principle, the underlying ATProto protocol allows independent servers and applications to operate within the network. In practice, however, it remains unclear to what extent this decentralization has actually been implemented. Key components of the system – particularly the management of user handles and the directories used for resolving identities – are still controlled by Bluesky itself. Federated interoperability is also still under development (Balduf et al. 2024; Lemmer-Webber 2024).

One example of efforts to expand the infrastructure is the planned Eurosky project, launched in Berlin in November 2025 as a European Bluesky service. Its long-term funding, however, is not yet secured. As a result, the network remains highly dependent on Bluesky's central infrastructure – in stark contrast to the tens of thousands of independently operated Mastodon servers. Much of the governance structure currently rests with a single company, raising questions about the system's independence and overall resilience (Brown et al. 2024; Lemmer-Webber 2024). There are ongoing discussions about transferring parts of this central infrastructure to an independent foundation in Europe.

Roughly 40 million people use Bluesky worldwide, which is more than twice as many as Mastodon. About 1.2 million users perform at least one “like” each day, indicating a substantial active user base (Bluesky 2025). Roughly 35 % of users are based in the United States, followed by 18 % in Japan, 9 % in Brazil, 7 % in the United Kingdom, and 5 % in Germany.

Bluesky is financed largely through venture capital. In 2023 and 2024, the company raised roughly \$23 million across several funding rounds, including investments from the crypto-focused venture firm Blockchain Capital (The Bluesky Team 2024). Venture capital financing comes with an expectation of returns, raising questions about the monetization strategies Bluesky may adopt. At present, no sustainable business model is clearly visible, and it remains uncertain how future revenue strategies might affect the platform's decentralization and independence (Zeff 2024).

Recent developments suggest that Bluesky's current structure leaves it vulnerable to political and economic pressures (Freihse & Sieker 2023). This is evident in the implementation of age-verification systems, which are required in some countries due to legal obligations (Robertson 2025; The Bluesky Team 2025). The need to rely on external providers to meet regulatory requirements as well as the resulting decision to restrict access to the platform in certain regions highlights the extent to which the system depends on external and regulatory factors.

Alongside Bluesky itself, there are other services built on ATProto that operate in a decentralized manner. To date, however, these services have achieved only limited user uptake. Bluesky PBC remains the central driver of the ATProto ecosystem, even as a growing number of actors begin contributing to its technical and organizational development (Kleppmann et al. 2024).

For European digital policy, this results in an ambivalent picture. The ATProto protocol demonstrates that open standards and modular architectures can, in principle, help reduce dependence on near-monopoly platform structures. At the same time, it remains unclear whether the current central dependencies on Bluesky PBC can

be overcome in the long term and whether genuinely federated structures will emerge – structures capable of meeting European requirements for digital sovereignty, data protection and interoperability.

4.3 | Governance as a core mechanism of decentralized networks

The governance of social networks is a critical factor in shaping their democratic potential (Redecker 2022). Decentralized and federated systems such as Mastodon/the Fediverse or Bluesky/ATProto are not inherently immune to harmful content, including hate speech, disinformation or manipulative posts. Governance determines how power is distributed, how decisions are made and how responsibility is assigned. It is therefore a central mechanism that influences the stability, trust and societal legitimacy of these platforms (Thouvenin et al. 2024). At the same time, many questions remain unresolved: How can transparent and participatory structures be established? How can conflicts be resolved fairly? And how can systems address technical and regulatory challenges in ways that strengthen resilience without undermining the openness that defines decentralized networks?

Below is a summary of the **key dimensions of governance in decentralized networks**:

- **Mechanisms for complaints and dispute resolution:** There are few cross-platform bodies to handle conflicts, and those that exist – such as the non-profit Independent Federated Trust and Safety (IFTAS) – struggle with sustainable financing (IFTAS 2025). In the Fediverse, users can usually only switch instances when disputes occur. Federated moderation councils or user-led advisory boards are needed to strengthen transparency and participation. Concepts such as “Fediverse Auxiliary Service Providers” (FASP) illustrate potential approaches for supporting moderation and conflict resolution.⁴
- **Transparency and user participation:** Decisions about content, rules and server-side interventions often rest with individual instance operators. Democratic mechanisms – including votes, elections or cross-instance user councils – could strengthen legitimate forms of participation.
- **Shared standards and self-regulation:** Federated networks operate autonomously but ultimately require shared standards for interoperability, ethics and legal compliance – similar to frameworks such as the Santa Clara Principles⁵ or the requirements laid out in the Digital Services Act (DSA). An open question is how to reach, enforce and evolve consensus on minimum standards without undermining decentralization.
- **Data protection and technical security:** Because of their decentralized architecture, unified approaches to data protection, end-to-end encryption and rights management remain a major challenge. Ensuring technical security is essential for building trust and broad acceptance of decentralized platforms.
- **Integration of public-sector actors:** Government agencies that operate their own instances raise questions about neutrality, fundamental rights and quality standards. Clear models are needed to integrate public mandates into open networks without compromising decentralization.
- **Identity protection and data portability (“credible exit”):** Protocols such as ATProto ensure that when servers fail, users do not lose their identities. In contrast, when a Fediverse server is abruptly shut down, access to content and links can disappear immediately. Backups can mitigate some risks, but the system architecture must evolve to enable migration and data security independent of individual instance operators.

4 See the Fediverse Auxiliary Service Provider specifications on GitHub: https://github.com/mastodon/fediverse_auxiliary_service_provider_specifications.

5 See <https://santaclaraprinciples.org/>.

- **Searchability and data accessibility:** Decentralization makes comprehensive search across networks difficult. Whereas the web has become centralized around search engines like Google, similar monopolies are intentionally avoided in the social web. ATProto demonstrates that a fully decentralized, redundantly stored index of all posts can enable better search capabilities, including personalized algorithms. In the Fediverse, such solutions currently exist only as prototypes.

Governance is a central mechanism for both Mastodon/ActivityPub and Bluesky/ATProto, shaping their democratic performance, trustworthiness and stability. It spans technical, organizational and regulatory dimensions, many of which remain unresolved. Transparent and participatory structures, shared standards, conflict-resolution mechanisms and strong data-protection frameworks are critical to establishing decentralized networks as public-interest digital infrastructure over the long term. Governance should be understood as a dynamic process linking research, practice and broad stakeholder participation.

4.4 | Interoperability as a shared path forward?

The previous chapters outlined Mastodon/ActivityPub and Bluesky/ATProto as distinct models of decentralized networks, each with its own strengths and challenges. At the same time, both face similar questions – in governance, data security and technical resilience – that suggest long-term cooperation could be beneficial. Even today, the systems are learning from one another: the success of Bluesky’s “starter packs,” which make onboarding easier, has inspired comparable efforts within Mastodon.

Despite the technical and conceptual differences between the two ecosystems, there is a growing push to improve interoperability between Mastodon and Bluesky. Tools such as Bridgy Fed (developed by the U.S.-based NGO A New Social) and Bounce allow users to interact across platforms or migrate accounts without losing followers. These developments signal a deeper search for ways to bring the systems closer together. Still, technical and organizational boundaries remain – especially because these bridging tools themselves can become central points of failure in the data exchange.⁶

A particularly notable example of potential convergence is Wafrn, a Tumblr-like platform connected to both ActivityPub and ATProto. It is currently considered the first and only platform in the open social web that integrates both systems.⁷ Apps such as OpenVibe similarly pull content from both ATProto and ActivityPub into a unified timeline and allow posting to both networks – although conversations remain separate.

Looking ahead, both the ActivityPub and ATProto ecosystems could benefit considerably from deeper cooperation. Stronger integration could enhance the user experience and improve resilience against political or commercial interference. However, this would require genuine willingness on both sides to adapt existing models and work toward shared communication standards. The coming years will show whether such collaboration can take shape. If it does, it may become a decisive step toward building a social media ecosystem that is more aligned with democratic values and the public interest.

⁶ Example: gup.pe, a group function whose domain was not renewed and is therefore now inactive.

⁷ <https://wafrn.net/>; a journalistic review is available here: <https://wedistribute.org/2025/10/wafrn-chaotic-good/>.

5 | Next Steps: Three strategic levers for a more democratic information ecosystem

Open, decentralized social networks built on standardized protocols still operate largely at the margins. Perceptions of limited reach or complex usability continue to hinder their broader adoption. The current state of decentralized platforms should therefore not be seen as a final outcome but as a transitional phase – one shaped by volunteer-driven initiatives, scarce resources and competition with globally dominant platforms.

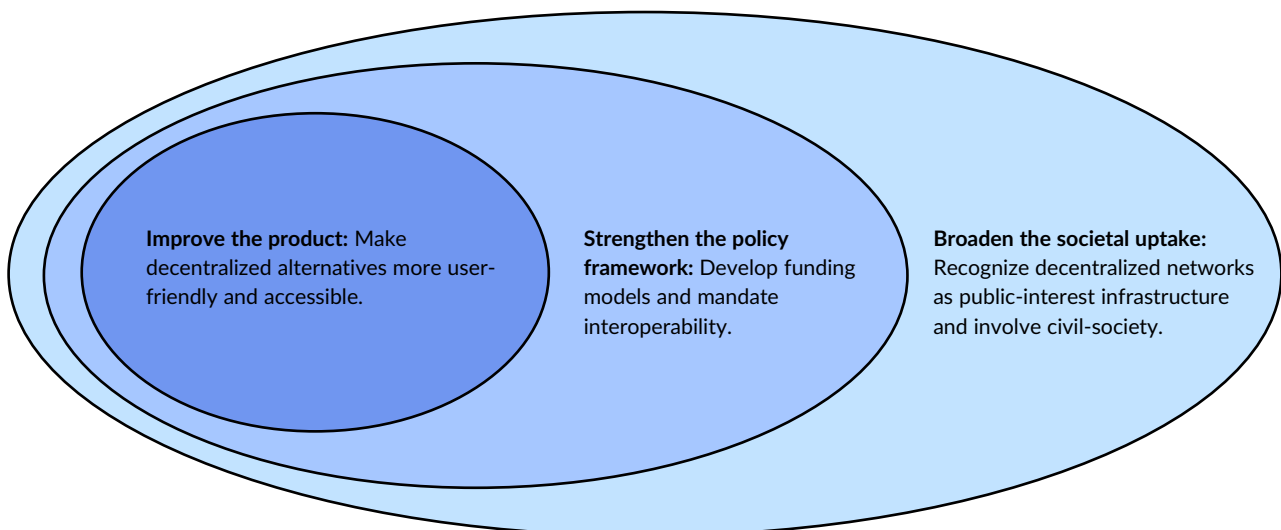


Figure 3: The three strategic levers for a democratic information ecosystem (Source: Authors' illustration)

To ensure that open networks can realize their democratic potential, a coordinated approach is needed across three levels (Figure 3):

1. **Improve the product:** Decentralized alternatives must become more user-friendly, appealing and accessible if they are to compete with commercial platforms.
2. **Strengthen policy frameworks:** Clear legal, institutional and financial structures are required to enable stable governance and fair competition.
3. **Broaden societal uptake:** Open networks must be recognized as public-interest digital infrastructure and supported politically, civically and culturally.

Only the interaction of these three dimensions – product appeal, political enablement and societal legitimacy – ensures a durable transition toward a more democratic, decentralized social media ecosystem. The following sections outline these three areas as key fields for action.

5.1 | Improve the product: Making decentralized alternatives more attractive to users

Open networks can only compete with commercial platforms if they are user-friendly, attractive and easily accessible. At present, many decentralized services remain technically demanding and limited in functionality and content, which constrains their reach and prevents network effects from taking hold. Breaking this dynamic will require targeted efforts to improve usability, develop transparent governance structures, establish shared communication and quality standards, and increase the availability of public-interest content on open platforms.

- **Improve usability and lower barriers to entry**

For decentralized platforms to appeal to broader audiences, they must offer a compelling user experience. This includes intuitive interfaces, clear navigation and a stable technical infrastructure. Systematic research is also needed to better understand user motivations so that services can be tailored to the needs of different groups. At the same time, switching away from existing platforms must be made easier: onboarding guides, migration tools and peer-to-peer communities can support the transition, while targeted outreach and the involvement of influencers and multipliers can help reach key audiences and encourage them to switch.

- **Ensure transparent governance structures**

Decentralized networks require transparent, participatory and verifiable governance models to build trust and legitimacy. Civil society and academia should jointly develop standards for moderation, data protection and interoperability, and update them regularly (see the governance dimensions outlined in Chapter 4.3). Funding for pilot projects and multi-stakeholder dialogues can help test practical approaches. The goal is to establish governance standards that balance democratic oversight, freedom of expression and technical stability.

- **Establish common trust and quality standards**

An umbrella label and visible quality benchmarks can build trust and make democratic, public-interest alternatives easier to recognize. Criteria should include compliance with the GDPR, transparency around algorithms and low addiction potential. Supported by communication campaigns and partnerships with media and multipliers, user councils could develop such standards, which could be made visible through labeling schemes or app-store certifications.

- **Provide public-interest content on open networks**

Public institutions – including government agencies, universities, libraries and public broadcasters – should be required to make their content available not only through existing channels but also on at least one open platform built on standards such as ActivityPub.⁸ Opening public archives and media libraries through open protocols would increase the visibility of public-interest content beyond commercial platforms. Implementation options include administrative directives, regulatory requirements, higher-education and broadcasting laws, or voluntary commitments by institutions.

8 See also Ralf Stockmann's "+1 Strategy": <https://openbiblio.social/@rstockm>.

5.2 | Strengthen the policy framework: Developing and establishing effective regulatory and funding models

For decentralized social networks to become viable alternatives to commercial platforms, policymakers need to provide clear guidance on legal certainty, sustainable funding and governance. A digital sphere that genuinely serves the public good will only emerge if the legal and institutional frameworks are strengthened in a focused and coherent manner.

- **Secure non-profit status in law**

Lawmakers should recognize the promotion of open software and digital infrastructure as charitable purposes, such as through an amendment of Germany's Fiscal Code (§ 52 AO) in Germany. This would allow operators of decentralized networks to act with legal certainty and benefit from tax advantages. A clear statutory definition of digital infrastructure as a public-benefit activity would reinforce independence, transparency and democratic participation online.

- **Develop public funding models for digital public goods**

For decentralized networks to fulfill their societal role over the long term, appropriate and sustainable financial frameworks must be in place. The establishment of the Digital Commons European Digital Infrastructure Consortium (EDIC) is an important step toward strengthening open, interoperable digital infrastructure across borders. Building on this, governments, institutions, and civil society should promote targeted funding mechanisms for public-interest communications infrastructure – similar to models used in culture or science – that combine donations, membership fees, and institutional contributions. Complementary measures should include scalable, independently operated support services such as “moderation as a service” to ease the technical and administrative burden on smaller instances.⁹

- **Promote interoperability as a guiding principle of the digital public sphere**

Policymakers and regulators should prioritize ensuring that major social media platforms are required – under the Digital Services Act, the Digital Markets Act and other EU rules – to provide open interfaces. This would give decentralized networks access to users, network effects and visibility. It is crucial, that interoperability also includes federated protocols such as ActivityPub and ATProto. Complementary support measures should further promote the integration of open standards into public infrastructure, media organizations and civil-society platforms, helping to strengthen competition, diversity and digital sovereignty.

- **Integrate decentralized platforms into digital policy discussions**

Decentralized networks are still insufficiently represented in digital-policy debates, even though they are increasingly relevant to digital sovereignty, infrastructure and democratic information flows. Policymakers should systematically include representatives of these platforms in multi-stakeholder forums that bring together political actors and civil-society voices. Doing so would enhance the legitimacy of open networks, enable evidence-based policymaking and build public support for platforms that strengthen democratic resilience.

⁹ See also the Digital Rights Center's recommendations: https://digitalrechte.de/media/pages/news/fuer-ein-souveraenes-internet-warum-die-politik-jetzt-das-fediverse-foerdern-muss/6a529e58ad-1759220180/foefed_digitalrechte.pdf.

5.3 | Broaden the societal uptake of decentralized alternatives

Open, decentralized networks are currently sustained largely by individual developers, volunteer groups and small organizations. What is missing is broad societal adoption and a civil-society counterweight capable of guiding their development. Unlike traditional media – which operate under clearly defined public mandates through state treaties, broadcasting regulations or press laws – the role of open platforms as democratic information infrastructure remains largely undefined.

Democratic information processes require not only the production of content, but also its dissemination through independent, resilient networks. At present, the development of open networks depends heavily on voluntary efforts by actors with limited resources, while competing with global platforms that command enormous reach and financial power. Digital policy initiatives also rarely reach the broader public, leaving decentralized networks without a widely recognized societal mandate. Political communication continues to flow primarily through commercial platforms, limiting both the visibility and perceived legitimacy of open alternatives. To address these gaps, the following steps are needed:

- **Promote and co-develop the benefits of decentralized networks**

The strengths of decentralized networks – data protection, digital sovereignty and democratic participation – need to be communicated clearly and with a targeted message. Public outreach, educational programs, workshops, online courses and flagship projects can build trust, lower barriers and encourage active participation. The goal should be to create a network of at least 1,000 nodes across schools, community organizations and topic-specific groups, connected regionally and nationally. Democracy-supporting initiatives can reinforce these structures and integrate safe, participatory spaces into educational programs.

- **Expand independent research on decentralized platforms**

Despite new transparency requirements under the Digital Services Act, independent research on commercial platforms remains limited – and research on decentralized alternatives like Mastodon, Bluesky or peer-to-peer networks is still sparse. Early, evidence-based studies could identify patterns such as discussion dynamics, filter bubbles or forms of participation and feed these insights directly into platform development. In this way, decentralized services can be continuously improved in ways that align with democratic norms, while strengthening public and political awareness of their potential.

- **Create cross-sector dialogue spaces and citizen advisory bodies**

Civil-society perspectives should be incorporated into technical development processes, for example through participatory formats at developer conferences, community discussions or multi-stakeholder roundtables. The goal is not to promote individual developers, but to create civic dialogue spaces that make user interests visible. In addition, citizen advisory panels at the state and municipal levels could help define democracy-enhancing criteria for platform governance, monitor their implementation and strengthen transparency, trust and public legitimacy.

These measures aim to ensure that open, decentralized networks are recognized as legitimate, democracy-enhancing public infrastructure. At the same time, they help create the conditions under which technical innovation and societal interests can be aligned, thereby laying the groundwork for a resilient information ecosystem that is more firmly oriented toward the public good.

Appendix: Practical showcases for the use of decentralized platforms across sectors

The Federal Ministry for Digital Transformation and Government Modernisation (BMDS) recently joined the Fediverse – specifically, the Mastodon instance social.bund.de. The move is part of a broader strategy to strengthen digital sovereignty in Germany.

Choosing Mastodon as a communication channel reflects a deliberate shift by the new digital minister toward an open and decentralized digital infrastructure. For its presence on Mastodon, the BMDS relies on the server social.bund.de, originally launched by former Federal Data Protection Commissioner Dr. Ulrich Kelber, which leads the list of notable good-practice examples.

There are numerous examples of institutions, organizations, companies and individuals successfully communicating on decentralized networks. The following overview highlights several good practices – without claiming to be exhaustive.

Good Practice 1: social.bund.de – Government communication via the Fediverse

The Mastodon server social.bund.de was launched in November 2022. Its goal was to offer a decentralized, privacy-friendly alternative to commercial social networks and to create a secure space where Germany's federal government and its agencies could communicate with the Fediverse. The launch coincided with a surge in Mastodon's popularity in 2022, when many organizations and public authorities established their own Mastodon instances.

social.bund.de is used primarily by German government institutions and their press offices, including the Federal Press Office, the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety, and the Federal Ministry for Transport. Some of these accounts have built followings in the thousands. Major ministries and press offices typically have between 7,000 and 15,000 followers. Their posts are widely shared and commented on, making them key actors in the public communication taking place on social.bund.de.

→ **Additional examples:** social.schleswig-holstein.de (Federal State of Schleswig-Holstein), social.overheid.nl (Netherlands)

Good Practice 2: Bonn.social – Regional Mastodon communities

The Mastodon server Bonn.social is an open, locally anchored instance for the Bonn and Rhein-Sieg region and serves as a representative example of similar initiatives such as norden.social, eimsbuettel.social, and others. Bonn.social has been operated since 2017 by the social media agency Bonn.digital.

With its strong local roots and transparent, noncommercial operations, Bonn.social emphasizes data protection, community self-governance and a socially responsible digital environment. As of September 2025, more than 1,600 accounts were registered on the server, roughly one-third of which remained active in the following month. After a surge in new registrations during the “Twitter migrations” of 2022, user numbers have grown steadily since 2023.

→ **Additional examples:** [eimsbuettel.social](#) (Hamburg district), [norden.social](#), [ruhr.social](#) (Ruhr area), [rheinneckar.social](#), [muenster.im](#)

Good Practice 3: Chaos.social – Self-organized thematic communities in the Fediverse

The Mastodon server chaos.social is maintained by Leah Oswald, rixx and other volunteer administrators. It originally emerged within the broader environment of the Chaos Computer Club (CCC), though it operates without any formal or organizational affiliation. The server is financed entirely through community donations; its non-profit association currently does not accept new members.

Advertising and commercial revenue are deliberately avoided to preserve independence and a public-interest orientation. Ongoing costs – including hosting, storage and moderation – are covered through voluntary contributions, with administrative overhead kept to a minimum. This example illustrates how volunteer-run, topic-focused instances in the Fediverse can create sustainable, community-driven digital spaces.

→ **Additional examples:** [burningboardsocial.echncs.de](#) (technology), [mastodon.art](#) (art), [BlackSky](#) (Bluesky-based service for people of color)

Good Practice 4: University of Innsbruck – Using Mastodon for science communication

The University of Innsbruck offers a compelling example of how Mastodon can be successfully integrated into academic communication. In fall 2023, the university launched its own instance, social.uibk.ac.at, hosted on university-owned servers to provide a privacy-friendly, ad-free platform for internal and external communication. Access is managed through the university's central single sign-on system and is available to all 5,000 employees.

Mastodon is used primarily for institutional science communication and is actively promoted by the university, which has intentionally stepped back from centralized platforms such as X (formerly Twitter). By running its own instance and integrating it into existing IT systems, the University of Innsbruck has created a scalable, sustainable solution that strengthens internal communication and increases visibility within the academic community. The example shows how universities can help establish decentralized, open communication structures within the Fediverse.

→ **Additional examples:** helmholtz.social (Helmholtz Association), social.kit.edu (Karlsruhe Institute of Technology), [Aktionsbündnis neue soziale Medien](https://Aktionsbündnis.neue-soziale-medien.de), encyclia.pub (ORCID)

Good Practice 5: Heise Verlag – Media presence in the Fediverse

After leaving X (formerly Twitter), the German media publisher Heise has significantly expanded its activity on Mastodon and has operated its own instance, social.heise.de, since late 2022. Not only the flagship brands, such as c't and heise Security, but also individual editorial staff members are active there. The main Heise account has roughly 61,000 followers and more than 12,000 posts (as of 2023/2024).

The platform's tech-savvy community drives an above-average engagement rate: on average, posts are reshared or favorited about 20 times. Although overall reach still falls short of X/Twitter, Mastodon links already generate roughly two-thirds of previous traffic levels. Automated content keeps operational costs low, with the monthly expenses for the instance amounting only to the high two-digit range. Overall, the example illustrates how media organizations can use their own Mastodon instances to strengthen reach, audience engagement and digital sovereignty.

→ **Additional examples:** [Flipboard](https://Flipboard.com) (news aggregator), [@nytimes.com](https://nytimes.com) on Bluesky (The New York Times), [@washingtonpost](https://washingtonpost.com) on Bluesky (The Washington Post), [integrated website and newsletter platform Ghost](https://integrated-website-and-newsletter-platform-ghost.com), tazgetroete@mastodon.social (taz)

Good Practice 6: Marc-Uwe Kling – An example of the “Plus One” strategy

Author and cabaret artist Marc-Uwe Kling is active on Mastodon under @marcuwekling@cultur.social, where he reaches roughly 43,500 followers (as of September 2025). With more than 280 posts, he uses the platform regularly to share humorous and socially critical content – often tied to his well-known works such as the Känguru comics. His strong presence illustrates how effectively creators can transfer their reach from established networks to open platforms. Kling also promotes his Mastodon account on Big Tech platforms and emphasizes the benefit of making content accessible on open networks without requiring users to hand over personal data. His engagement is a strong example of the “plus-one” strategy: maintaining a presence on centralized platforms while deliberately adding an open communication channel in the Fediverse.

→ **Additional examples:** @islieb@mastodon.social (islieb), @ralphruthet@troet.cafe (Ralph Ruthe), @pallenberg@mastodon.social (Sascha Pallenberg), @janboehm@edi.social (Jan Böhmermann), sarahbosetti@mastodon.social (Sarah Bosetti), @stephenking.bsky.social (Stephen King), @barackobama.bsky.social (Barack Obama)

Good Practice 7: AltStore – Decentralized app distribution and interoperability

The alternative iOS app store AltStore uses the sideloading option introduced under EU legislation and plans to adopt ActivityPub in the future to publish app updates across federated networks. Unlike Apple’s App Store, which has traditionally been fully controlled and did not allow third parties to distribute apps directly to user devices, AltStore enables installations without Apple’s approval.

AltStore illustrates how regulations such as the Digital Services Act (DSA) and the Digital Markets Act (DMA) can help open markets and strengthen interoperability. Much like the Fediverse, it demonstrates that open and decentralized approaches can complement previously closed platforms and create new access points for both providers and users.

→ **Additional examples:** Threads (Meta), WordPress.com, Tumblr (Automattic), Typo3, Drupal

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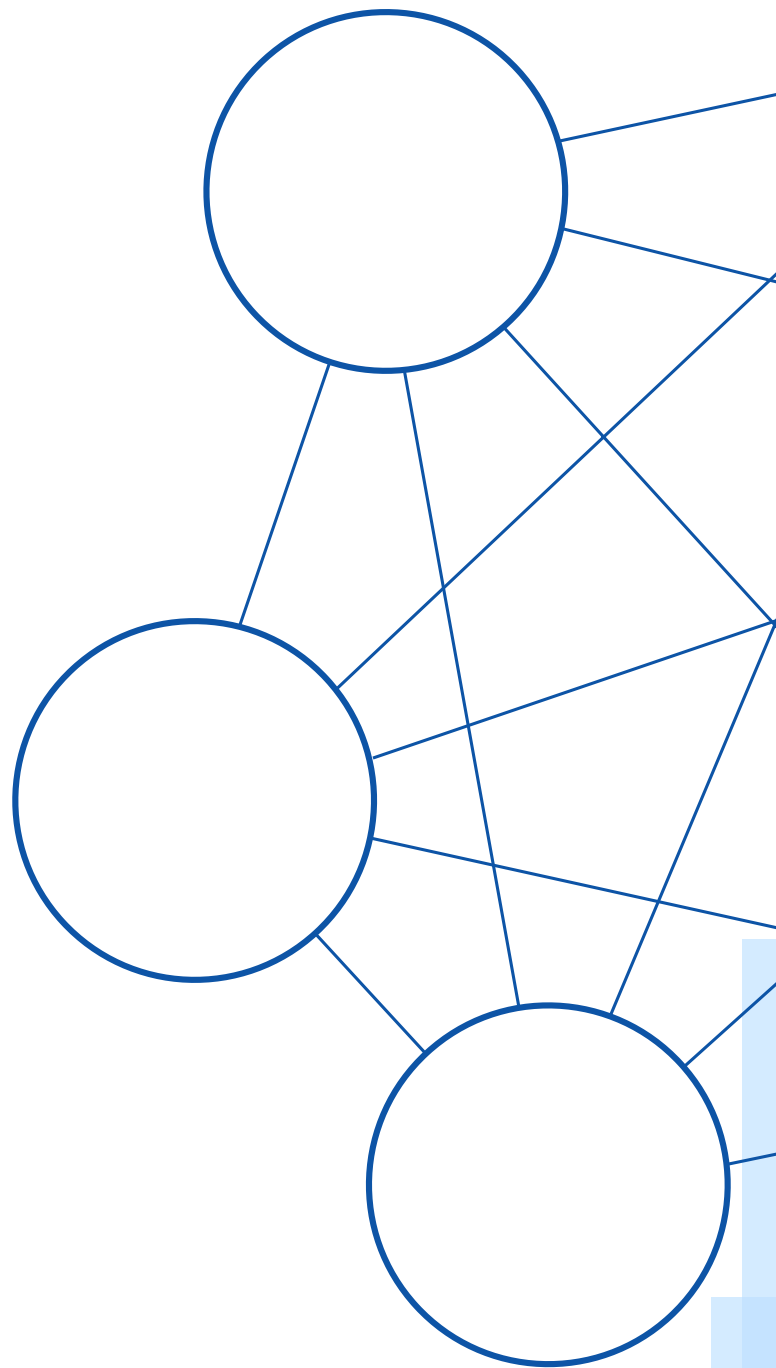
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