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The State of Decentralized Publishing 2025:

Trends, Platforms, and Road-Map for Open Knowledge

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Executive Summary

Blockchain technology is redefining the landscape of content distribution, monetization, and preservation through the rise of decentralized publishing platforms. Over the past decade, numerous initiatives—from scholarly journal platforms and decentralized journalism efforts to multimedia sharing services—have experimented with blockchain-based solutions paired with decentralized storage technologies like IPFS and Arweave. This report critically analyzes more than 20 prominent platforms, covering their architecture, governance models, content storage strategies, and incentive mechanisms. We organize these platforms into thematic categories, including academic publishing, journalism, blogging/social media, e-book distribution, and multimedia content.

Early innovators, such as Steemit (2016), demonstrated how blockchain could incentivize user-generated content through cryptocurrency rewards. However, ambitious projects like Po.et and Civil struggled with user adoption due to complex onboarding processes and unclear token utilities. In academia, platforms such as Orvium and ScienceMatters/EUREKA successfully introduced transparent peer-review processes and token incentives, while newer Web3 tools (Mirror.xyz, LikeCoin) enabled authors to mint content as NFTs and ensure permanent archival.

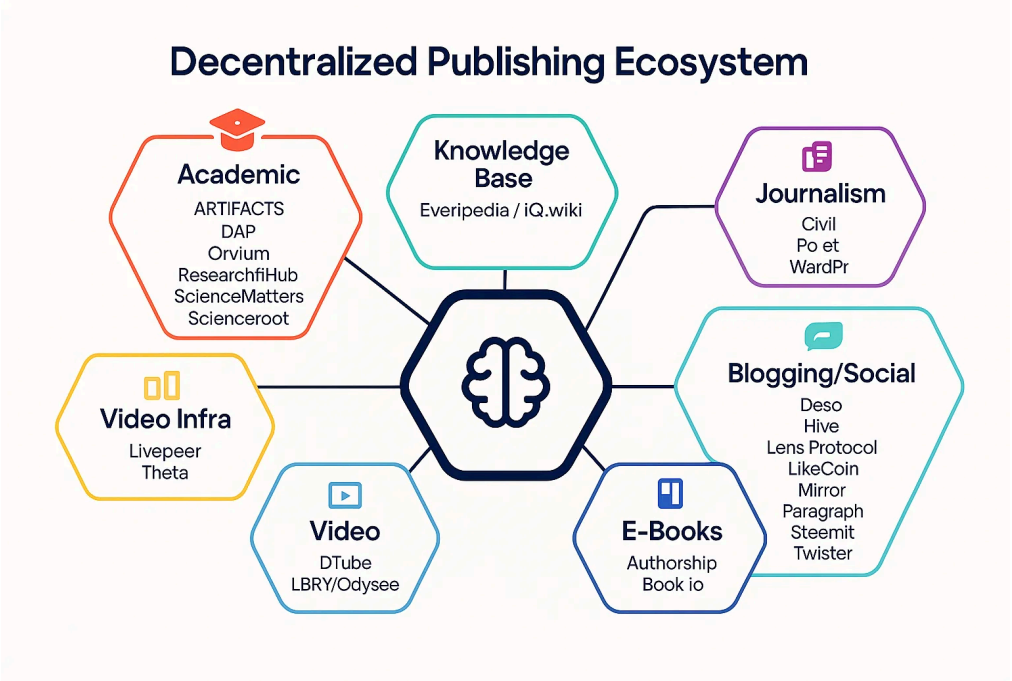

Figure 1: Thematic Ecosystem Map of Decentralized Publishing Platforms. Platforms are categorized by content type and application area, illustrating the diversity and specialization across the decentralized publishing ecosystem.

Key findings suggest that successful decentralized platforms consistently prioritize genuine user needs, such as content ownership, equitable monetization, and long-term content preservation, rather than speculative financial models. Innovations in rights management (ARTiFACTS for research provenance, KodakOne for photo licensing) and novel monetization methods (Audius rewarding musicians directly, Steemit/Hive's reward tokens) have set important precedents. Conversely, several platforms failed due to inadequate alignment with existing user workflows, complicated onboarding, or insufficient integration with traditional academic and media frameworks.

Moving forward, our research highlights several actionable insights critical for the future success of decentralized publishing initiatives:

- **Align with User Incentives and Workflows:** Platforms should seamlessly integrate with established academic and media ecosystems, reducing crypto complexity and clearly defining the value of incentives such as rewards or curation tokens.

- **Ensure Content Ownership, Portability, and Permanence:** Use decentralized storage to guarantee long-term content access and employ decentralized identifiers (DIDs) to maintain content portability and author autonomy across platforms.
- **Adopt Gradual Decentralization and Hybrid Models:** Strategically prioritize decentralizing high-impact operations (timestamps, payments), employing consortium governance initially to ease adoption in risk-sensitive sectors such as academia.
- **Design Governance for Participation and Fairness:** Implement intuitive governance models, leveraging quadratic or reputation-based voting to prevent plutocracy and encourage equitable community engagement.
- **Leverage Smart Contracts for Efficiency and Transparency:** Automate royalties, access rights, and embargoes through smart contracts, providing transparent micropayments and engagement rewards.
- **Proactively Address Regulatory and Ethical Concerns:** Ensure tokens remain utility-focused, fairly distributed, and adhere to regulatory frameworks. Balance decentralization with effective moderation and content standards to uphold credibility and ethical integrity.
- **Prioritize Community Building and Network Effects:** Engage with niche, mission-aligned communities, showcase early successes, and leverage integration with existing Web3 infrastructures to amplify platform adoption and interoperability.

This report provides an in-depth comparative analysis, detailed platform profiles, and strategic recommendations designed to guide the next generation of blockchain-enabled publishing platforms toward sustainable, user-centric innovation.

Academic and Scholarly Publishing Platforms

Platform	Blockchain / Storage	Key Features & Innovations	Governance & Status
PubWeave (2022)	Cardano (Smart Contracts), Arweave (Storage)	Full-stack decentralized peer review system; treasury-funded open access model; NFT-based publishing via Veritheum; modular architecture via PanDAO	DAO-enabled governance in progress; active development on GitHub (Intellart); MVP live
ResearchHub (2020)	Ethereum (ERC-20 token); Web2 frontend	Open peer review with RSC token bounties (~$150/review); upvotes, comments, and uploads earn tokens; organized into topic-based "Hubs"; DAO-style governance; integrates social and publishing functions. (Not to be confused with ResearchGate).	Active since 2020; backed by Brian Armstrong and Open Source Capital; governed via RSC token voting; ongoing development by the ResearchHub Foundation; open access and researcher-led. Editorial board for article submission review.
DAP (2020)	Ethereum (proposed), IPFS-style decentralized storage (proposed)	Aims to support decentralized open peer review, anonymity on-demand, open access publication without traditional journal gatekeeping. Uses machine intelligence to assist in review validation. Emphasizes fairness, transparency, and researcher control over publishing workflows.	Conceptual framework originating in Europe as part of broader EU Open Research initiatives; development status unclear, not widely adopted yet; proposed as infrastructure for Open Research Europe and EU Horizon programs.
Orvium (2018)	Ethereum & DB off-chain	End-to-end journal workflow with immediate timestamping of submissions ; open peer review with reviewer rewards; tokenized license transfers.	Open-source; Orvium token for rewards; active development but limited adoption so far.
Pluto (2018)	Ethereum, IPFS for data	Platform for publishing research objects with DOIs; "blinded" peer review with **reputation scores** and reward tokens . Decouples publishing from traditional journals.	Startup-led; broad vision (incl. repository and marketplace); status unclear, faced adoption hurdles (academics' preference for journals).
Scienceroot (2018)	Native chain (PoS)	Aimed to be an all-in-one scientific ecosystem: funding, collaboration, and its own journal ("Scienceroot Journal"). Used **Science Token (ST)** for APCs and to reward reviewers and authors. ORCID integration for researcher identity.	ICO-funded project; relied heavily on tokenization. Status: likely defunct (no major updates post-2019).
ARTiFACTS (2018)	Bitcoin/Ethereum (timestamping)	Research asset management: records immutable hashes of research outputs (datasets, figures, etc.) to establish attribution. Integrates with GitHub, Figshare for provenance tracking.	Private startup; focused on research data rather than full manuscripts. Provided early blockchain integration but did not tackle peer review or journals.
ScienceMatters / EUREKA (2016)	Ethereum, custom DApp	Operated an open-access journal for single-observation studies; **blinded blockchain peer review**; authors paid fee (in fiat) used to reward reviewers in EUREKA tokens.	Company-driven (ScienceMatters); had working platform and token system, but niche scope. Current status: EUREKA token exists; platform activity limited.

Table 1: *Comparison of blockchain-based academic publishing platforms.* **Orvium** and **Pluto** tried to reinvent the publication process with tokens and new platforms, whereas **ARTiFACTS** and **Manubot** targeted narrower issues (research data attribution, manuscript versioning). **ScienceMatters/EUREKA** and **Scienceroot** operated hybrid models with their own journals and reward tokens.

Academic publishing has seen multiple blockchain projects aiming to improve transparency, speed, and credit distribution in the research lifecycle. These platforms focus on use cases like **proof-of-existence for manuscripts**, **open peer review**, and **tokenized rewards for reviewers**. Table 1 (above) summarizes key features of notable academic-focused platforms.

In-depth Profiles – Academic Platforms

PubWeave (2022-Present)

PubWeave is a Cardano-native, decentralized academic publishing platform proposed by the Intellart team, which has also developed the **Veritheum** OpenScience NFT marketplace and the **PanDAO** interoperability framework. The project's ambition is to create a full-stack, peer-reviewed scholarly ecosystem that combines NFT-based publication, smart contract-managed funding, and censorship-resistant hosting via Arweave.

PubWeave aims to solve two problems simultaneously: (1) the unsustainable cost structure of academic publishing, and (2) the lack of control researchers have over their work. Its design includes a **treasury-funded open access model**, where usage of affiliated marketplaces like Veritheum helps fill a treasury pool that subsidizes publication costs. This is supplemented by governance logic tied to a DAO, enabling stakeholders to manage incentives and maintain editorial quality.

Technically, the project employs a modular architecture:

- **Frontend** on pubweave.com (currently minimal and seemingly inactive),
- **Backend and APIs** (developed in Ruby and JavaScript),
- **Arweave integrations** through PanDAO Arweave Ops,
- **Plutus smart contracts** on Cardano for treasury logic and token governance.

Challenges and Limitations: Despite its compelling architecture, PubWeave has not yet achieved visible traction or broad community engagement. Its current front-end (pubweave.com) is sparsely populated, and while GitHub activity indicates active development, the user experience and adoption appear limited. The platform's reliance on integration between multiple experimental components (Veritheum, PanDAO, Arweave) increases architectural complexity and may pose long-term maintenance and interoperability challenges. As with many Catalyst-funded projects, its success will depend not just on engineering execution but on sustained outreach, academic buy-in, and real-world usability testing.

ResearchHub (2020-present)

ResearchHub is a community-driven scientific publishing and discussion platform that integrates a Web2 frontend with Ethereum blockchain-based incentives. Launched in 2020 by Coinbase CEO Brian Armstrong and scientist Patrick Joyce, it blends elements of a preprint server, Reddit-style community forum, and journal club. At its core is ResearchCoin (RSC), an ERC-20 token used to reward uploads, reviews, and discussions. Peer review is open and attributed—contributors earn RSC bounties (~$150) for thorough reviews, with the reviews permanently linked to their profiles. The platform emphasizes transparency, open access, and researcher-driven governance via token-weighted votes on platform evolution. ResearchHub is organized into topical "Hubs," where researchers can share articles, ask questions, and curate content collaboratively. By 2023, it had raised $5M in funding and was highlighted in *Nature* as a key DeSci project pioneering crypto-enabled peer review. It continues to grow, particularly among early-career scientists seeking recognition and reward for scholarly engagement.

Challenges: While ResearchHub's model addresses key pain points in peer review and academic publishing, broader adoption may depend on bridging cultural and reputational divides in traditional academia. Integration with indexing services, citation tracking, and institutional recognition remains limited, though community use is accelerating.

DAP (Decentralized Academic Publishing) (2020)

DAP is a European initiative aimed at building a blockchain-based academic publishing infrastructure that improves transparency, efficiency, and fairness in the peer review process (Davidović 2023) It introduces a modular system comprising a "Scholarly Wallet" for managing digital identity and tokens, a "Virtual Editor" for matching submissions to reviewers, and a decentralized reviewer reputation system. DAP utilizes a dual-token approach: fungible tokens as rewards and non-fungible tokens to track reviewer performance and academic contributions (DAP Benefits, DAP References). The platform also emphasizes selective anonymity, decentralized storage (e.g. IPFS), and integration with existing publishing systems to facilitate adoption.

Challenges: While DAP is well-funded and has produced prototypes under the Horizon Europe program, its real-world adoption is still unproven. It faces similar hurdles to peer platforms: changing ingrained academic practices, incentivizing broad reviewer participation, and aligning with institutional recognition systems. However, its modular, journal-agnostic design offers potential flexibility for academic ecosystems seeking blockchain integration.

Orvium (2018-Present)

Orvium is a decentralized platform aimed at replicating the entire scholarly publishing workflow on blockchain. It provides **proof-of-existence timestamps for submissions** and supports open peer review where reviewer identities and comments are recorded immutably (Manna 2024). Authors can transfer or assign content licenses via smart contracts. Orvium's architecture includes a web frontend, blockchain backend, and databases for storage – meaning not all content lives on-chain, but critical actions are logged to Ethereum. The platform issues an **Orvium token (ORV)** used to reward reviewers and potentially manage governance. Orvium's open-source approach and focus on reducing publication costs align with the open science movement.

Challenges: Orvium essentially enables creation of new "decentralized journals" on its platform. A key question is whether researchers will value these **DAJs (Decentralized Autonomous Journals)** if they lack impact factor or indexing. As of now, Orvium remains in development with pilot implementations, but widespread adoption in academia has yet to be achieved.

Pluto Network (2018-present)

Pluto (by Pluto Network) envisioned a **research hub** where scientists could publish articles, datasets, and peer reviews directly, rather than through traditional journals. It runs on Ethereum smart contracts and issues **"reward tokens"** to incentivize peer review (Pluto Labs 2018) . Notably, Pluto assigns each user a **reputation score** based on their contributions (publishing, reviewing). Content (with DOIs) is stored such that authors retain copyright control. By eschewing the journal format, Pluto hoped to **decentralize scientific communication** entirely (Kim 2017).

Challenges: This bold approach runs up against academic norms – researchers still need publications in recognized venues for career advancement. The platform's success would require a cultural shift in academia. While innovative (especially in blinded peer review and token rewards), Pluto's current status is unclear; it gained attention around 2018 but did not become mainstream among researchers.

Scienceroot (2018-2019)

Scienceroot attempted to build an entire scientific ecosystem on its own blockchain. It proposed features spanning **crowdfunding for research projects, collaboration networks, and a publishing platform**. The native **Science Token (ST)** would be used for all transactions: authors paying article processing charges (APCs), reviewers earning tokens, and even bounties for contributions. By linking activities to ORCID researcher IDs, Scienceroot aimed for an integrated profile of a scientist's funding, publishing, and reviewing history on-chain (Research Stash 2018).

Outcome: This ambitious project faced the common pitfall of trying to "do it all." It relied on its token economy to attract users, which proved difficult. It also ran into the issue of needing to establish its own journal and convince authors to publish there. After an ICO in 2018, Scienceroot's development waned; it did not manage to rival traditional publishers and appears to have faded, illustrating that broad scope and heavy token reliance can hinder a project's viability.

ARTiFACTS (2018-2019)

Rather than replacing journals, ARTiFACTS tackled a specific pain point: establishing *precedence and attribution* for research outputs. The platform allows researchers to **securely record a hash of any research artifact (manuscript draft, dataset, image)** on a blockchain, creating an immutable timestamped record. This can be used to claim authorship or prior existence of findings. ARTiFACTS integrated with popular repositories like **Figshare and GitHub**, so when a scientist uploads data to those services, a record can be written to the blockchain via ARTiFACTS. This helps build a trusted chain of custody for research data and ideas (ARTiFACTS, 2018).

Limitations: ARTiFACTS did **not attempt to change the peer review or publishing model** directly. It's a complementary service focusing on provenance. While useful, by itself it doesn't solve issues like journal access costs or slow review – but it *does* provide a way to get credit for research steps earlier than final publication. ARTiFACTS was a well-received idea in principle (even referenced by academic blockchain research), but its adoption depends on researchers choosing to use it alongside traditional workflows. As of now, it remains a niche tool for the tech-savvy scientist.

ScienceMatters & EUREKA (2016-present)

ScienceMatters is an open-access publisher that launched a journal for single-observation studies and integrated a blockchain-based review system called **EUREKA**. Authors would pay a flat fee (e.g. $595), and those funds convert to **EUREKA tokens** that reward peer reviewers. If a paper was rejected, authors got a partial refund, and if accepted, the reviewers were paid in tokens (Mackey, et al. 2019). This model provided **transparency and incentive in peer review**, addressing complaints of unpaid reviewer labor. EUREKA (on Ethereum) recorded review decisions and facilitated reviewer anonymity where needed (https://github.com/eureka-blockchain-solutions).

Outcome: ScienceMatters demonstrated a working model – it **ran real journals using blockchain for process enforcement**, arguably one of the most robust implementations in scholarly publishing. However, its focus on very niche publication types and the requirement for authors to pay (common in open access) limited its reach. The platform showed that blockchain can streamline review payments, but it remains one player in the broader academic publishing landscape.

Other Academic Projects

Manubot deserves mention as an open-source initiative that uses **Git for version control of manuscripts** and optionally anchors version hashes on a blockchain. This ensures every edit in a paper's development is tracked and attributable, addressing authorship disputes. Also, beyond platforms, **academic journals have experimented with blockchain**: e.g., the journal *Ledger* (since 2017) requires authors to include a Bitcoin blockchain hash of their paper's metadata in the submission, as a proof-of-existence at submission time (Leighninger 2024). The *Journal of the British Blockchain Association (JBBA)* has likewise used blockchain to timestamp published articles (Manna 2024). These examples highlight growing interest in using blockchain for **trust and transparency** in scholarly communications, even within conventional journals.

Lessons from Academic Platforms

Academic blockchain projects show that **incentive alignment and integration** are critical. Efforts like Orvium and Pluto, which tried to create entirely new publishing ecosystems, struggled to pull researchers away from established journals (prestige and career incentives still favor traditional publications). On the other hand, targeted solutions (ARTiFACTS, Manubot) that integrate with existing practices offered useful enhancements but on a smaller scale. A key takeaway is the importance of **working with academic standards** (e.g. ORCID, DOI, existing repositories) and gradually building acceptance, rather than expecting an overnight revolution in researcher behavior.

Decentralized Journalism and News Platforms

Platform	Blockchain	Purpose & Features	Outcome / Lessons
Civil (2017-2020)	Ethereum (CVL token)	Marketplace of independent newsrooms. Readers and journalists held **CVL tokens** to govern content: stake tokens to challenge false news or fund favorite newsrooms (Leighninger 2024). Partnered with major media (Associated Press) for adoption.	*Failed:* Token sale fell short and user onboarding was too complex (average readers struggled with crypto) (Leighninger 2024). Civil shut down in 2020, team pivoted to other blockchain projects (Hayward 2020). Showed that **complex token economics can alienate users** in the media.
Po.et (2016-2019)	Bitcoin (initially), then Ethereum	Protocol to **timestamp and license digital content** on-chain. Allowed creators (journalists, bloggers, etc.) to register their articles/works to create a tamper-proof record. Envisioned marketplaces and attribution systems using the POE token.	*Failed/Pivoted:* Built core tech (Bitcoin-based timestamping, API, WordPress integrations) but **struggled to find a role for its token** (Das 2020). Faced scaling issues on Ethereum and attempted migration to another chain. Ultimately lost momentum. Lesson: A useful feature (content timestamps) isn't enough without a clear demand or token utility.
PUBLIQ (2018)	Custom blockchain (PBQ token)	Decentralized publishing network for journalists and bloggers. Aimed to **remove intermediaries** and reward content creators based on content popularity (via PBQ tokens). Also incorporated distributed storage to prevent censorship (publiq.network).	Never gained wide adoption. Illustrates that many similar projects competed in this space; those without major backers or unique advantages faded. PUBLIQ's vision of ad-free, token-rewarded journalism was compelling but required critical mass of both writers and readers to succeed.
DNN (2018)	Ethereum (DNN token)	Decentralized News Network: A news platform where content goes through decentralized editorial review. Community journalists submit articles, which are vetted by token-holder curators before publication. Aimed to combat fake news through incentive-aligned vetting.	Did not launch beyond test phases. Showed interest in **blockchain-based editorial processes**, but coordinating a decentralized newsroom (with unvetted contributors and token incentives) proved complex. Possibly suffered from the 2018 crypto downturn.
PressOne (2018)	EOS (PRS token)	Founded by ex-journalist, this platform targeted content creators in China. Enabled registration of articles on blockchain and monetization through tokens. Focused on ownership verification to fight plagiarism.	Had initial buzz (ICO funding), but little international coverage of outcomes. Likely a case of a regional project whose adoption is hard to track; underscores that **content ownership verification** was a global concern tackled by many platforms concurrently.

Table 2*: Blockchain-driven journalism platforms and their outcomes.* These projects attempted to address issues like declining trust in media, censorship, and unfair pay by using tokens and decentralized governance.

Decentralization in journalism promised to restore trust and financial stability by removing central gatekeepers and enabling reader-funded models. A number of high-profile projects launched in the late 2010s to leverage blockchain for news reporting, content authenticity, and journalist rewards. Table 2 (above) overviews the notable projects in this category of publishing platform.

In-depth Profiles – Journalism/News Platforms

Civil (2018-2020)

Civil garnered significant attention as a possible savior for journalism's business woes. It set up a network of newsrooms (eventually 13 news outlets were involved) and introduced the **CVL token** for community governance (Leighninger 2024). In Civil's model, anyone holding CVL could propose new journalism projects, vote on newsroom ethics, or challenge stories that seemed incorrect by staking tokens (Leighninger 2024). The idea was to create a "crowd-curated" journalism ecosystem free from ad-driven clickbait. *Despite strong backing* (it was supported by ConsenSys and partnered with AP), Civil's 2018 token sale failed to meet its minimum target observer.com.

One core issue: **news readers found it confusing to buy and use tokens** just to consume or support journalism (Leighninger 2024). Many interested supporters couldn't figure out the crypto exchanges or wallet setup required to participate, highlighting a **user-experience gap**. Civil tried shifting to a membership model without requiring token purchase, and even gave grants to newsrooms (Hayward 2020), but by 2020 it shut down and the team moved on (Hayward 2020).

Legacy: Civil demonstrated both the promise and pitfalls of decentralized governance in media. The promise – a network where readers have a stake in **high-quality, truth-vetted news** – was overshadowed by the complexity of the token system and reliance on speculative crypto economics. A lesson learned is that **tools must be as easy as existing web platforms** for average users, or they won't gain traction in the media industry.

Po.et (2016-2017)

Po.et was an earlier (2016-17) initiative focused on the **backend infrastructure for digital publishing**. It wasn't a consumer-facing news site, but a protocol and API that publishers could integrate to timestamp content on a blockchain. For example, a freelance writer could register an article through Po.et and receive a timestamped proof of authorship. Po.et also imagined that its **POE token** could fuel a marketplace where content licenses are traded or creators are paid in tokens. In practice, Po.et successfully built the tech – they created Frost, a Bitcoin wallet for timestamping, and even WordPress plugins to automate registering blog posts on-chain. The challenge was **getting industry adoption**. Traditional media didn't urgently demand a blockchain solution for licensing, and Po.et had difficulty articulating a clear utility for POE tokens in its ecosystem. As Ethereum's popularity grew, Po.et migrated from Bitcoin to Ethereum for flexibility, but then faced high gas fees and scaling issues. A planned move to yet another blockchain (Echo) signaled turbulence in the project's direction. Eventually, Po.et's foundation ceased active development. (Das 2020)

Key insight: Even though **content timestamping** is undeniably useful (to prove "who published what when"), it alone doesn't sustain a platform – especially if tied to a token with no obvious necessity. Po.et was likely *ahead of its time*, as now in 2025, content authenticity is a hotter topic (with deepfakes, misinformation), but back then the immediate demand was lukewarm. Future efforts might incorporate Po.et's ideas but need to bundle them with features that directly solve publishers' revenue or distribution problems.

Other Journalism Projects

A variety of smaller projects echoed similar themes:

- **PUBLIQ** positioned itself as a decentralized content network rewarding writers purely based on content performance (views, likes) with PBQ tokens, and using community storage to ensure content can't be censored. It aimed to build reader trust by eliminating ad-driven bias (Daniel 2017). While the concept was sound, PUBLIQ entered a crowded field and did not differentiate enough to thrive. It highlights that **rewarding**

content with tokens was a common approach, but the devil is in the details of how you attract an audience.

- **Decentralized News Network (DNN)** introduced an extra layer of review by the community before news gets published, somewhat like a decentralized editor's desk. This is an interesting hybrid of journalism and open-source peer review, but it introduced friction (slower publication due to multiple token-holder approvals) and required a large, well-informed token community to succeed – a high bar for a new platform. DNN's difficulty underscores that **content moderation and verification can be decentralized,** but the process must be efficient and the incentives aligned to not deter contributors (Coleman 2021). Project is now defunct, but its legacy url was https://dnn.media, former social media handle can be found here: https://x.com/OurDNN.

- **Authenticity and anti-plagiarism tools:** Some platforms zeroed in on verifying that content is original and not tampered. For example, **WordProof** (2019) (https://wordproof.com/about/), is a tool allowing news sites or any website to **timestamp their content on blockchains** (like EOS or Telos) for transparency. It won the EU's "Blockchains for Social Good" contest by showing how timestamping articles can build trust with readers (an article timestamp can be displayed to prove it hasn't been stealth-edited) – essentially implementing what Po.et envisioned, but as a user-friendly plugin. WordProof's progress suggests that packaging blockchain features (like timestamps) into familiar CMS systems (WordPress) can drive adoption more effectively than standalone crypto platforms.

Lessons from Journalism Platforms

Decentralized journalism experiments taught that **audience engagement is crucial**. A platform like Civil needed everyday readers to participate in governance, but asking them to navigate crypto proved too much in 2018 (Leighninger 2024). Simpler models (e.g. allowing credit-card payments that internally convert to tokens, or abstracting tokens entirely) might have helped. Additionally, **gradual decentralization** might work better: for instance, starting with a traditional subscription model and slowly introducing token-based voting for certain decisions, rather than putting everything on a token from day one. On the technology side, establishing content authenticity (through hashes/timestamps) is a clear value-add that some news organizations are exploring, but it needs to be combined with addressing business needs (revenue, audience growth). Going forward, any blockchain-based news platform must **emphasize usability, clear value (like exclusive content or community involvement), and regulatory compliance** (tokens in media could be securities or create legal questions). The failures of Civil and Po.et were not in vain – they provided a roadmap of pitfalls to avoid for the next wave of decentralized media platforms.

Web3 Blogging and Social Media Platforms

General blogging platforms and social networks were early adopters of blockchain for content, with **Steemit** being the pioneering example. These platforms provide mainstream content creators (writers, bloggers, influencers) an alternative to Web2 giants by rewarding them with cryptocurrency and giving them more control over content. We examine classic blogging platforms like Steemit/Hive and newer Web3 publishing tools like Mirror and LikeCoin, as well as decentralized social networks like Minds, Lens, and DeSo.

In-depth Profiles – Web3 Blogging and Social Media Platforms

Steemit / Hive (2016-present)

Steemit launched as a blockchain-based Reddit/Blog hybrid, running on the **Steem** blockchain. It introduced the concept of **"Proof-of-Brain"** where users upvote content, and the system algorithmically rewards authors and curators with Steem tokens (Dalton 2020). Content (posts, comments) is stored directly on the Steem ledger (Dalton 2020), making it censorship-resistant in theory. Steem's blockchain also had unique tokenomics: it generated new tokens daily and distributed them to content creators based on votes, rather than mining. This created a built-in monetization for bloggers, something that attracted a wave of users in its early days. Steemit, Inc. ran the main front-end (steemit.com) and held a large stake of Steem tokens.

Evolution to Hive: In 2020, a corporate takeover attempt by TRON's Justin Sun (who bought Steemit, Inc.) led to a governance crisis (Dalton 2020). The Steem community felt decentralization was threatened and hard-forked the blockchain to create **Hive** – essentially the same code but without the controlling stake of the new owner (Dalton 2020). Hive continues as a community-governed chain for social content, while Steem also still operates (though much diminished in community). This saga highlighted a governance lesson: decentralized social platforms must ensure no single entity can easily dominate consensus or token supply, or the community may lose trust (Dalton 2020). **Hive** today powers a rich ecosystem (blogs like peakd.com, forums, games) and retains the Steem model of rewarding content with tokens (CryptoLife 2023). The Steemit/Hive model proved that a content blockchain can scale to millions of posts (Steem was among the most-used blockchains by transaction count at its peak, since every vote and post is a transaction). It also showed the importance of **community forkability** as a check against centralization.

Key features: Steem/Hive use Delegated Proof-of-Stake (DPoS) for fast block times, and Resource Credits instead of gas fees so that users don't pay microtransactions for each post (IvanOnTech 2021). Images or videos are typically stored off-chain (Steemit set up its own image host), while text content and references are on-chain. Users hold private keys to their accounts, enabling them to truly own their profile and content (they can use different front-ends to access the same account data on the blockchain). Hive continues to innovate with second-layer tokens and communities (like specialized subreddits with their own token economics). The success of Hive (outliving the Steem corporate drama) suggests that **tokenized social media can cultivate a loyal user base**, especially among those who feel underserved by ad-based Web2 platforms. However, challenges remain: Hive's content economy can be skewed by "whales" (users with large stake have more voting power), leading to **wealthy users influencing content visibility** (Dalton 2020). The community has implemented mechanisms like downvote pools to mitigate abuse, an example of the unique governance issues in decentralized social media.

Mirror.xyz (2020-present)

Mirror is a **Web3 publishing platform for long-form writing**, often described as the decentralized alternative to Medium. It runs primarily on Ethereum (and now Optimism for lower fees) and uses **crypto wallets for login** instead of emails/passwords. Mirror's innovation is treating each article or blog post as a digital asset that the author can **monetize or govern through smart contracts**. When an author publishes on Mirror, the content is stored on **Arweave's permaweb** (a decentralized, permanent storage layer) for immutability (Mirror Support 2024). The author can then choose to mint their article as an **NFT – called a "Writing NFT"** – which readers or collectors can purchase to support the author (Mirror Development 2022). Mirror even allows setting a limited edition size and price for these NFTs (Mirror Development 2022). Collectors essentially get a crypto-collectible that represents the article (often with the article title, author, and a snippet embedded).

Mirror also introduced novel publishing mechanics like **crowdfunds** and splits: An author can crowdfund a project (say a book or investigative piece) by selling a token to backers via Mirror, and later share ownership or revenue. The smart contract "splits" feature lets creators automatically distribute earnings from an NFT sale or crowdfunding to multiple contributors (useful for co-authors, editors, etc.). Initially, Mirror access was limited – only those who won a weekly voting competition received a $WRITE token which granted publishing rights (Beck 2021). This curated early content and kept quality high. By 2022, Mirror opened up to anyone with an Ethereum wallet, dropping the token gate (the $WRITE token is being repurposed for governance).

Impact: Mirror has become the go-to platform for many crypto writers, DAOs publishing newsletters, and even academics experimenting with NFT articles. It seamlessly combines **content publication with Web3 monetization** – readers can *support authors directly* by collecting their work. Because content lives on Arweave, authors have a guarantee their words can't be deleted. The platform is relatively young but has seen successful examples like magazine issues and novels sold as NFTs on Mirror. One challenge is that **purchasing content NFTs is still niche** – mostly limited to the crypto-savvy audience. Mirror's focus is not on token rewards for reading (unlike Steemit) but on enabling **creator ownership and fan patronage**. This model might attract professional writers more than mass social media users. It's highly relevant to professional and academic publishing as well: e.g., a researcher could publish a summary or lay article of their work on Mirror and allow interested readers to collect it as a way to raise funds for research or simply distribute an immutable copy.

LikeCoin & ISCN (2018-present)

LikeCoin is an infrastructure project from Asia that provides a **decentralized publishing protocol** rather than a single user-facing app. It introduced the concept of the **International Standard Content Number (ISCN)**, analogous to ISBN for books, but for any digital content. When a creator publishes something (article, photo, video) using LikeCoin's network, an ISCN (a unique identifier) is registered on the LikeCoin blockchain along with metadata (author, title, timestamp, content hash). The actual content can be stored on decentralized storage like IPFS or Arweave, and the ISCN entry links to that content address (Decentralized Publishing | LikeCoin 2024). This effectively creates a **global registry of content metadata** on-chain. The LikeCoin blockchain (built on Cosmos SDK) also has the LIKE token which can be used in various ways (tipping creators, governance, etc.). One application of LikeCoin is **Liker Land**, a platform where readers can reward content by "liking" it on-chain (with LIKE tokens), and creators get those token tips.

The aim is to make publishing **"permanent and attribution-friendly"** – once registered, a content's metadata is always accessible and verifiable on chain (Number 2022). This is particularly useful for archival (years later, one can prove a piece of content existed at a certain time, with certain authorship). It's also being used to help photographers and artists protect their works (by registering their photos via apps like Numbers Protocol that integrate LikeCoin) (Number 2022).

Status: LikeCoin is active, mainly adopted in Hong Kong/Taiwan independent media circles and by some content platforms for **content authenticity and cross-platform identity**. Its approach, focusing on infrastructure and standards, shows another path: rather than building a new front-end for users, provide the **decentralized backbone** that existing websites can plug into. For example, a WordPress site can integrate LikeCoin so that every blog post automatically gets an ISCN and on-chain timestamp. This lowers the barrier for creators to enter Web3 (they don't have to leave their current publishing tools). LikeCoin's success will depend on widespread adoption of ISCN as a standard for content identification – it's an ambitious goal, but if achieved, it would weave many independent publishers into a **shared ledger of content attribution**.

Minds (2015-present)

Minds is a decentralized social network often likened to Facebook+Reddit but with crypto incentives and strong free speech stance. It is open-source and allows users to post content, share, and message just like a traditional social media platform. Minds introduced a token (ERC-20 on Ethereum) that users earn for their contributions (creating popular posts, referring friends, daily engagement) and can spend to **boost their posts' visibility** or tip other users. Rather than fully on-chain content, Minds uses a hybrid approach: content is stored on Minds' servers (with encryption options), but the token economy and some moderation logic leverage Ethereum. Users can also pay each other in tokens or fiat for premium content (Minds has a subscription tier similar to Patreon). Minds' governance includes

community voting on content moderation policies, and it has experimented with **DAO-like proposals** for changes to the network.

Minds' claim to fame is that it gained a user base in the millions by marketing itself as a privacy-focused, censorship-resistant alternative to mainstream networks, especially popular with communities who faced bans on traditional social media. Unlike many projects listed here, Minds did not do an ICO or at least not in the same timeline; it grew more like a startup with venture funding and later integrated crypto. This likely helped it focus on user experience first. The Minds token provides a real utility (advertising reach) which keeps a **circular economy** on the platform. However, because content isn't stored on a public blockchain, some purists argue it's not fully decentralized – it's more of a federated model with open source code (so anyone can run a Minds node or fork it). Still, Minds demonstrates that **social networks can incorporate crypto rewards without requiring users to navigate blockchain intricacies** – many users may use Minds just as a social site and only indirectly deal with tokens via the platform's interface. It offers insight that a gentle approach to decentralization (where blockchain is under the hood) can onboard more users.

Lens Protocol (2022-present)

Lens is a **decentralized social graph protocol** developed by Aave's team. It's not a single app but a base on which many social apps can be built, all sharing the same users and content. Lens runs on Polygon and uses NFTs extensively: when you create a profile on Lens, you mint a **Profile NFT** that represents your identity (Kakar 2022). When you publish a post, that post is an NFT (or tied to an NFT) in your profile's collection. If someone follows you, their follow action is represented by an NFT (they hold an NFT that says they follow you). Collecting a post (akin to retweeting or saving it) can also be an NFT-based action. By modeling these social relationships as tokens, Lens makes the social graph **ownable and portable** – you can prove your followers, content, and connections on-chain and carry them between different front-end applications.

For storage, Lens typically uses IPFS for the content of posts (e.g. the text, images) and stores references (like content hash and URI) in the NFT's metadata on-chain. Governance of Lens currently lies with its developers (no token yet as of 2025), but the intention is to gradually decentralize control. Several apps have been built on Lens: **Lenster** (a web app similar to Twitter), **LensTube** (for video sharing), and others focusing on specific communities. They all read/write to the same Lens contract data. This means if you get banned or if an app goes down, you can just use another app and your social presence is intact – a powerful departure from Web2 walled gardens (Kakar 2022).

Significance: Lens is arguably at the cutting edge of decentralized social media. It is less about content monetization (though creators can charge a fee to let others follow or collect their posts, providing income) and more about **data ownership and interoperability**. For professionals and academics, Lens could be the backbone for a decentralized LinkedIn or ResearchGate, where your list of publications, followers, and endorsements lives with you rather than on a company server.

The challenge for Lens is building large user bases on the front-end apps to compete with Web2 networks. Also, storing every social action as an NFT means potentially *lots* of transactions – they've mitigated costs by using Polygon (low fees) and creating dispatcher services to batch actions, but scaling to millions of users will be a test of Polygon's throughput and perhaps require further off-chain scaling solutions. Nonetheless, Lens's design is a **blueprint for future social networks**: user-owned data, modular features, and the ability to compose new social experiences from the same underlying graph.

DeSo (Decentralized Social, formerly BitClout, 2021-present)

DeSo is both the name of a Layer-1 blockchain and the collective of social apps on it. It launched controversially as BitClout, a platform where users could buy and sell "creator coins" tied to individuals' reputations (including profiles of famous Twitter personalities created without consent, which drew criticism). BitClout rebranded to DeSo and broadened the vision to be a base chain for all kinds of social content. Unlike Lens which is on an existing chain, DeSo built a custom blockchain optimized for **storage-heavy social media data** (deso.com). It claims to cheaply store posts, profiles, messages on-chain and handle high throughput of micro-transactions (like likes, follows). DeSo's architecture includes a **decentralized database** of social content that any node can host, and an API for developers to build apps on top. They have their own DESO coin that powers the network and can be used in applications.

In DeSo's ecosystem, one can find apps for microblogging, forums, and NFT marketplaces. The hallmark feature remains **creator coins** – each profile can have a token that others can buy, essentially betting on that creator's rising popularity (a social stock market). Additionally, posts on DeSo can be minted as NFTs or gated so that only coin holders can see premium content, introducing monetization avenues. DeSo also supports end-to-end encrypted DMs and other social features natively (Node: FAQ 2025). Its strong point is that it's a one-stop stack – identity, content, and monetization all on one chain – which might attract developers who want to build social apps without piecing together Ethereum + IPFS + other tools. *However,* the BitClout launch issues hurt its reputation among some. The network is running and has a dedicated community, but it's still far from mass adoption. It shows another approach: **creating a purpose-built social blockchain** from scratch to handle scale. The jury is out on whether this approach will outperform leveraging existing chains and protocols like Lens.

Other Blogging/Content Platforms – A few additional examples

Publish0x (2018-present):

A crypto-powered blog platform where both authors and readers earn small crypto rewards (in various tokens) for writing and reading articles. Uniquely, readers on Publish0x can allocate a portion of a reward pool to the author and themselves when they "tip" an article (at no cost to the reader). Publish0x content isn't on chain, but the reward system is crypto-based. It gained popularity in the crypto community as a way to get paid for reading educational content. Its success (still active with a sizable user base) underscores that **blending content and crypto rewards can work** if the UX is simple – on Publish0x, users don't need to buy tokens; the platform provides them from sponsors. This approach might inform academic or professional content platforms that want to incentivize engagement without a barrier to entry. (https://www.publish0x.com/page/how-it-works).

Yours.org / read.cash (2017/2019-present):

These were Bitcoin (and later Bitcoin Cash) based blogging platforms enabling **micropayments for content**. On Yours.org, readers could pay a few cents worth of crypto to unlock an article or tip an author. The idea was a web economy of tiny payments instead of ads. It garnered some use, proving that on-chain microtransactions for content are possible (especially on low-fee chains like BCH). Read.cash continued the idea on Bitcoin Cash with tipping. The takeaway is that cryptocurrency can enable *micro-monetization* that wasn't feasible before (paying an author $0.10 for a single post is possible when transaction fees are fractions of a penny). While these platforms remained niche, they illustrate a monetization model that could be potent for scholarly content as well (imagine paying a few cents to the creator of a useful dataset or analysis you read, directly and instantly). (Yours.org, read.cash)

Narrative Network (2018-2020):

A content platform where the community owned "niches" (topic categories) as tokens and earned rewards from the content in those niches. It attempted a decentralized community-run version of a content site, with a reputation system and a council elected by token holders to oversee governance. Despite an operational platform and active early adopters, Narrative closed in 2020 due to not achieving sufficient growth. It teaches that **decentralizing content communities is as much social as technical** – one needs to attract diverse contributors and readers, not just crypto enthusiasts, to sustain a content ecosystem. (Guy 2018)

Lessons from Blogging/Social Platforms

This category shows some of the **most tangible successes** in decentralized publishing, as well as important lessons. Steemit/Hive proved a working economy, but also revealed how on-chain governance can be attacked and how community forks can save a project (Dalton 2020). Mirror and Lens demonstrate that **UX and integration with creator needs** (NFT monetization, data portability) are key – they abstract away a lot of blockchain complexity (one-click minting with gasless transactions, etc.) so that creators can focus on writing or interacting. At the same time, purely on-chain social brings new challenges: for instance, privacy (everything public by default), moderation

(how to deal with abuse or illegal content without a central authority), and scalability (handling millions of small actions).

One emerging best practice is to **use blockchain where it adds unique value (ownership, payments, permanence)** and use off-chain or second-layer solutions for the rest. For example, Mirror uses Arweave for content storage (optimized for permanence) and Ethereum for ownership and financial transactions – a division of labor. Lens uses NFTs for identity and relationships but can use off-chain indexing for searching content.

From a professional/academic viewpoint, these platforms offer inspiration: imagine academic blogs or micropublications on Hive or Mirror where researchers get paid per upvote or via collectible research summaries. Or a social network for scientists built on Lens where one's network of co-authors and followers is portable across many apps (perhaps a future where Google Scholar, ResearchGate, etc. all read from a Lens-like decentralized graph). The pieces are coming together, but careful design is needed to ensure *reliability* (academic content might need stronger moderation or curation than open social media, for quality control) and *incentive alignment* (a token reward can encourage engagement, but also risk gaming metrics or focusing on popular appeal over quality content – something even Steemit struggled with when clickbait earned rewards).

Decentralized Content Marketplaces and Multimedia Platforms

Beyond text publishing, blockchain has also transformed **multimedia content sharing** – including video, audio, images, and e-books. These platforms often emphasize content ownership and direct monetization via NFTs or tokens, creating new marketplaces for digital media. We group here platforms that focus on **video streaming, music streaming, image rights, and e-book publishing** under a broader umbrella of decentralized content distribution networks.

Video and Livestream Platforms

LBRY / Odysee (2017-present)

LBRY is a protocol and platform for sharing videos and other digital content in a decentralized way. It combines a blockchain (LBRY blockchain) for registering content metadata and a P2P network for distributing the files. Creators publish content to LBRY by uploading it to the network and associating it with a **name (channel and content title)** on the blockchain, along with a price if they want to charge (many videos are free, but some can cost LBRY Credits to stream/download). The LBRY Credits (LBC) token can be earned by watching content, referring users, or through community rewards, and spent to support creators or buy content. **Odysee** is the flagship front-end (a YouTube-like website) that uses the LBRY protocol under the hood. (https://lbry.com/, https://odysee.com/)

A key aspect is that content **can be stored off centralized servers** – users who download a video also seed it to others (similar to BitTorrent), and the blockchain ensures **content is discoverable and not alterable by a single party** (each piece gets a content hash and a record). LBRY positioned itself as a champion of free speech (less restrictive on content moderation than YouTube, within legal limits) and has drawn communities that had videos demonetized or removed elsewhere.

Challenges: LBRY's journey has been rocky in terms of legal status – in 2022, the U.S. SEC sued LBRY Inc., arguing LBC was an unregistered security. LBRY lost the case, which cast uncertainty on the token's future and the company's operations. The **protocol and Odysee platform remain operational**, but this highlights regulatory risk for tokenized platforms. Technically, LBRY demonstrated that a blockchain can coordinate a global content library, but it also showed that **incentivizing a P2P video network is hard** – competing with the sheer convenience and speed of YouTube. LBRY had to incorporate features like centralized streaming for popular videos to ensure smooth playback, which purists saw as a compromise but was likely necessary for user experience. Nonetheless, it's one of the most robust examples of a decentralized video platform in daily use, with millions of users on Odysee.

DTube (2017-present)

DTube is another decentralized video platform, originally built to integrate with the Steem blockchain (hence the "D" for Decentralized YouTube). It allowed users to upload videos which were stored via IPFS (InterPlanetary File System), and the video links along with titles/descriptions were posted to the Steem blockchain. This meant that **likes and rewards were handled by Steem's content reward mechanism** – users upvoting a DTube video would give the creator Steem tokens, similar to a blog post (DTube). DTube also had its own token (DTC) introduced later and migrated to a custom blockchain (the Avalon blockchain) to reduce reliance on Steem/Hive.

The platform interface looks like YouTube and it garnered popularity during Steem's heyday, with some content creators earning significant Steem rewards for videos. The use of IPFS ensured that the actual video files were decentralized, while Steem/Avalon took care of indexing and payments.

Differences from LBRY: DTube's economy was more tightly tied to social voting (like Steemit's model) rather than direct purchasing. This encouraged engagement but also meant income was unpredictable and driven by trending algorithms and big voters. DTube also lacked the permanent library approach – if IPFS nodes stopped hosting a video (say, if no one pins or seeds it), it could become unavailable, whereas Arweave or LBRY's design tries to ensure longevity. The trade-off is cost: storing large videos permanently on a blockchain like Arweave is expensive, so DTube's choice of IPFS (which is free but not guaranteed persistent without pinning) was pragmatic.

DTube is still around, now independent with its own blockchain and token. It underscores a general pattern: **hybrid architecture** – blockchain for metadata & incentives, decentralized storage for content – is standard for video platforms. Pure on-chain storage of videos (which are huge files) is impractical on most chains. Instead, platforms focus on distributed storage networks (IPFS, Arweave, or their own P2P layer) combined with blockchain-based catalogs and payment systems.

Theta Network (2018-present)

Theta is a specialized blockchain for **decentralized video delivery**. It is not a user-facing video site but rather an infrastructure that video platforms can use. Theta's network consists of "edge nodes" run by users that **cache and relay video streams** to viewers, sort of creating a decentralized CDN (Content Delivery Network). People who run Theta edge nodes are rewarded with **Theta Fuel (TFUEL)** tokens for sharing their bandwidth and resources to relay video. The Theta blockchain keeps track of these rewards and also hosts a marketplace for video platforms to purchase bandwidth from the network. Theta also has a governance token (THETA).

Theta gained high-profile partners like Samsung and media companies for testing, and it also launched dApps like Theta.tv (a streaming site where users watching certain streams could earn TFUEL). Theta essentially separates the content layer from the blockchain: the video data moves through a mesh of nodes, and the blockchain is coordinating who should pay whom for the data delivery and perhaps for digital rights. In terms of publishing, Theta introduced the idea of **NFT DRM** – using NFTs to represent rights to a piece of video or live stream access. For example, a streamer could issue an NFT that gives the holder access to their premium stream. Under the hood, the Theta network would enforce that only NFT holders get the data.

Significance: Theta's approach is more infrastructure-level but very relevant. It shows blockchains can help solve the costly problem of video streaming by incentivizing users to share their unused resources (similar to how Filecoin does for storage). For content creators, a network like Theta can reduce reliance on centralized CDNs (which charge fees), potentially lowering the cost to distribute video, or enabling new business models where fans contribute bandwidth and earn tokens. It's a piece of the decentralized publishing puzzle that might not be visible to end-users but could empower next-gen platforms to scale like YouTube without having Google's resources.

Livepeer (2017-present)

Livepeer is another infrastructure protocol on Ethereum (and Arbitrum) that targets a specific aspect of video: **transcoding** (the process of converting raw video into various formats and qualities for streaming). While not a full publishing platform itself, Livepeer allows anyone with a GPU to become a transcoder on the network and get paid in ETH or Livepeer Token (LPT) for processing videos. Video platforms can send their videos to the Livepeer network to be transcoded much cheaper than using cloud services. This fits into decentralized publishing by **lowering the cost to serve video** – one of the historically biggest expenses for content platforms. By decentralizing transcoding (and Theta decentralizing delivery), a small video site can potentially use these services to compete with the big players.

Both Theta and Livepeer illustrate that beyond just storing and listing content, **blockchain can decentralize the content *pipeline*** – from encoding to distribution – ensuring that no single company has a monopoly on those services.

Music and Audio Platforms

Audius (2019-present)

Audius is a well-known decentralized music streaming platform, often compared to SoundCloud but built on blockchain infrastructure. It allows musicians to upload their tracks, which are then streamed to fans through a decentralized network of nodes. Audius uses **IPFS to store the music files** (ensuring they are not housed on a central server) (Case study: Audius), and initially used an Ethereum sidechain for metadata and the AUDIO token, later migrating some components to Solana for scalability. The **AUDIO token** serves multiple purposes: artists can stake it to get more visibility, fans can stake on their favorite artists to share in their success, and it governs the

platform's future. Audius also created features for artists to mint NFTs or showcase NFT ownership within their profiles (How Is Audius Decentralizing The Music Industry?, 2025), tapping into the Web3 collector culture.

A big selling point is that Audius is **artist-owned** – the governance is in the hands of artists and node operators who hold tokens, rather than a corporation. Artists also get a much larger share of revenues. While streaming on Audius is free for now (they have not introduced listening fees), the plan is to allow artists to monetize via premium content or token-enabled features. Audius has millions of users, especially after integrating with TikTok (allowing TikTokers to use Audius songs). It shows that a decentralized app *can* achieve relatively mainstream adoption by focusing on a good UX (Audius has a slick, Spotify-like interface). Under the hood, it solves the hard problem of music rights by avoiding the traditional record label system initially – it's mostly independent artists or those who own their rights joining Audius.

For academia or professional publishing, Audius itself might not be directly relevant, but it demonstrates how decentralization can empower creators in an industry (music) and align incentives: artists and fans both have stakes in the network's growth (How Is Audius Decentralizing The Music Industry?, 2025). Translated to scholarly publishing, one could imagine a platform where scientists and readers similarly share tokens in the success of a journal or content repository (akin to stakeholders in Audius). It also highlights tech: IPFS can handle large media files for a global user base if the front-end and incentive structure is done right.

Ujo Music (2017-2018)

Ujo was an earlier, Ethereum-based music platform by ConsenSys that pioneered the idea of **direct artist-to-fan sales** using smart contracts. Ujo famously helped artist Imogen Heap release a song such that each purchase of the song via Ethereum smart contract automatically split the payment between her and her collaborators according to pre-set percentages – demonstrating automated royalty payments. Ujo also worked on a system where each musical work had a record on the blockchain linking all its contributors (songwriters, producers), so that whenever revenue came in, it could be correctly and transparently split. This prototype inspired later NFT marketplaces and music platforms. Ujo eventually shuttered or merged into other ConsenSys projects, but it showed the power of **smart contracts for IP management in music** – which applies to any content. A research paper, for example, could automatically split citation reward tokens or usage royalties between authors, institutions, etc., if an analogous system were in place.

Catalog, Royal, etc. (2020s)

In recent years, a wave of **music NFT platforms** (Catalog, Sound.xyz, Royal) have taken the concept further: artists sell limited edition NFTs of songs or rights. Buyers might get exclusive access, collectible value, or even a share of streaming royalties (Royal does this). These aren't publishing platforms in the traditional sense, but they form **content marketplaces** that use blockchain to create new revenue streams for creators. A parallel in publishing would be selling NFTs of landmark articles or books (some authors have tried selling NFT e-books where the NFT is effectively a digital first edition with special access). Indeed, platforms like **Book.io** (Cardano-based) and **Publica** allow e-books to be sold as unique tokens (Cole 2024). This leads us to e-book publishing.

E-Book and Writing Platforms

Publica (2017-2018)

Publica was an ICO-era project focused on e-books. It allowed authors to tokenize their books as **"book ICOs"**, selling limited edition access tokens or even raising funds to complete a book by pre-selling tokens that would later be redeemable for the e-book. Each book token essentially acted as an e-book license and could be resold by readers (introducing a secondary market for digital books, which isn't possible with traditional Kindle books). The content (the book file) could be stored permanently (for example, on IPFS or a blockchain storage) and only unlocked by holders of the token. Publica successfully facilitated the publication of a few books using this model and demonstrated **smart contracts for crowdfunding literary work**. However, like many ICO projects, it struggled to sustain momentum beyond the initial launches. It was an important innovator in showing how **NFT-like tokens can represent intellectual property rights to books** (Cole 2024).

Book.io (2022-present)

A more recent entrant, Book.io, operates on Cardano (and other chains) and has been actively releasing e-books and even audiobooks as **NFT ePubs**. They emphasize **decentralized encrypted assets (DEAs)** where you truly own the digital book (it's stored in a decentralized way and accessible in their reader app). They've had success with special editions of classic novels and new releases, some of which have resale value in NFT marketplaces. Book.io's approach suggests a future where your e-book library might be a wallet of NFTs, giving you rights that can be transferred or sold, and authors/publishers can even get royalties on every resale via smart contracts (Cole 2024).

Authorship (2017)

Authorship is mentioned as a historical example – it was a platform aiming to connect authors, translators, publishers, and readers directly using the ATS token (Warfield 2017). It promised that token holders (especially authors) would receive monthly earnings and that all transactions (like hiring a translator or selling a book) would use the token (Ross, et al. 2017). Authorship distributed a large number of tokens to authors to encourage adoption. Ultimately, it didn't get far – likely due to overemphasis on the token rather than a compelling platform. Some in the community labeled it a scam or at least a failed ICO (Authorship, n.d.). The idea of a global platform for all publishing roles was grand but maybe too broad. The cautionary tale here is that **simply adding a token to the existing publishing world (with authors, translators, etc.) doesn't automatically solve underlying issues** like finding an audience or producing quality content. However, Authorship did highlight an interesting aspect – the inclusion of translators in the ecosystem. A decentralized platform that incentivizes translating content (research, books, articles) could greatly increase knowledge accessibility, and blockchain could track contributions and ensure translators are paid fairly (even via automated splits like Ujo did for music). So while Authorship seems to have collapsed, future projects could pick up that thread with better execution.

Scenarex (Bookchain)

Scenarex is a company that developed *Bookchain*, a solution for publishers to distribute ebooks via a private blockchain, controlling file access and automating royalties (Cole 2024). It's more of an enterprise application than an open network – a reminder that not all blockchain publishing needs to be on public chains with tokens; some publishers might use permissioned ledgers to get transparency and rights management in-house. It shows the **interest from traditional publishing in blockchain for DRM and royalty tracking**.

Image Rights and Photography

While not exactly "publishing platforms," the image domain saw notable projects: **KodakOne** (mentioned earlier) set out to create a blockchain registry for photographers to track usage of their images and streamline licensing (Blake 2019). It combined crawling the web for unlicensed image uses with a blockchain ledger to handle rights and payments. Despite Kodak's brand, KodakOne's results have been mixed; some reports of limited actual revenues generated (Castor 2019). Another was **Binded (formerly Blockai)**, which let anyone hash an image on Bitcoin to prove they had it at a certain time (targeted at artists for copyright evidence). It ran into a social problem: people started hashing images they didn't own, leading to confusion. The lesson: A blockchain can prove a timestamp but **cannot prove legal ownership** – that still requires a link between the person registering and the actual author. Solutions to that include identity verification or integrating with existing copyright registries.

NFT Marketplaces (OpenSea, etc.)

One cannot ignore the effect of NFT marketplaces on content publishing. While OpenSea, Rarible, etc. were primarily for digital art, they established a template: content as unique tokens that can be traded, with creators receiving royalty payments automatically on each secondary sale. This model is now being applied to everything from tweets (Jack Dorsey famously sold an NFT of his first tweet) to essays (some writers minted their blog posts as NFTs and sold them on OpenSea before platforms like Mirror offered dedicated support). Even social media posts are being tokenized (a protocol called **Valuables let people mint tweets as NFTs). For publishers, the NFT boom showed that people are willing to pay for digital collectibles of content, introducing a potential new revenue source for high-value content (imagine auctioning the NFT of a groundbreaking research paper or a famous newspaper's front page).

However, speculation can overshadow utility – many NFTs are bought for hype rather than support, and the market is volatile.

Archival Projects

Lastly, decentralized archiving deserves mention. Efforts like Arweave's Permaweb have led to archival of entire websites or datasets (e.g., the Arweave News archive that stored articles from outlets fearing censorship). In academic context, one could use Arweave to permanently archive all versions of a scientific paper or the raw data, ensuring it's never lost or altered. IPFS-based archives like IPFS Scholarly Archiving have been proposed to back up papers or even journals in a decentralized way, using blockchain for indexing. The Internet Archive has also experimented with storing some collections on distributed storage. While these are not "platforms" with user interaction, they form the back-end that could guarantee perpetual access to published knowledge, arguably a core goal for scholarly communications.

Comparative Features Table (by platform category)

Category	Platform	Launch Year	Blockchain (+ Storage)	Peer Review	Open Access	NFT / Tokenized Content	Gov Token / DAO	Decent. Storage	Status
Academic	ResearchHub	2020	Ethereum - ERC-20 (RSC)	✅	✅		✅	partial (IPFS links)	✅
Academic	Orvium	2018	Ethereum	✅	✅		✅	partial (off-chain DB + IPFS)	◦ pilot
Academic	Pluto Network	2018	Ethereum (+ IPFS)	✅	✅		✅	✅	◦ dormant
Academic	ScienceMatters	2016	Ethereum	✅	✅		✅	partial	◦ limited
Academic	Scienceroot	2018	Native PoS chain	✅	✅		✅	✅	❌
Academic	ARTiFACTS	2018	Ethereum / Bitcoin		✅			✅	◦ niche
Academic infra	DAP	2022	HashNET (+ IPFS)	✅	✅		✅	✅	◦ R&D
Auth/News plugin	WordProof	2019	EOS / Telos		✅			✅	✅
Blogging	Steemit	2016	Steem (DPoS)		✅		✅	on-chain text	✅
Blogging	Hive	2020	Hive (DPoS)		✅		✅	on-chain text	✅
Content licensing	Po.et	2017	Bitcoin⇒Ethereum		✅		✅		❌
E-books	Publica	2017	Ethereum			✅	✅	IPFS	❌
E-books	Book.io	2022	Cardano + Polygon		✅	✅	✅	✅	✅
E-books	Authorship	2017	Ethereum (ATS)			✅	✅		❌
Journalism	Civil	2017	Ethereum (CVL)		✅		✅	partial (IPFS)	❌
Journalism	PUBLIQ	2018	Custom PBQ chain		✅		✅	✅	❌
Micro-blog	Twister	2014	BTC-style + BitTorrent		✅			P2P storage	◦ hobby
Music	Audius	2019	Solana (+ IPFS)		✅	✅	✅	✅	✅
Social graph	Lens Protocol	2022	Polygon (+ IPFS)		✅	✅	(token pending)	✅	dev
Social L1	DeSo (BitClout)	2021	DeSo chain		✅	✅	✅	on-chain DB	✅
Social network	Minds	2015	Ethereum ERC-20		✅		✅	hybrid	✅
Transcoding infra	Livepeer	2017	Ethereum / Arbitrum				✅	off-chain segments	✅
Version control	Manubot	2017	Git + optional chain anchor	✅	✅			✅	✅
Video	LBRY / Odysee	2016	LBRY chain (+ P2P)		✅		✅	P2P blobs	✅
Video	DTube	2017	Avalon (+ IPFS)		✅		✅	✅	✅
Video infra	Theta Network	2018	Theta L1			(NFT DRM)	✅	edge nodes	✅
Web3 publishing	Mirror.xyz	2021	Ethereum / Arweave		✅	✅	✅	✅	✅
Web3 publishing	LikeCoin	2018	Cosmos (+ IPFS/Arweave)		✅	✅	✅	✅	✅
Web3 publishing	Paragraph.xyz	2022	Ethereum / Arweave		✅	✅	✅	✅	✅

Table 3: *Comparative features of selected decentralized publishing platforms.* We see a spectrum from fully decentralized public blockchains to more permissioned or hybrid models, and a variety of incentive systems.

Evolution of Decentralized Publishing: Launch Trends by Category (2014 – 2022)

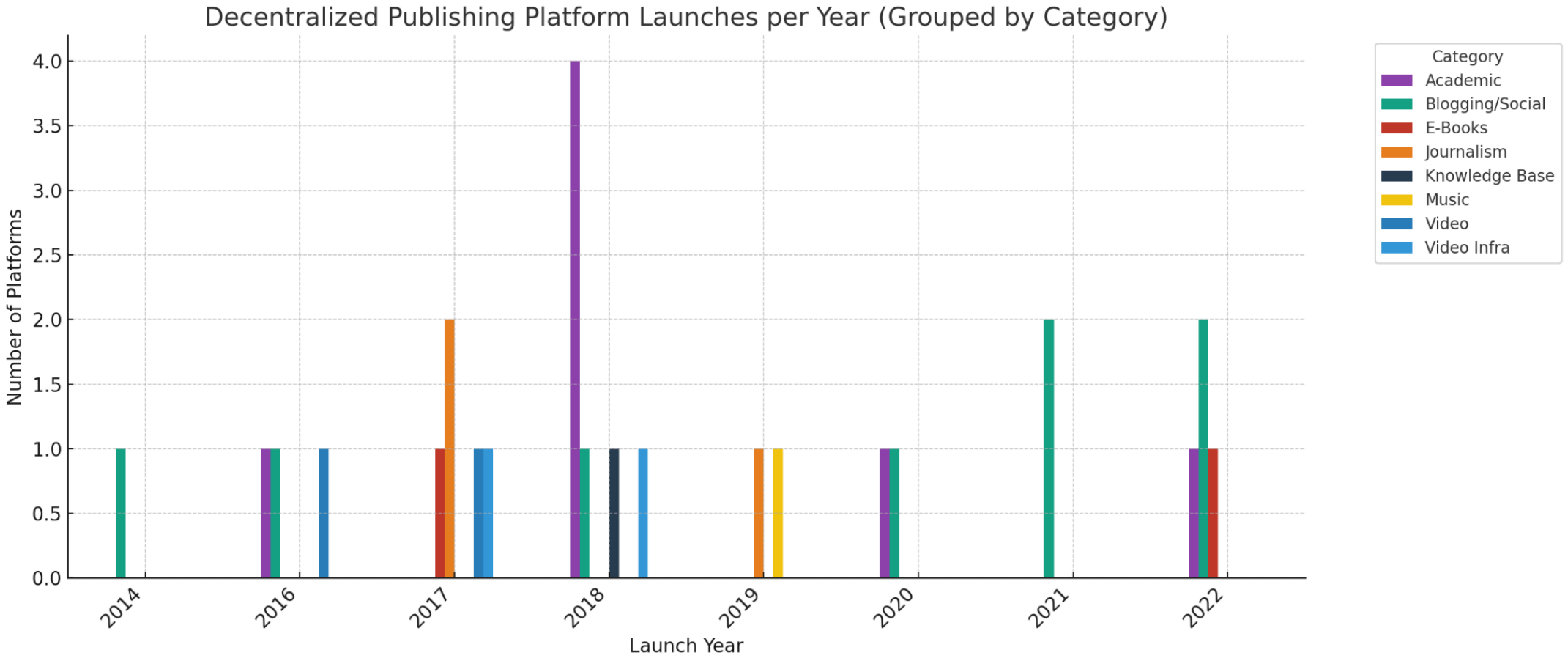

Figure 2: *Decentralized Publishing Platform Launches (2014–2022), Categorized by Content Type*. The chart highlights the number and diversity of new platforms introduced each year, showing a peak in launches around 2018 and a resurgence in recent years driven by blogging/social and academic publishing projects.

What the grouped-bar timeline tells us at a glance

Period	Observation	Interpretation / Implications
Early experiments (2014 – 2016)	Only a handful of launches—Twister (2014) and Steemit/LBRY (2016)—focused on social blogging and video.	These projects tested token-rewards and P2P storage before the big ICO wave. They served as proof-of-concept for content monetisation and permanence.
ICO-era surge (2017 – 2018)	Notice the spike in 2017-18, with bars representing **six distinct categories**. Academic (Orvium, Scienceroot), Journalism (Civil, Po.et), E-Books (Publica), and multiple video solutions all appear in this window. 2018 alone shows the tallest bar in almost every colour.	The combination of ICO funding and rising gas prices pushed many teams to launch quickly. The diversity hints at broad optimism, but also at fragmentation—several 2017-18 entrants (Civil, Scienceroot, Po.et, Publica) later went dormant or folded.
Correction & consolidation (2019)	Launch count drops sharply; only three new projects (Audius, WordProof, and a Journalism entry) appear.	Post-ICO hangover: funding dried up, and builders began focusing on usability rather than token sales. Projects that did launch (Audius) emphasised mainstream UX and have remained active.
Resurgence with Layer-2 and DeFi tailwinds (2020 – 2022)	A second rise, but now dominated by **Blogging/Social** (green bars) and a new academic cohort (ResearchHub, DAP). NFT-ready e-book (Book.io) and Layer-2-friendly social tools (Paragraph.xyz, Lens) land in 2022.	Lower fees on Polygon, Arweave and Cardano, plus DeFi/NFT literacy, enabled consumer-grade UX. Rather than pure token rewards, these platforms lean on NFTs, revenue splits, or DAO governance.
Category evolution	*Academic* launches show two waves: 2018 (token-centric experiments) and 2020-22 (open-science, bounty-driven, or funded by EU programmes). *Blogging/Social* sees the most consistent activity (2016, 2018, 2020-22). *Video & infra* entries cluster 2016-18, then plateau—indicating capital-intensive nature and longer runway requirements.	Academic segment is maturing toward pragmatic, hybrid models; social/blogging continues iterative growth; heavy-infra categories stabilise once a few robust networks (Theta, Livepeer) emerge.

Key Takeaways

1. **2018 remains the inflection-point year**: highest diversity and volume, but also highest attrition—illustrating that hype cycles spawn experimentation but also unsustainable models.

2. **Platform survival correlates with UX and community fit** rather than launch timing alone: Audius (2019) and Mirror (2021) thrive despite downturns because they abstract crypto complexity and integrate with creator workflows.

3. **Recent wave skews toward NFT-enabled publishing** (Book.io, Mirror, Lens) and DAO-governed knowledge sharing (ResearchHub, DAP), emphasising monetisation flexibility over speculative ICO economics.

4. **Academic sector shows renewed momentum** as institutional grants and DeSci funding replace ICO funding, suggesting longer-term viability for mission-driven scholarly platforms.

These patterns reinforce the report's recommendation to **adopt incremental decentralisation, focus on user value, and align incentives with real-world workflows** rather than purely on token supply and speculation.

Actionable Insights and Recommendations

Drawing from the successes and failures above, here are **practical insights for developing future blockchain-based publishing platforms**, with a focus on scholarly and professional use cases:

1. Align with User Incentives and Workflows

One clear lesson is that **technology must meet users where they are**. In academia, for example, researchers care about recognition, impact factor, and career advancement. A decentralized platform will gain traction only if it helps them achieve those (or analogous) goals more efficiently. This could mean: integrate with ORCID and university systems, issue **verifiable badges or DOIs for content** on the blockchain so that works published via the platform count in CVs, and ensure open access content is indexed by Google Scholar. Orvium's challenge integrating with traditional journals shows the need to either bridge to existing systems or provide equivalent prestige.

For journalism and blogging, the **onboarding experience** must be seamless. Civil's failure due to token complexity (Leighninger 2024) suggests not requiring users to handle crypto upfront. Consider models like *Mirror* that subsidize gas fees (via meta-transactions) so users can mint NFTs without owning ETH, or *Publish0x* that rewards without requiring any purchase from readers. Offering familiar Web2 login options that internally create a crypto wallet (and educating users gradually) can lower barriers.

Incentives should be clearly tied to platform utility. If you introduce a token, **define its role crisply**: e.g., "use this token to access content or vote on curation decisions." Avoid vague utility that can shift (Po.et changing token narratives hurt trust (Das 2020)). Alternatively, you might not need a new token – using existing crypto (ETH, stablecoins) can simplify things unless a bespoke token is crucial for governance or reward distribution.

2. Focus on Content Ownership, Portability, and Persistence

A core promise of blockchain in publishing is to give creators and readers more ownership. This means designing the system such that if your platform's front-end disappears, the content and social graph should live on, as happened with Steemit to Hive migration (Dalton 2020). **Use decentralized storage (IPFS, Arweave, Filecoin) for the content** itself, and store the important metadata (ownership, integrity hashes, permission info) on-chain.

For scholarly content, permanence is vital: researchers want assurances their work will be accessible decades later. Solutions like Arweave (with its one-time upload fee for perpetual storage) or distributed replication via IPFS and incentivized pinning could be advertised as a feature: *"Publish your paper such that it can never be taken down or lost."* This appeals to academic values of knowledge preservation. Likewise, ensure there's a way to export or mirror all data in standard formats. A researcher who publishes on a decentralized journal should be able to easily archive it in their institutional repository or personal website (perhaps the blockchain record could double as an official timestamp for that archive copy).

Portability of identity and reputation is also key. Consider integrating with decentralized identity (DID) standards or at least enabling users to control a domain or identity token that represents them. For example, an academic could use their ENS (Ethereum Name Service) name or a DID as their author ID across platforms. This reduces dependency on any single platform and fits the Web3 ethos of user-owned identity.

3. Implement Gradual Decentralization and Hybrid Models

Not everything must be on-chain from day one. In fact, a fully on-chain approach can be costly and slow (imagine requiring a blockchain transaction for every peer review comment – probably overkill). Instead, **identify which parts of the workflow benefit most from decentralization** and start there. For instance, *timestamping submissions and reviews* (for trust and transparency) can be on-chain (Manna 2024), but the reviews themselves could be stored off-chain (or on IPFS) with the hash on-chain. Payments can be automated with smart contracts, but maybe user accounts are managed in a familiar web database with the option to link a wallet later.

This incremental approach is seen in practice: e.g., many platforms keep content in databases or IPFS and use blockchain for tokens and hashes – a pragmatic compromise. As technology improves (scalability, cheaper transactions), more can be moved on-chain or to decentralized protocols.

Also, consider a **consortium or permissioned blockchain for certain communities**. The Frontiers in Blockchain paper suggested a consortium model for academic publishing, where universities or libraries run the nodes (Mackey, et al 2019). This could alleviate concerns about public network volatility and allow governance by known stakeholders (universities, societies) while still providing transparency and immutability. For example, a group of libraries could operate a blockchain to manage a shared open access repository, ensuring no single library could alter records unilaterally. This is still decentralized (multi-party control) but likely more acceptable to conservative institutions than a completely open network governed by unknown token holders.

4. Embrace Community Governance, but Carefully Design It

Decentralized governance is powerful – it gives users a voice and stake – but it must be designed to avoid apathy, plutocracy, or confusion. Lessons from Civil and Steem show extremes: Civil had trouble getting everyday people to participate in complex decisions (Leighninger 2024), while Steem fell victim to a few large token holders colluding (Dalton 2020). For future platforms:

- **Simplify governance UX:** If you expect users to vote on content or disputes, integrate it seamlessly. E.g., a reviewer might click “flag this as plagiarized” and behind the scenes that action stakes some reputation or tokens that trigger a vote – without them dealing with transaction mechanics. Provide **education and clear stakes** for voters (what does it mean if you vote wrong? how do you benefit from voting right?).

- **Mitigate token whale dominance:** Consider quadratic voting (diminishing influence of large holders), or reputation-weighted voting where contributing content or reviews gives non-transferrable points that influence decisions. Or separate financial and governance tokens. Hive’s fork was one solution (community fork to escape a whale), but designing governance to prevent needing such drastic measures is better.

- **Gradual decentralization in governance:** Early on, maintain some trusted moderation or oversight (even a multi-signature council) to handle abuse or critical updates, with a plan to phase out as the community grows competent. Many DAOs do this: launch with a foundation or core team holding veto power, and slowly transition to full community control. And most notably, Cardano has recently successfully transitioned to community-governance as well, albeit with ongoing debate around the constitution at time of writing. Academics especially might be wary of pure mob rule deciding what research gets visibility; a transitional model where, say, an editorial board DAO curates content with community input might strike a balance.

- **Incentivize positive participation:** Much like miners/proposers get block rewards, consider rewards for governance actions – e.g., **bounties for reviewing content** (Civil planned something like this for fact-checkers), or token/credit for voters who sided with the majority in a content dispute (assuming majority is proxy for correct outcome). But be cautious to avoid incentivizing **only popularity** – ensure diverse views and minority protections in governance (perhaps a bicameral model: token holders and content creators both have to approve a change).

5. Leverage Smart Contracts for Automated Workflows

One of blockchain’s biggest advantages is automating trust-heavy processes. In publishing, think of all the royalty splits, license restrictions, and access controls that are handled by publishers and societies. Smart contracts can make these instantaneous and transparent:

- **Automatic royalty and revenue sharing:** As demonstrated by Ujo Music and Mirror’s splits, dividing revenue among authors, co-authors, reviewers (if a model arises where reviewers are paid by article downloads or something) can be done in code (Warfield 2017). This ensures everyone is paid fairly and immediately when value is generated (be it a sale of an e-book NFT, or a grant that’s released to authors and reviewers based on performance milestones, etc.). Implementing this removes a huge administrative overhead and builds trust (no more opaque publisher accounting).

- **Conditional access and usage rights:** NFTs or other on-chain tokens can encode *graduated* access models that mirror these realities. A smart-contract could mint multiple licence tokens for the same article:

    - **Premium-access token** – lets holders read the full text immediately (analogous to a high-tier journal subscription).

    - **Embargoed token** – sold at a lower price; it decrypts the article only after a six-month delay, matching today's discounted "delayed access" agreements.

    - **Open-access release** – the contract can automatically flip the article to universal OA once the funder-mandated period elapses, or instantly if an APC-backed *OA-NFT* is purchased.

  Because the embargo logic lives in an immutable contract, libraries and funders gain provable guarantees that the publisher cannot quietly extend or ignore embargoes, and authors can satisfy zero-embargo policies without manual policing.

- **Proof-of-Integrity and audit trails:** Use smart contracts or blockchain logs to record every step: submission, revisions, acceptance. Perhaps use hashing of documents to allow anyone to verify no tampering occurred post-peer-review. This creates an **audit trail** that can deter malpractice (like editors unfairly rejecting, or authors claiming priority falsely). For instance, each submission could immediately get a blockchain timestamp – as *Ledger* journal did – so even if unpublished, the existence of that work at a certain date is proven (Leighninger 2024).

- **Micropayments and tipping:** Encourage broader participation by integrating microtransactions where appropriate. E.g., allow readers to tip an author $1 worth of crypto if they found a blog helpful – trivial in Web3 (Lightning Network for Bitcoin or layer-2 for Ethereum) but meaningful as a feedback and incentive mechanism. This was effectively done by platforms like Yours.org on Bitcoin Cash.

6. Address Regulatory and Ethical Considerations Early

As seen with LBRY and potentially others, **tokens can attract regulatory scrutiny** if not structured properly. For future platforms, consider:

- If launching a token, avoid positioning it purely as an investment; emphasize utility (governance, access, rewarding work done) and ensure decentralization of its distribution (e.g., earn tokens by contributing, rather than only via sale). This may help it be seen more like a community currency than a security.

- Be mindful of content liability and moderation. Decentralization doesn't mean anarchy – illegal content (e.g., hate speech, libel, piracy) can create legal trouble. Platforms should have a content policy and a way to enforce it (perhaps via community moderation or a DAO-led moderation team). **Content-addressable storage (like IPFS)** means the platform front-end can choose not to index certain hashes (effectively "hiding" banned content from the UI), even if the network can't erase it. This is similar to how Hive or Minds handle moderation – leave content on-chain but make its visibility and discovery subject to community rules. This approach should be communicated to users (to manage expectations about "censorship-resistant" – some think it means everything goes, but in practice communities often choose to moderate to keep quality and legality).

- **Privacy:** Not all content or interactions should be public. Especially in academic peer review, anonymity can be important. Consider using techniques like zero-knowledge proofs or keyed encryption for certain data on-chain. For example, a review could be hashed on-chain, with the plaintext only revealed if certain conditions are met (like after publication or via a secret key for authorized people). Or use a mix of on-chain and off-chain: record that a review happened and maybe a hash of it, but keep the content off-chain accessible through permissions. Lens Protocol's approach to allow encrypted posts to followers only is an interesting development in this area. Also, if building on a public chain for academic content, be aware that authors might not want rough drafts publicly visible; maybe only post a hash until it's accepted.

- **Interoperability and open standards:** Use or contribute to standards (schema.org for metadata, JATS for article content, ISCN for content identifiers, etc.) so that your platform's content can plug into the wider information ecosystem. This will make it easier for libraries, archives, or other platforms to adopt or mirror your content, which is

especially important for scholarly communication (where longevity and cross-indexing are important). It also prevents lock-in and aligns with academic openness values.

7. Cultivate Communities and Network Effects

Lastly, the social aspect: many failed platforms had the tech but not the people. Building a community of creators *and* consumers is essential. This might mean starting with a niche community that has strong reasons to try decentralized publishing – e.g., researchers in developing countries locked out of expensive journals (they might embrace a token-based open access journal if it gives them reach), or independent journalists who lost trust in corporate media (they might try a tokenized co-op). Show early success stories in those niches to attract others. Civil's approach of funding some newsrooms was smart (Hayward 2020) – the content draws readers, which could drive token demand. Similarly, an academic platform might sponsor a few high-profile open access publications to draw attention.

Encourage collaboration with existing institutions: maybe a university press pilots your system for a new journal, or a media outlet uses your protocol for a content section. That both validates the model and seeds initial users.

Also, use the **network effect of Web3 itself**: integrate with other decentralized platforms. For example, allow content to be easily shared to Lens social apps for discovery, use NFTs that can trade on common marketplaces for extra visibility, partner with storage networks like Arweave (as Mirror did) so content is automatically part of a larger permaweb. Composability is a strength – maybe an academic article on your platform could be minted as an NFT on OpenSea to reach collectors or institutional libraries that want to own a "first edition". Or a podcast published via your platform could leverage Audius for streaming, etc.

Insights Summary

In summary, the next generation of blockchain publishing platforms should **blend technological innovation with user-centric design and integration**. They should address real pain points (cost, delay, trust, censorship) with decentralization in a way that *feels natural* to the user. By learning from the pioneering efforts detailed in this report – adopting their successes (e.g. Steemit's effective incentives (Dalton 2020), Mirror's seamless NFT integration (Mirror Development 2022), Lens's data ownership (Kakar 2022)), and avoiding their missteps (Civil's onboarding woes (Leighninger 2024), Po.et's unclear token (Das 2020), Narrative's lack of growth) – developers and stakeholders can build platforms that truly empower creators and consumers of content.

The overarching vision of decentralized publishing is **democratizing the creation and dissemination of knowledge and art**: to ensure content creators are fairly rewarded, content consumers have greater choice and trust, and valuable information remains accessible and tamper-proof. With careful design and community engagement, blockchain-based platforms can increasingly fulfill this vision, complementing or even transforming the legacy publishing industries in academia, journalism, and beyond.

How Cardano Aligns with These Recommendations

The Cardano blockchain offers a uniquely suitable foundation for implementing many of the decentralized publishing practices and innovations outlined in this report. Its architecture, governance philosophy, and ongoing ecosystem initiatives are closely aligned with the report's actionable insights:

- **Low-Cost, Sustainable Infrastructure**: Cardano's proof-of-stake model offers high scalability and low transaction fees, making it ideal for microtransactions involved in content tipping, peer review rewards, or NFT-based publishing. This directly supports use cases like affordable access to journals, reader micropayments, and on-chain academic artifact tracking.

- **Native Token Support & Metadata Standards**: Cardano natively supports custom tokens and NFTs without requiring smart contracts. The evolving standards around **CIP-25, CIP-68, and CIP-721** provide robust structures for embedding publishing-relevant metadata. These standards are well-suited for tokenized books, journal submissions, and identity-linked review records.

- **On-Chain Governance and Community Funding**: With **Project Catalyst**, Cardano has pioneered a community-governed treasury system that can directly fund decentralized publishing experiments. Proposals in the DeSci and digital identity space have already received support, providing a natural ecosystem for academic and publishing-focused innovation.

- **Decentralized Identity Integration**: The **Atala PRISM** identity framework supports W3C-compliant decentralized identifiers (DIDs) and verifiable credentials. This aligns with the report's call for identity-aware peer review, reputation systems, and contributor recognition.

- **Existing Publishing Initiatives on Cardano**: Platforms like **Book.io** have already demonstrated NFT-powered e-book publishing with royalties and scarcity embedded into smart contracts. These real-world implementations validate many of the report's concepts, such as digital ownership, secondary market royalties, and long-term content preservation.

- **Research-Driven and Standards-Focused**: Cardano's origin in peer-reviewed research and its commitment to formal methods make it a strong philosophical match for the academic community. Efforts in open metadata standards, formal governance models, and interoperability frameworks resonate with the report's push for infrastructure-level collaboration.

In short, Cardano is not just technically viable but culturally and strategically aligned with the decentralized publishing movement. Stakeholders interested in implementing the recommendations in this report should seriously consider Cardano as both a technological foundation and a funding and governance ecosystem capable of supporting scalable, equitable, and open publishing solutions.

Looking Ahead: Toward the Future of Decentralized Publishing

Unlocking Future Potential: Publishing as the Next Frontier in Web3

As the chart in Figure 3 illustrates, decentralized publishing currently represents a **minority share—typically 1–2% or less—of activity across major blockchain ecosystems**. DeFi and GameFi dominate the developer landscape on networks like Ethereum, Solana, and Polygon, while only a handful of publishing-focused projects (e.g., Mirror, ResearchHub, Lens Protocol) have reached significant scale. This imbalance should not be seen as a limitation, but as a signal of opportunity.

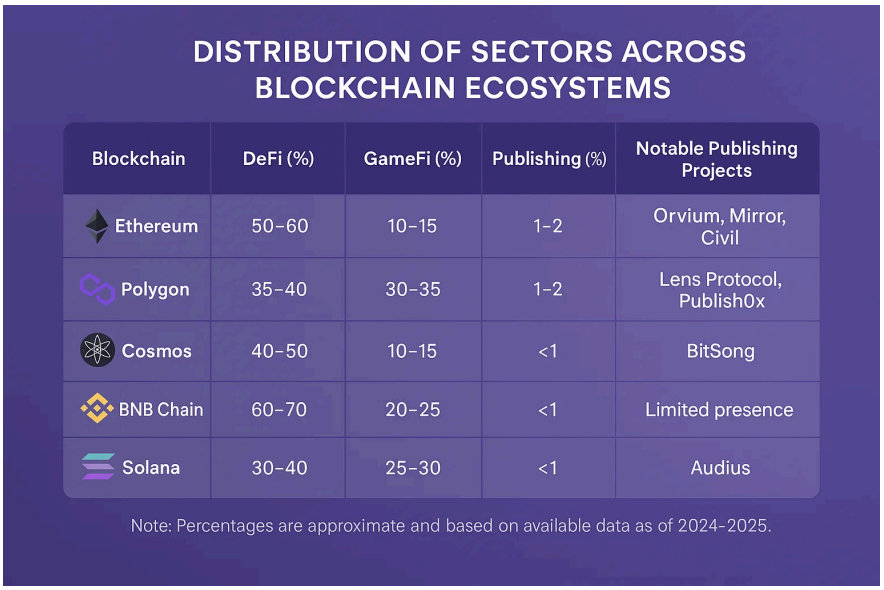

Figure 3: *Distribution of Sectors Across Blockchain Ecosystems (2024–2025).* While publishing represents a small fraction of activity on major chains today—typically <2%—this signals not saturation but **opportunity**. With much of blockchain innovation focused on DeFi and gaming, decentralized publishing remains an undervalued domain, poised for growth as creators, researchers, and institutions seek trustless, transparent alternatives to traditional publishing.

Publishing infrastructure is foundational to the knowledge economy. It touches academia, journalism, the creator economy, and open-source software development. And yet, in Web3, it remains underfunded, underdeveloped, and largely fragmented. There is a critical gap between the **growing demand for decentralized knowledge sharing** and the **infrastructure available to support it.**

Bridging that gap requires:

- **New primitives** for attribution, access control, and content licensing. Smart contracts offer granular, enforceable rulesets that could power embargoes, royalties, and access tiers.

- **Better identity-layer integration**, especially for researchers, educators, and journalists. Projects like Atala PRISM or ORCID-integrated wallets can unlock trust and verification in publishing.

- **Alignment with funder mandates and institutional goals.** Many public and academic funders now require open access. Decentralized tools can automate compliance and auditability.

- **Investment in composable, interoperable tools.** Publishing doesn't need to reinvent storage, identity, or curation—it needs to plug into the emerging open Web3 stack and focus on usability.

As decentralized science (DeSci), open-source IP markets, and creator-focused ecosystems grow, **publishing will be the connective tissue** between ideas, people, and permissionless value flows. The time to invest in it is now.

The decentralized publishing movement is still in its early stages, but its foundations are strong. Across academia, journalism, creative media, and community-led knowledge production, there is a growing appetite for solutions that return control to creators, reward contribution transparently, and ensure long-term preservation of public knowledge. Blockchain, as a technology and philosophy, is uniquely well-suited to meet these needs. Yet technology alone isn't enough—broad adoption will depend on building intuitive interfaces, seamless integrations, and values-aligned governance models that earn the trust of real users.

Now is the time for pragmatic experimentation. Libraries, universities, funding bodies, independent creators, and decentralized technology developers must work together to prototype, test, and refine these new models. Platforms should be designed with interoperability and extensibility in mind—able to plug into existing academic and publishing ecosystems, while building toward a more open, robust, and participatory future. The vision is within reach: a knowledge economy where publishing is open by default, attribution is verifiable, incentives are aligned with quality, and no knowledge is lost to censorship, obsolescence, or profit-driven gatekeeping.

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Appendix

Platform landscape overview (by thematic category)

Platform	Type	Description	Link	Launch Year	Blockchain Used	Thematic Category
ScienceMatters	Academic Journal	Single-observation journal with token-based reviews	https://sciencematters.io/	2016	Ethereum	Academic
Manubot	Version Control	Git-based collaborative writing with blockchain anchoring	https://manubot.org/	2017	Git (with optional blockchain)	Academic
Orvium	Academic Publishing	Open-source scholarly publishing with peer review	https://orvium.io/	2018	Ethereum	Academic
Pluto Network	Academic Publishing	Research repository and peer review platform	https://pluto.network	2018	Ethereum	Academic
ARTiFACTS	Academic Provenance	Timestamping and citation of research artifacts	https://www.artifacts.ai/	2018	Ethereum/Bitcoin	Academic
Contentos	Content Ecosystem	Decentralized video content and dApp infrastructure	https://contentos.io	2018	Custom chain	Academic
ResearchHub	Academic Publishing	Token-incentivized scientific platform with open peer review	https://www.researchhub.com/about	2020	Ethereum (ERC-20 RSC)	Academic
DAP	Academic Publishing Infra	EU-funded decentralized peer review infrastructure	https://www.dap.irb.hr	2020	HashNET	Academic
PubWeave	Academic Publishing	Decentralized peer-reviewed academic publishing system with smart-contract-based funding	https://pubweave.com	2022	Cardano / Arweave	Academic
DeSo	Social Media	Creator coins and decentralized social graph	https://deso.com	2018	Binance Chain	Content Ecosystem
Publica	E-Books (ICO)	Early e-book tokenization platform	https://publica.com	2017	Ethereum	E-Book & IP Publishing
Book.io	E-Books (NFT)	NFT e-book publishing and resale	https://book.io	2022	Cardano/Polygon	E-Book & IP Publishing
Civil	Journalism	Community-governed newsroom platform (defunct)	https://joincivil.com	2017	Ethereum	Journalism
Po.et	Media Licensing	Content timestamping and licensing (defunct)	https://po.et	2017	Bitcoin/Ethereum	Journalism
Popula	Journalism	First news article published on Ethereum	https://popula.com	2018	Ethereum (w/IPFS)	Journalism

Platform	Type	Description	Link	Launch Year	Blockchain Used	Thematic Category
Scienceroot	Academic Research Network	Blockchain funding + publishing (defunct)	https://scienceroot.com	2018	EOS	Knowledge Base
Paragraph.xyz	Web3 Newsletters	NFT-gated publishing and community building	https://paragraph.xyz	2014	Bitcoin	Microblogging
Audius	Music Streaming	Creator-owned decentralized music platform	https://audius.co	2017	LBRY	Music
Ujo Music	Music Royalties	Smart contract-based music rights (defunct)	https://ujomusic.com	2019	Ethereum/Solana	Music
Livepeer	Video Transcoding	Decentralized transcoding protocol	https://livepeer.org	2015	Ethereum (ERC-20)	Social
Minds	Social Media	Free speech-focused crypto social network	https://www.minds.com	2021	Custom (DeSo)	Social
Everipedia / IQ.wiki	Knowledge Base	Blockchain encyclopedia and content governance	https://iq.wiki	2018	Ethereum (w/IPFS)	Social Publishing
Odysee	Video Sharing	Front-end for LBRY video platform	https://odysee.com	2017	Steem (w/IPFS)	Video
Theta Network	Video Infrastructure	Decentralized video streaming network	https://www.thetatoken.org	2017	Ethereum/Arbitrum	Video
DTube	Video Sharing	IPFS + blockchain video platform	https://d.tube	2018	Theta	Video
LBRY	Video Sharing	Blockchain-based video protocol	https://lbry.com	2020	LBRY	Video
Steemit	Blogging	Reward-based blogging platform with DPoS	https://steemit.com	2016	Steem	Web3 Blogging & Publishing
LikeCoin	Metadata Infrastructure	Content registry with tipping and provenance	https://like.co	2018	Cosmos	Web3 Blogging & Publishing
Web3Press	Blogging Plugin	WordPress-to-NFT publishing via LikeCoin	https://w3press.io	2018	Cosmos	Web3 Blogging & Publishing
Mirror.xyz	Web3 Publishing	NFT and crowdfunding-enabled publishing	https://mirror.xyz	2020	Ethereum/Arweave	Web3 Blogging & Publishing
Hive	Blogging	Community-driven fork of Steemit	https://hive.io	2020	Hive	Web3 Blogging & Publishing
Matters	Journalism	LikeCoin-based East Asian journalism/blogging	https://matters.town	2020	Cosmos/LikeCoin	Web3 Blogging & Publishing
Lens Protocol	Social Graph	Composable NFT-based social graph platform	https://lens.xyz	2022	Polygon	Web3 Blogging & Publishing
Akasha	Social Publishing	Ethereum + IPFS-based publishing	https://akasha.org	2022	Ethereum	Web3 Blogging & Publishing
Twister	Microblogging	Bitcoin + BitTorrent-powered microblogging	http://twister.net.co/	2022	Cosmos	Web3 Blogging & Publishing