Project Liberty Institute & Decentralization Research Center

How Can Data Cooperatives Help Build a Fair Data Economy?

Laying the Groundwork for a Scalable Alternative to the Centralized Digital Economy

July 2025

Project Liberty Institute //

DRC Decentralization Research Center

Disclaimer

This report is based on a series of interviews that took place between November 2024 and January 2025, and a workshop held at Georgetown University with over 38 co-op and data co-op leaders and experts. It re-evaluates how data is understood and governed, outlines a range of cooperative and hybrid use cases across sectors, and maps out complementary models with the ultimate objective to provide a scalable alternative to the current centralized digital economy. While every effort has been made to faithfully reflect all input received, it should be noted that the views expressed herein are those of the Project Liberty Institute and the Decentralization Research Center, and they may not necessarily align with the individual positions of the expert contributors listed below or the organizations with which participants of the first consultations are affiliated.

Please cite as: Nicole, S., Vance-Law, S., Spelliscy, C., Bell, J. (2025, July). "How Can Data Cooperatives Help Build a Fair Data Economy? Laying the Groundwork for a Scalable Alternative to the Centralized Digital Economy." Project Liberty Institute & Decentralization Research Center.

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About Project Liberty Institute

Project Liberty Institute is a 501(c)(3) organization that serves as an international meeting ground for technologists, policymakers, entrepreneurs, investors, academics, civil society, and governance experts. Its mission is to advance responsible governance and evidence-based innovation across entrepreneurship, infrastructure, and capital allocation, shaping frameworks for how we design, invest in, deploy, and govern new technologies. The Institute supports timely, actionable research on digital technology and responsible innovation. Its academic partners include Stanford University, Georgetown University, Harvard, MIT and other leading institutions.

Central to Project Liberty Institute's mission is the stewardship of the Decentralized Social Networking Protocol (DSNP), a public-interest infrastructure protocol available as a public utility. DSNP supports a new era of innovation that empowers people over platforms and serves the common good.

Through its multifaceted approach, Project Liberty builds solutions to help people reclaim control of their digital lives, fostering voice, choice, and stake in a better internet.

DRC Decentralization Research Center

About Decentralization Research Center

The Decentralization Research Center (DRC) is a 501(c)(4) social welfare non-profit that advocates for decentralization as a fundamental characteristic of emerging technologies. This includes the development of blockchain protocols and applications that are immutable, censorship-resistant, transparent, secure, and enable data self-sovereignty.

The DRC's mandate is to connect stakeholders and create opportunities for innovators to collaborate, gain momentum, and guide the ownership, governance, and regulation of emerging technologies towards decentralization.

To create a more equitable future, we must ensure that the next wave of innovation is underpinned by principles of broad participation, fair reward distribution, and decentralized control. The DRC stands committed to working with industry, academia, and policymakers to help shape this future.

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Foreword

2025 marks the United Nations' International Year of Cooperatives,[1] an opportunity to recognize the enduring impact of cooperatives around the world and to reimagine their role in shaping the digital future. At a time when data extraction, platform consolidation, and advances in artificial intelligence are accelerating, cooperatives offer a powerful alternative: distributed, community-led models that prioritize shared value.

This report explores how cooperatives can help address one of the most pressing challenges of the digital era: a Fair Data Economy.[2] How can we return value to the people, communities, and organizations that generate data? And how can we ensure individuals have a voice, a choice, and a stake in their digital lives?

Developed through a series of expert and practitioner consultations combined with real-world case studies, this report brings together insights from cooperative leaders, technologists, academics, and policy experts. A cornerstone of this effort was a **workshop** co-hosted by Project Liberty Institute and the Decentralization Research Center at the McCourt School of Public Policy at Georgetown University, which opened the 2025 Decentralized Tech Summit in Washington, D.C. Over 40 experts and practitioners from cooperative founders to data economy innovators, convened to respond to preliminary findings released earlier that year and to shape a shared vision for the future of data cooperatives.[3]

That vision builds on the deep and long-standing traditions of the cooperative movement. For over 150 years, cooperatives (co-ops) have provided an alternative to investor-owned firms, aligning economic resilience with community needs. Yet despite their success, cooperatives have been slower to gain traction in the digital economy. This report examines how that is changing, highlighting a diverse set of models, from cooperative and hybrid approaches being tested today, to startups and digital platforms, as well as legacy co-ops experimenting with new infrastructure and legal frameworks.

This report is designed to bridge a gap between digital literacy and co-op literacy. To further this effort, we are growing a data cooperative action network, composed of individuals and organizations ready to share, experiment, research, and build together. Indeed, if empowered with meaningful rights and agency, individuals can drive innovation and help expand more just and inclusive digital systems.

Along with this report, we are committed to actions that inform, inspire, and catalyze meaningful movement toward cooperative data futures. For way too long, we have heard how powerful it would be to have a data economy centered around people. It is time to examine a concrete path forward.

Sheila Warren
CEO, Project Liberty Institute

1. United Nations. (2024, June). "UN General Assembly announces launch of the 2025 International Year of Cooperatives."

2. Fehlinger, P., Bell, J., McBride, C., Farrell, M. (2024, November). "Toward a Fair Data Economy: A Blueprint for Innovation and Growth."

3. Nicole, S., Vance-Law, S., Spelliscy, C., Bell, J. (2025, January). "Towards Data Cooperatives for a Sustainable Digital Economy."

Executive Summary

Conceived as a continuation of the preliminary observations and considerations for practical data governance solutions,[4] this report offers a critical re-evaluation of what data is and how it is valued. It argues that this question is central to addressing the root dynamics of today's highly centralized digital economy. By challenging the prevailing model that treats data as a commodity to be extracted and optimized for profit, the report makes the case for recognizing data as a collective resource, one that calls for governance models built on accountability, participation, diversity, and shared benefit.

Cooperatives offer a structural match for this alternative vision. Their principles, including democratic control, shared ownership, and member benefit, align closely with the nature of data and the need for more equitable data governance. Rather than scaling up single dominant platforms, cooperatives enable many smaller, community-anchored initiatives to scale out, responding to specific needs, contexts, and values.

This report serves as both a resource and a practical guide for founders, entrepreneurs, and organizations who are exploring better redistributing models and community-led approaches to data. It includes case studies, authored by their own founders and executive leaders, from across sectors: from legacy cooperatives in agriculture and finance, to emerging data cooperatives focused on digital art and online browsers. These examples range from long-established institutions to brand-new experiments, illustrating the flexibility and adaptability of cooperative approaches in the data economy.

Importantly, the report does not suggest a one-size-fits-all solution, or that every organization must fully convert into a cooperative. Instead, it highlights a growing space of hybrid models and multistakeholder structures that allow organizations to adopt cooperative elements where and when it makes sense. This is especially relevant in the context of data, where collective governance and consent can be implemented in modular, evolving ways.

Cooperatives are not the only model fit to provide an alternative to the current centralized data economy. This report also examines the benefits and challenges of complementary approaches such as data commons, data trusts, DAOs, and data unions, that can work alongside or complement cooperatives to build a fair data economy. Together, these models offer not just critique but real, working alternatives that can shift how data is governed, valued, and used in practice.

Finally, to grow and scale, these cooperative and community-rooted models need policy support. Rather than relying solely on reactive regulation, policymakers should enable viable alternatives, starting by recognizing cooperatives as a credible, scalable model for the data economy.

4. Nicole, S., Vance-Law, S., Spelliscy, C., Bell, J. (2025, January). "Towards Data Cooperatives for a Sustainable Digital Economy."

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1. Reframing Data Valuation: Beyond Extraction and Optimization

More Than a Commodity

The extensive collection and use of data across every sector of our lives and economies has been a matter of fact for decades, and the current attention placed on artificial intelligence (AI) and its data extraction practices has brought increased scrutiny to how data is collected, used, owned, and governed. In these conversations, data is often framed in financial terms, as a tool for selling advertising, improving logistics, or training large language models. Often, public discourse focuses on personal data, copyright, and privacy. However, this individual and financial framing can obscure deeper questions about how data, and the information it produces, holds value.

Before evaluating how data is governed or valued, it is important to note what data is and how it functions. Data is not a neutral or uniform commodity. It is produced, shaped, and interpreted through specific technical, social, and institutional processes. Data is active, informing decisions, structuring power, and reflecting the values embedded in its creation and use. Recognizing the contextual and relational nature of data helps reveal the many kinds of value it can hold beyond extraction or optimization.

Importantly, data's value is not intrinsic. It depends on how it is contextualized, interpreted, and applied. A single dataset can support multiple, even conflicting, uses depending on who accesses it and for what purpose. Agricultural data, for example, might optimize yields for a farming cooperative, support government surveillance, or feed predictive financial models. Recognizing this multiplicity is key to developing governance models that resist reducing data to a single economic logic (for instance, focusing solely on financial transactions between companies and individuals) and instead honor the diversity of relationships and meanings embedded in its production and use. These relationships can be transactional and economic, but data often plays other, more fundamental roles. In everyday life, the value of data is intuitive: photos shared with loved ones, a web search about a child's fever, a fitness tracker's step count. These actions generate data whose value comes before questions of ownership or profit. The same is true at the systemic level, and this is especially significant in a data economy that is deeply embedded in people's daily interactions.

The Collective Nature of Data

Personal data exemplifies data's relational quality. Much of our data is not just about one individual; it is about their relationships, networks, and environments. A group photo reveals information about everyone in it. A family member's genetic upload to a genealogy platform can expose data about relatives who never consented.[5] On a broader scale, data contributes to predicting housing trends, determining which grocery chains or services enter one's neighborhood, shaping emergency response times, and even influencing district gerrymandering. Personal data, then, has collective effects that reach far beyond any one individual.[6]

Failing to recognize the relational and collective dimensions of data leads to a systemic oversight of the issue of collective consent.

5. Project Liberty. (2025, April). "Your DNA is now a corporate asset."

6. Scholz, T., Calzada, I. (2021, April). "Data Cooperatives for Pandemic Times."

Consent does not scale easily. One person's decision to share data can have serious implications for others. This is the so-called "shared-blanket" problem, the challenge that arises when data about one person is simultaneously data about others.[7] Because data is contextual, sharing it in one setting might lead to unintended consequences in another. As such, relying on individual consent as the basis for ethical data practices is often inadequate and mostly contributes to reinforcing the centralized digital economy, as it fails to address the centralized ownership of data. Collective decision-making about data use is needed more than ever, in families, communities, and institutions, because individual privacy frameworks alone cannot address these challenges.

Public and Institutional Value Beyond Markets

This relational character of data extends beyond one's private life to more institutional spaces. Health data, for instance, while often commodified, is also regularly donated to enable collaborative research and treatment. Without the open sharing of health data, responses to public health crises like COVID-19 or HIV would be significantly hindered.[8] Similarly, environmental data, education data, and public infrastructure data all hold critical value outside of market logics. Recognizing these shared values is essential to understanding why data is produced and how it serves the public good.

Finally, for data to have value in any context, quality matters. Incomplete, outdated, biased, or erroneous data fails to deliver on its intended purpose. On a massive scale, as in internet scraping to train AI, quality control is nearly impossible. While this may be tolerable for broad applications like large language models, it fails communities and organizations that need high-quality, context-specific data. Mass data collection often overlooks local relevance, making it hard for communities to access or benefit from the data they help generate. These gaps reveal the shortcomings of dominant data governance systems and point toward the potential of cooperative models, which are rooted in shared ownership, mutual benefit, and collective stewardship, as a better fit for how many communities create and use data.

Key Insights

- **Data's value is contextual and relational**, not intrinsic or fixed — the same dataset can support multiple, even conflicting, uses.
- **Personal data has collective impacts**, challenging the sufficiency of individual consent and calling for collective decision-making frameworks.
- **Public and institutional data serve the common good**, often beyond market logics, as seen in health, education, and environmental data.
- **Mass data extraction systems struggle with quality and relevance**, making them poorly suited for community-specific needs.
- **Cooperative approaches to data governance offer a more inclusive and equitable model**, rooted in shared ownership and benefit.

7. Prewitt, M. (2021, February). "A View Of The Future Of Our Data."

8. Example: Taiwan's data infrastructure enabled their leading response to COVID. Lai, J. (2020, September). "Hacking the pandemic: how Taiwan's digital democracy holds COVID-19 at bay."

2. Cooperative Core Principles Fit for the Data Economy

Cooperatives as a Structural Match for Data's Collective Nature

Cooperative models, grounded in democratic governance and shared ownership, offer an alternative lens through which to view the value of data. Unlike investor-owned platforms that often extract data for narrowly defined commercial gain, cooperatives are structurally oriented toward member and community benefit. Their guiding principles, equity, participation, and concern for community, align with the idea that data is not a one-dimensional resource but carries multiple, context-dependent values. So, how can cooperative models enable more pluralistic, ethical, and participatory approaches to data governance and valuation?

The cooperative business model has existed for 150 years alongside traditional corporations. It has represented communities when venture capitalists wouldn't and filled gaps in markets that traditional investors haven't. This report argues that data is the next great use case for the cooperative model. As with electric grids, agriculture, and financial co-ops before them, co-ops engaged in the ownership and governance of data have the opportunity to step in and represent community interests where Big Tech corporations neither can nor will, as explained in the first part of this report. Co-ops have a unique capacity to balance economic viability with broader social, cultural, and environmental goals. While this report touches on how co-ops might compete with or complement investor-owned firms (IOFs), their potential extends far beyond market competition. Cooperatives can reframe how we think about, manage, and benefit from data, especially for communities left behind by extractive data regimes.

Cooperatives are naturally suited to manage the multiplicity of data's meanings and functions. The International Cooperative Alliance defines a cooperative as "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise."[9] This structure makes them ideal vehicles for navigating the relational and contextual dimensions of data, as shown below in a table that places the seven cooperative principles alongside their benefits to data governance:

Cooperative Principle	Alignment with How Data Operates
1. Voluntary and Open Membership	Data systems benefit from diverse contributors and users; inclusivity strengthens data quality, representativity, and legitimacy.
2. Democratic Member Control	Data governance requires distributed and participatory decision-making, especially when data impacts many stakeholders.

9. International Cooperative Alliance. (2025). "Cooperative identity, values & principles."

3. Member Economic Participation	Data generates economic value; shared ownership ensures those who generate it share its benefits, and incentivizes quality data.[10]
4. Autonomy and Independence	Communities have greater agency over how their data is used, stored, and shared to ensure consent and avoid exploitation.
5. Education, Training, and Information	Meaningful data governance requires digital literacy and transparency for informed participation.
6. Cooperation Among Cooperatives	Data ecosystems and data spaces are interconnected; federated co-ops can share infrastructure, standards, and leverage at scale.
7. Concern for Community	Data affects communities collectively; stewardship must reflect ethical and social responsibilities alongside profit.

As the table above demonstrates, these principles provide a foundation for harnessing data's diverse forms of value — economic, social, cultural, and communal — within democratic and participatory frameworks. They support what is often referred to as digital self-determination (DSD), where both individuals and communities have meaningful control over the data they generate and use.[11] At a time when AI technologies threaten to deepen economic inequality, the cooperative model offers a built-in mechanism for ensuring more equitable outcomes from data-intensive systems.

Collective Consent, Leverage, and Structural Alignment

Similarly, cooperatives easily align with notions of collective consent. Cooperatives are inherently designed around group interests and shared outcomes, which makes them structurally well-suited to managing data whose value and ethical implications often extend beyond individuals. Unlike corporations that treat data as proprietary and individual privacy as a liability, co-ops can treat collective data rights as a core mandate, much more consistent with how data actually functions.

Importantly, cooperatives offer a form of collective leverage that is largely absent in today's data economy. Individuals have little bargaining power when faced with the opaque and asymmetrical practices of tech giants, exemplified by practices in the gig economy that blur the boundaries between contractors, freelancers, and employees,[12] often leveraging this vagueness to minimize obligations and shift risk onto workers.[13]

In contrast, co-ops enable communities to pool resources, negotiate collectively, and shape the terms of engagement. This is especially important for marginalized groups. A particularly pertinent example

10. Mehta, S., Dawande, M., Mu, L. "The key to designing sustainable data cooperatives." February 1, 2022.

11. Verhulst, S., Marcucci, S. (2025, March). "Situating Digital Self-Determination (DSD): A Comparison with Existing and Emerging Digital and Data Governance Approaches."

12. P., Bierman Glavin, , A., Schieman S. (2021, June). "Über-Alienated: Powerless and Alone in the Gig Economy." ; Pilatti, G., Pinheiro, F., Montini, A. (2024, October). "Systematic Literature Review on Gig Economy: Power Dynamics, Worker Autonomy, and the Role of Social Networks."

13. Datta, N., Rong, C., Singh, S., Stinshoff, C., Iacob, N., Nigatu, N. S., Nxumalo, M., Klimaviciute, L. (2023, July). "Working Without Borders: The Promise and Peril of Online Gig Work."

comes from Enyorata Loviluku in Tanzania, where women, historically excluded from access to bank loans, have created a co-op that can receive credit. Financial data and risk, when managed collectively, can become a source of leverage and opportunity that individual members could not access alone. As examples like this show, co-ops do not simply increase profitability and community-aligned outcomes for members; they are often the necessary steps to enable them in the first place. The current centralization of the data economy requires the type of decentralization that co-ops can offer.[14]

Scaling Out rather than Scaling Up

The way cooperatives scale also offers advantages for data governance. Unlike centralized corporations that grow through vertical integration and consolidation, co-ops tend to scale by federating, creating networks of independent, member-focused organizations that collaborate while retaining local control. For example, the United States' rural electric co-op grid covers over 50% of the country's landmass but is made up of more than 900 separate co-ops. This kind of "scaling out" rather than "scaling up" allows co-ops to maintain local responsiveness and accountability while benefiting from shared infrastructure, data resources, and coordination.[15] It is a model of distributed growth that aligns more closely with the decentralized, contextual, and relational nature of data itself.

Key Insights

- **Cooperatives offer a structural alternative** to extractive data practices, prioritizing community benefit, equity, and participation.
- **The seven cooperative principles** provide a strong foundation for governing data as a collective, contextual, and multipurpose resource.
- **Digital self-determination and collective consent** are more achievable through cooperative governance structures than through traditional individualistic privacy models.
- **Cooperatives empower communities with collective leverage,** especially important for historically excluded or marginalized groups.
- **Federated scaling models in cooperatives** mirror the decentralized nature of data and offer a more democratic path for scaling digital infrastructure.

14. Bühler, M. M., Calzada, I., Cane, I., Jelinek, T., Kapoor, A., Mannan, M., Mehta, S., Mookerje, V., Nübel, K., Pentland, A., Scholz, T., Siddarth, D., Tait, J., Vaitla, B., Zhu, J. (2023, June). "Harnessing Digital Federation Platforms and Data Cooperatives to Empower SMEs and Local Small Communities."

15. Dervillé, M., Manriquez, D., Dorin, B., Aubron, C., Raboisson, D. (2023, October). "Indian dairy cooperative development: A combination of scaling up and scaling out producing a center-periphery structure."

3. Case Studies – How Legacy Cooperatives are Innovating from Within

Across sectors such as agriculture, energy, and finance, existing cooperatives are beginning to engage strategically with data to strengthen their operations and deepen member engagement. The following two sections provide both an overview of cooperative engagement with data with the National Cooperative Business Association CLUSA International (NCBA), and a case study showing how legacy cooperatives are integrating data into their operations with the Credit Union Data Exchange (CUDX).

Importantly, these examples show that cooperatives are not only compatible with data-driven innovation, but they can actively shape it to reflect more democratic and inclusive priorities. While many other compelling examples exist across different sectors and regions, this analysis focuses on these two cases to illustrate specific approaches to innovation from traditional cooperative models. Doug O'Brien, President and CEO of the NCBA CLUSA, gives examples of co-ops already putting data at the centre of their operations, and provides historical context for this new frontier of innovation.

NCBA CLUSA Case Study

The following case study was provided by Doug O'Brien, President and CEO at NCBA CLUSA.

Overview

Founded in 1916, the National Cooperative Business Association CLUSA International (NCBA) is the United States' oldest and most broadly representative association dedicated to promoting, protecting, and advancing cooperative enterprise nationally. The association represents cooperatives across every sector, including credit unions, agricultural co-ops, worker and housing co-ops, purchasing co-ops, and emerging platform and data cooperatives.

In today's economy, shaped increasingly by data and digital infrastructure, cooperatives offer a powerful model for ensuring that people who use a business benefit economically from the value they create. Just as farmers once established cooperatives to reclaim power over the agricultural supply chain, people today can turn to cooperatives to regain control over their personal and business data.

Cooperatives Across Sectors Are Leading the Way

Across the United States, cooperatives are already demonstrating how technology and data can serve people, rather than an investor-owned business using data to extract value from people. For example, Rappahannock Electric Cooperative (REC), which serves more than 170,000 members in Virginia, uses smart meters and analytics to improve energy efficiency and reliability while preserving affordability. Its advanced metering infrastructure allows real-time monitoring and faster outage response, benefiting rural and suburban customers alike. As a member-owned utility, REC reinvests profits into infrastructure upgrades and community services rather than paying dividends to shareholders. The National Information Solutions Cooperative (NISC), which is owned

and controlled by over 950 utility and broadband co-ops nationwide, is integrating artificial intelligence into member operations, ultimately boosting effectiveness while preserving local control. NISC provides critical back-office software that co-ops rely on for billing, operations, and customer service, creating shared value across its network. Its AI initiatives include predictive maintenance and intelligent customer engagement tools, all developed under cooperative governance to prioritize member needs, ultimately boosting effectiveness while preserving local control. Finally, the emerging **Ag Data Cooperative** enables farmers to own and manage their agricultural data, using it to make better decisions while maintaining privacy. By aggregating data across members, the co-op allows farmers to benchmark performance, identify trends, and access more competitive services. Unlike traditional tech platforms, the cooperative is governed by the farmers themselves, ensuring transparency and data sovereignty, using it to make better decisions while maintaining privacy.

These advances are part of a much longer history of co-ops delivering value at scale. In the late 1800s and early 1900s, farmers built marketing and supply cooperatives to improve pricing and market access, thus capturing more value from their products. Today, more than half of U.S. farmers are members of co-ops, and well-known, farmer-owned brands like Land O'Lakes, Blue Diamond, Florida's Natural, and Ocean Spray remain pillars of the food system. Over 60% of the nearly 1700 agricultural co-ops in the United States have been in business for more than 50 years, and 17% are over 100 years old. It is similar for electricity deployment, when in the 1930s, rural communities, in partnership with the federal government, formed rural electric cooperatives. Today, more than 42 million Americans receive electricity from member-owned utilities that cover 56% of the nation's landmass across 49 states, including 92% of persistent poverty counties.

Cooperative Success and Public Policy

The successes of cooperatives are not accidental. They have been enabled by public policy that recognizes the cooperative model's distinct structure. In agriculture, co-ops thrive thanks to technical assistance, favorable tax treatment, and special legal recognition around securities and antitrust rules. In rural electrification, federal loans and guidance made widespread cooperative formation possible. As U.S. federal policy now evolves to address data governance, privacy, and digital infrastructure, policymakers have a fresh opportunity to empower people. Recognizing cooperatives as vehicles for democratic participation in the data economy could prevent extractive business models from dominating emerging technologies through a time-tested solution.

NCBA CLUSA continues to advocate for a modern policy environment that allows cooperatives to thrive in data-intensive sectors, just as they have in agriculture, energy, and financial services. History shows that when cooperative businesses scale, people benefit. The future depends on scaling that impact once again, this time, for the digital age and the data economy.

Credit Union Data Exchange (CUDX) Case Study

The following case study was provided by Jessica Gamache, Head of Research at Filene.

Credit unions, with over 142 million members in the U.S., represent one of the largest types of co-op. However, while there are around 4,500 credit unions, data sharing between them remains both legally and technically difficult, leaving gaps in the services individual credit unions can provide to their members. As part of enabling cooperation between co-ops, credit unions often band together to take on joint tasks in the form of Credit Union Service Organizations (CUSOs). CUSOs are separate legal entities from co-ops that are owned by one or more credit unions to provide specific services that support them and their members. One such CUSO, the Credit Union Data Exchange (CUDX), is taking on the data management problem.

Overview

Formed in 2023 by Trellance, the Filene Research Institute, and a number of forward-looking credit unions, the **Credit Union Data Exchange** (CUDX) was born with the goal of maximizing the power of the credit union industry's data. CUDX is a cooperative that allows credit unions to contribute their data, which is then anonymized, pooled, and securely shared among participating institutions. This collaborative model empowers credit unions to access broader insights, benchmark performance, and provide data-driven decision-making while maintaining control over their individual datasets. Designed to address pressing challenges in data analytics by leveraging a cooperative approach, CUDX demonstrates how shared data assets and community-driven governance can revolutionize the credit union landscape.

Why This Path Makes Sense for Credit Unions

Unlike large banks, credit unions tend to have limited data sets, given the size of their membership. By pooling data across multiple institutions, CUDX creates a geographically rich and diverse data environment. This collective approach not only deepens analytical insights but also enables credit unions to better capture and respond to regional trends that would otherwise be missed.

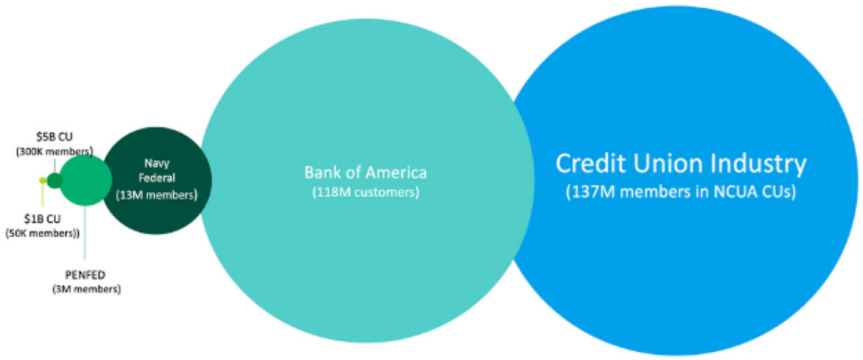

Image: Filene Research Institute

Developing and maintaining advanced data analytics capabilities is also an expensive proposition for individual credit unions, especially smaller ones. CUDX's cooperative model distributes these costs among participants. Instead of each credit union building a costly, standalone infrastructure, pooled resources enable access to analytic tools at a fraction of the expense.

CUDX also minimizes the resources required by any individual credit union by adopting best practices in data privacy, risk management, and compliance. By following uniform protocols for data handling and security, the CUDX ecosystem assists credit unions in meeting regulatory requirements more effectively. This shared compliance model not only mitigates risk but also ensures that every participating institution adheres to a consistent set of ethical standards in managing member data.

As a credit union service organization, or a CUSO, the governance of CUDX is firmly in the hands of credit union executives. CUSOs are separate entities formed and owned by one or more credit unions, ensuring that every decision is aligned with the credit union mission. As such, the CUDX board is composed entirely of credit union leaders, which ensures that every strategic decision reflects the cooperative's collective interests. CUDX also has a community of practice model that enables members to exchange successful policy templates, operational best practices, and innovative solutions to common challenges. This crowdsourced approach to governance and standard setting not only promotes transparency and accountability but also helps to align the platform with broader industry standards.

How to Envision This Model as a Business

Each participating credit union uploads its data through its own secure environment. When data enters the combined system, all identifying details are removed to preserve essential demographics while safeguarding member privacy. This approach allows institutions to retain control over their data while benefiting from the enhanced insights of the collective data pool.

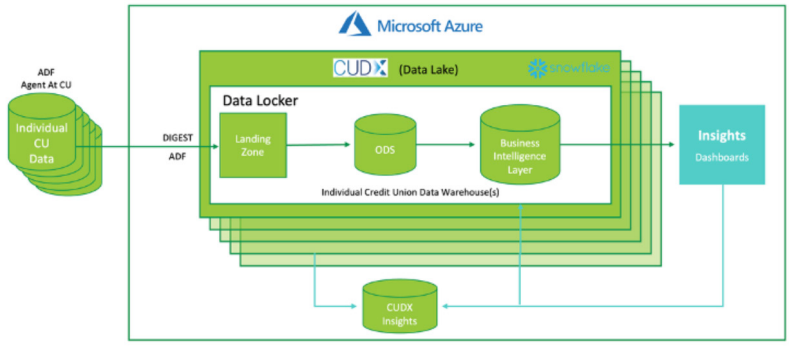

Image: Trellance

A key value of CUDX is its ability to generate actionable insights from aggregated data. Through advanced analytics, participating credit unions can uncover trends, benchmark performance, and identify strategic opportunities that would be difficult to discern from isolated data sets. By leveraging industry expertise and peer-contributed methodologies, they can refine predictive models, optimize service offerings, and strengthen financial performance.

The enriched, geographically comprehensive data housed within CUDX holds significant market value. Approved third parties, such as capital investors, retailers, and fintech innovators, can access this aggregated information under strict guidelines. Revenue generated from these transactions is used to cover operational overhead and is shared with the participating credit unions as non-interest income. This model not only transforms data into a valuable asset but also creates a self-sustaining ecosystem where credit unions can earn revenue rather than incurring net costs for participation.

How This Innovative Model Can Benefit Traditional Credit Union Members

With access to a more comprehensive and diverse dataset, including different geographies and consumer segments, credit unions can better analyze member behavior and market trends, in turn allowing them to tailor products and services to better meet the specific needs of their current and potential members. The ability to develop more targeted offerings leads to improved product design, more precise risk assessments, and better overall service. These improvements not only enhance member satisfaction but also strengthen loyalty by demonstrating a clear commitment to understanding and meeting the evolving needs of the community.

Additionally, CUDX allows credit unions to be more innovative in how they use data while ensuring that member data stays secure. Each credit union retains ultimate control over how its data is used, and CUDX ensures the latest best practices and standards are adopted to govern the overall ecosystem. Member information is handled with the highest privacy and security standards. This dual focus on innovation and security ultimately provides a better, safer experience for members.

Key Insights

- **Cooperatives are actively engaging with data innovation** across multiple sectors.
- **Rappahannock Electric Cooperative (REC)** uses smart meters and analytics to improve energy services while reinvesting profits locally.
- **National Information Solutions Cooperative (NISC)** provides AI-enabled back-office software to hundreds of utility and broadband co-ops, preserving local control.
- **Ag Data Cooperative** empowers farmers to own, aggregate, and leverage their data to improve decision-making while ensuring privacy and transparency.

- **Credit Union Data Exchange (CUDX)** enables secure, anonymized data pooling across credit unions. This makes advanced data capabilities affordable for smaller credit unions, makes compliance easier, aligns with mission and member needs, and encourages knowledge sharing and cooperative development of best practices.
- **Credit unions can deliver more personalized services,** improve products, assess risk more precisely, and respond better to local needs.
- **Credit unions can generate revenue** by making aggregated, anonymized data available to third parties (e.g., fintech and investors).
- **History demonstrates the potential of co-ops** to have a say in the data economy. Over half of U.S. farmers are co-op members; many agricultural and energy co-ops have operated for 50–100+ years. And rural electric cooperatives now serve 42 million Americans, demonstrating scalable, community-led infrastructure.
- **Public policy has aided historical successes** in agriculture and electrification (e.g., through favorable tax treatment, antitrust exemptions, and federal loans).

4. Data Cooperatives: New Models and Experiments from the Ground Up

Organizations founded as data cooperatives are still largely in the developmental stage, but many of the case studies for these data co-ops can be highly instructive for legacy co-ops, IOFs, and data co-op builders examining how to integrate data into their operations. More well-known examples represent co-ops across industries such as Drivers Cooperative - Colorado and the Driver's Seat Cooperative (now at the Workers' Algorithm Observatory at Princeton University) in ride-sharing; Enyorata Loviluku in finance; MIDATA co-op and Salus.coop in health; Resonate in music; and ABALOBI in fishing.

This report presents three further examples — from art with TRANSFER, to agriculture with the Kerala Food Platform, and to online browser User Cooperative — as case studies that provide multiple ways to think about, and build, data cooperatives in various domains and at various stages of development, from early experimentation to more mature implementation.

TRANSFER Case Study

The following case study was provided by Kelani Nichole, technologist and founder of TRANSFER.

Overview

TRANSFER was founded in 2013 as a brick-and-mortar gallery focused on exhibiting virtual artworks in a physical space, engaging with data-based art forms such as virtual worlds, software-based artworks, generative art, internet art, video games, 3D printing, immersive installations, and experimental video art.

The gallery began as a single-owner LLC, but functioned more like a member-supported cooperative; each exhibiting artist contributed labor and shared resources with the global network the gallery represented. The COVID-19 pandemic and the Non-Fungible Tokens

(NFT) boom of 2020 accelerated the mainstreaming of "Digital Art," cultivating a broader digital literacy that made the gallery's programming more accessible, and more valuable. As "Web3" emerged, fueled by blockchain and encrypted technologies, new organizational models began to prioritize data sovereignty, decentralized control, and transparency.

Inspired by Exit to Community,[16] TRANSFER began exploring transitioning ownership of the gallery to the artists themselves. These artists occupy a unique space between an emergent speculative market for data and a more traditional valuation system in the contemporary art world. Beyond finance, fine art is one of the few markets capable of assigning value to data, especially in the form of Time-Based Media artworks, which are essentially data. In 2023, TRANSFER announced it would sunset the gallery and transition toward a cooperative model. The LLC was dissolved, and the gallery's assets were returned to the artists and caretakers. A year was spent considering governance models, entity types, and jurisdictions, especially in light of the international nature of contributors. The path to the transition is available on **Open Collective** as a record of the resources required for similar efforts.

Incorporating as a Cooperative

Formal incorporation as a data cooperative is planned for summer 2025, with legal counsel from Jason Weiner P.C. At that time, the cooperative will publish its bylaws and supporting documents as templates for others looking to build similar entities. The co-op will be incorporated in Colorado, the "Delaware of Cooperatives," and operate entirely virtually, with members across the U.S., Canada, and the EU. Formation of the new entity entails members paying a fee and committing their assets to the data cooperative, as articulated in the membership agreements and bylaws. Each year, artists contribute new artworks to the co-op, which appraises and maintains them as assets. Acquisitions are conducted directly between artists and collectors, with the co-op taking a commission that is redistributed to members annually. The co-op will also maintain a scalable node network and offer mutual support as new collectives form their own data cooperatives, using this model as a blueprint.

The member-controlled cooperative serves both a promotional and preservation role, undertaking routine preventive conservation for the media artworks in its care. By interlinking each studio's data through dynamic metadata structures for discoverability, the group creates market efficiencies while maintaining individual artistic autonomy and ownership. Through pooled resources, the co-op can also support time-intensive, costly restoration efforts, offering long-term assurance to collectors and institutions.

16. University of Colorado Boulder Media Economies Design Lab, Exit to Community.

How it Works

Each studio maintains a physical Network Attached Storage (NAS) drive that houses its archive, giving each artist direct ownership and control of their data. These devices are connected via the InterPlanetary File System (IPFS), enabling encrypted, redundant storage and recovery across the decentralized network. Should a node fail, data can be restored from others. Additionally, Filecoin contracts provide cold storage as a third layer of redundancy.

Every month, cooperative members commit new data to their NAS drives, increasing the overall value of the co-op's holdings. They also report on storage capacity, helping to ensure the decentralized network remains healthy and sustainable. The cooperative's infrastructure, both hardware and software, has been co-designed by artists and is publicly available on GitHub, allowing other groups to adopt and adapt the model. This experimental cultural infrastructure is being developed as a public good. Currently, TRANSFER Data Trust operates as a fiscally sponsored nonprofit project with support from Gray Area, an art and technology incubator in San Francisco. Funding has been awarded by the Knight Art + Tech Expansion Grant, GSR Foundation, the Filecoin Foundation, and the Filecoin Foundation for the Decentralized Web.

Quarterly, members vote on governance issues such as resource allocation, membership growth, project proposals, and data stewardship strategy. After two years of successful operation, and with anticipated growth in the appraised value of its assets, TRANSFER Data Trust plans to formalize its trust entity. This trust, held by the cooperative, will ensure the cultural legacy of these works persists beyond the lifetime of its creators.

From Metadata to Mutual Benefit

As TRANSFER grows, this open archive will represent a deep cultural record that is articulated through metadata on the **Linked.Art** model, a linked open data project that is already in use by leading cultural organizations globally like the J Paul Getty Trust, Metropolitan Museum of Art, Rijksmuseum, among others. The semantic structures of this schema open up new possibilities for AI models trained on the data, and the data co-op will engage members of the cooperative and node network to collaboratively broker AI training provisions that are mutually beneficial. Additionally, as the data represented by the cooperative and node network becomes a valuable resource for scholarly research, the data co-op will develop tools for managing access and other forms of licensing and facilitation for the data, such as exhibition loans, activations, and educational use. Finally, as the value of the data co-op grows, tools to protect the individual contributor's intellectual property and rights will become increasingly important. Sovereignty and ethical data use are built into the model, along with encrypted chain of custody and authentication through content-addressed data storage. From this foundation, the co-op can build out interfaces for members to manage rights and usage information, licensing, and offer legal resources for protecting copyright and intellectual property.

Kerala Food Platform Case Study

The following case study was provided by Vinay Nayaran, Senior Manager, Sameer Bajaj, Analyst, and Rajitha Kumar, Researcher at Aapti Institute. It includes findings from the Aapti Institute on the current state of data cooperatives in India.

Overview

The Kerala Food Platform (KFP), initiated in 2020, aims to strengthen markets for indigenous climate-resilient crops, improve agricultural planning, and strengthen financial institutions. Designed to reach vulnerable communities and build on state and national initiatives, including Digital Public Infrastructures (DPIs), the KFP seeks to scale and sustain approaches and policies for climate change. It amalgamates participatory data governance mechanisms with community networks, public infrastructure, and local institutions.

Kerala, a small southwestern coastal state of India, is located in a unique geography, a coastal state situated along the steep gradient of the Western Ghats, with its landscape vulnerable to natural disasters.[17] Nearly 14.5% of the state's land is prone to floods, rising to 50% in some districts.[18] After massive floods in 2018, the Kerala government focused on using data-driven tools and services for resilience.[19] Along with its focus on data-driven approaches to climate resilience, Kerala also explored climate-resilient cultivation methods and food systems. One such approach centres on Pokkali rice, a flood- and saline-resistant crop indigenous to the region.

How it Works

The KFP was created at the intersection of the two approaches, combining data with resilience services to further enable and boost climate mitigation and adaptive strategies. Presented to the Kerala government as part of the Rebuilding Kerala initiative post the 2018 floods, it aimed to provide the technological pillar in the agriculture infrastructure. It was announced as part of the 2020 Kerala state budget overseen by the Kerala Development and Innovation Strategic Council (K-DISC) on behalf of the State Government. The platform is based on the UAE Digital Food Platform made by Suntech (which was also involved in the making of the KFP), with modifications to align with Kerala's context.

The KFP was piloted in the Ezhikkara region with two primary objectives. First, to create an end-to-end Enterprise Resource Planning (ERP) system to aid agricultural digitalisation within Kerala; second, to embed digital traceability within local food systems through a "Farm to Fork" system. The approach embedded in the pre-existing local community networks and infrastructure, in this case, the Palliyakkal Co-op Bank and local Self-Help Groups (SHGs), ensured stakeholders could operationalise the platform without overcomplication. The farmers enter their data in the app and complete their KYC. After which, they get access to information about procurement, which happens above market rate to incentivise the farmer, and access to the aggregated data of other producers. This can be used for planning and operations. The app helps improve market linkage for farmers as well.

17. Relief Web. (2018, December). "Kerala Post Disaster Needs Assessment: Floods and Landslides."

18. UNDP. (2018, December). "Post-Disaster Needs Assessment - Kerala."

19. World Bank. (2023, October). "Data Diagnostic for Kerala."

A key stakeholder of the platform, the Palliyakkal Co-op Bank, emerged from the vibrant people-driven cooperative movement, with an ideological base and economic goal of establishing a strong democratic legal framework and a cooperative policy. In Ezhikkara, the members of the cooperative are predominantly from economically disadvantaged backgrounds. At present, the cooperative supports 2500 families.

Deploying the platform in collaboration with Palliyakkal Co-op Bank helped leverage existing relationships, with over 1000 farmers and 8 SHGs registered with the bank. The use of this network was also pivotal in deploying the technology, with K-DISC providing training on collecting data and geo-tagging. The platform helped the cooperative better plan for the demand and improve market access by broadening the customer base. The co-op bank and SHGs retained ownership and control of farmers' data, creating pathways for data and infrastructural sovereignty.

Scaling and Integration with Digital Public Infrastructure

The Kerala Food Platform provides an archetype model for participatory data governance that can be scaled. Its integration with India's DPI, such as Landstack and Aadhar, provides pathways for building data co-operatives and transitioning them into future DPIs. After the completion of the initial pilot, the platform aims to start collaboration with other states, unions, FPOs within Kerala, and farmer-producer companies which are aiming to aggregate data for better planning. Institutions such as the National Bank for Agriculture and Rural Development (NABARD) intend to use these platforms to access and identify credible FPOs to extend loans to. Digital initiatives such as the Kerala Food Platform show approaches to strengthening technological capacity, enabling benefits for the citizenry, such as helping increase access to financial institutions for the farmers, technological capacity building at the district level, and better agricultural planning at the state level.

User Cooperative Case Study

The following case study was provided by Matt Martensen, founder of User Cooperative.

Overview

User Cooperative is a user-owned web browser startup structured as a free and open consumer cooperative, a wholly member-owned and -governed company.

The Co-op has approached people's right to internet technology ownership and governance through the lens of risk-capitalization. The premise is that Big Tech companies are built on people's data, which is conveyed through people's clicks and exposes them to some level of risk. That makes people's data risk-capital and their clicks risk-capital transactions, which, in our market system, should entitle people to a sizable ownership stake in every tech business that profits from their clicks.

Within this framework, the Co-op shares its wealth with people on the basis of their clicks on its services. To do this, the Co-op uses a consumer cooperative ownership structure, like Recreational Equipment, Inc. (REI), which distributes all profits and corporate control to its members on the basis of their patronage.

User Cooperative "soft-launched" in 2025, and it is currently building its membership and raising voluntary contributions to finance its startup costs. It has also begun developing Surge Browser using Chromium, and it plans to release a beta desktop version for macOS in a matter of months.

The Web Browser

Browsers are widely used, major sources of data, and they can amount to billions in income per year. As examples, Google pays Apple about $20 billion per year in royalties from Safari, which has an 18% market share,[20] and pays Mozilla about $500 million per year in royalties from Firefox, which has a 3% market share.[21] Search engine royalties and targeted ads will be the initial revenue focus for the Co-op's Surge Browser.

Surge Browser will be free to use, members-only, and available on all major devices. It is designed to feel and look similar to Chrome to make switching easy for members. During setup, members will be able to transfer their bookmarks, cookies, passwords, payment methods, form-fills, extensions, browsing history, settings, etc., from their current browser to Surge Browser in a few clicks.

Clicks on the browser will increase the dividends a member is entitled to. For example, clicks that access a hyperlink, enter a search query, go to a specific URL, go back a page, reload a page, change browser settings, update the browser, and view an ad will all increase dividends. The dividends will then be paid electronically.

How it Works

As a cooperative, User Cooperative distributes all profits to members in the form of patronage dividends, which can be distributed to each member in cash, in kind, or both in proportion to their clicks on the Co-op's services. This is the Co-op's formula for member dividends:

Member dividend = calendar-year profit x (member's calendar-year clicks ÷ all members' calendar-year clicks)

Where:

Member's clicks = outgoing service calls + incoming service calls

An outgoing service call is a member-initiated interaction with Co-op services, like a mouse click or a screen tap to input a search query or reload a web page. An incoming service call is an interaction the Co-op initiates, for example, to retrieve cookie, device, location, and stored usage data.

Service calls convey member data to the Co-op to provide, secure, and improve its services. That data is collected and used in accordance with each member's individual privacy settings and through the Co-op's privacy policy, which the members control. Lastly, any money that might be made in a sale of the Co-op, which is decided by its members, goes to each member in proportion to all clicks they have made on its services.

20. Altchek, A. (2024, May). "Court documents reveal Google's payments to Apple increased to an eye-watering $20 billion."

21. Davis, E. (2025, February). "Firefox Would Like to Remind Everyone It Exists and 'Isn't Backed By a Billionaire'."

Member Governance

Co-op governance is conducted electronically on a “one member, one vote” basis. Member voting rights include one (1) vote for each elected seat on the board of directors, which oversees all business affairs, and one (1) vote on any business item submitted to a member vote by the board of directors, CEO, or members. A business item can relate to actions such as business acquisitions, hiring/firing key personnel, lines of code in an algorithm, product features, privacy policies, terms and conditions, or a company sale. Day-to-day operations are managed by the Co-op’s staff.

The affirmative vote of more than fifty percent (50%) of members who vote, subject to a quorum in some cases, is enough to elect a board director or approve a business item. There are a number of democratic safeguards in place, including an early stage takeover protection in place that defers member voting until we reach 1,500,000 members and $15,000,000 of cumulative revenue.

Key Insights

- **All initiatives conceptualize data as a shared, governed asset** to be stewarded, governed, and equitably distributed.
- **Projects experiment with democratic models suited to their contexts,** from co-op formation (User Cooperative), to artist-led boards (TRANSFER), to co-governance with state actors (Kerala).
- **Cooperatives are building or adapting digital infrastructure,** like IPFS-based storage, ERP systems, NAS, and co-op-run metadata platforms, to ensure autonomy, interoperability, and ethical data reuse.
- **Data co-ops are finding different ways to give back to members,** through click-based dividends (User Cooperative), artist resale royalties (TRANSFER), and farmer access to markets and finance (Kerala).
- **Exit-to-Community models are emerging,** with several initiatives starting from private or state-led projects and transitioning toward community ownership.
- **Emphasizing open-source software and sharing learnings** to support broader ecosystems of aligned cooperatives.
- **Many efforts begin informally or with hybrid structures,** prioritizing function and shared governance before legal formalization as cooperatives.
- **Projects solve specific problems,** sustaining digital art, organizing small farmers, compensating browser users, and demonstrating the need to have specific goals in mind when starting a co-op.

5. Evolving Ownership: Alternative Models and the Shift Toward Cooperatives

So far, this report has largely focused on co-ops as they operate and network among themselves. There are many places where co-ops can have the opportunity to engage with other models, however, both for the benefit of cooperatives and as an alternative for IOFs. One area in which this approach makes particular sense is in addressing the different needs that organizations can have over time. A startup traditionally needs a lot of capital, whereas a more mature business might not to the same extent, and a founder who retires might want to be able to hand over operations to the workers in that business. For each of these moments in the lifetime of a business, different models will have different advantages and disadvantages, and combining business models to meet those needs, or evolving business models to adapt to change, can allow for significantly different outcomes over the life cycle of a business.

Hybrid Organizations, Fractional Cooperatives, and Multistakeholder Networks

The following section was written in collaboration with Nathan Schneider, professor of media studies at the University of Colorado Boulder, and director of the Media Economies Design Lab.

Nested and Networked: Hybrid Structures for Cooperative Ownership

Cooperatives do not need to operate as silos, or even solely within co-operative ecosystems, and can extend into and form partnerships with other types of organizations. Terms like hybrid organizations, fractional cooperatives, and multistakeholder networks help describe different ways co-ops can coexist with and complement other structures. Just as the data economy is ubiquitous, so too can cooperative models be.

In recent years, especially in light of the limitations cooperatives face in the data economy, there has been growing experimentation with hybrid structures that involve cooperatives without being exclusively cooperative in form. One model involves multiple linked entities, for example, a venture-backed tech company alongside a user-owned cooperative. This arrangement allows the company to access investment capital while enabling users to organize around their own governance priorities. Another model involves a nonprofit linked to a cooperative, combining the fundraising advantages and tax status of the nonprofit with the governance and profit-sharing mechanisms of a co-op. Fiscal sponsorships between cooperatives and nonprofit sponsors offer another avenue. These experiments seek to combine the strengths of complementary structures to produce better overall outcomes. By considering how these models can support one another, both venture-backed companies and cooperatives can benefit.

Hybrid models are not new. There is a long history of cooperatives with non-cooperative members, such as small business cooperatives or the Associated Press, a cooperative made up of different news organizations. These earlier examples tend to operate across organizational levels. What is more novel today is the interest in structuring a parent entity that includes different legal forms, each used strategically for its strengths.

This emerging approach involves nesting a cooperative inside a different kind of organization, and various aligned structures already show how this can be accomplished. A classic example is the Employee Stock Ownership Plan (ESOP), in which a trust holds a portion of a company on behalf of employees. While some ESOPs are 100% worker-owned, many begin with much smaller stakes. The Certified Employee-Owned standard in the U.S., for example, recognizes 30% as a meaningful threshold. In large publicly traded companies, even smaller percentages can have a significant impact. These structures are not cooperatives in a legal sense, but they can offer similar benefits, including shared ownership, democratic participation, and alignment of interests, while maintaining compatibility with investor ownership.

Together, these approaches represent two primary modes of hybridization: one in which cooperatives operate alongside other organizational forms, and another in which they are embedded within them. Each raises practical questions about implementation.

Implementing Hybrid Models and Fractional Ownership

For venture-backed companies, these models offer practical ways to engage cooperative principles without fully departing from investor expectations. Most already allocate an "option pool," a portion of the cap table reserved for employee equity. Though this mechanism shares some traits with cooperative models, it is typically optimized to align employee incentives with investor outcomes, rather than to promote broader participation or equity.

Historically, employee ownership through stock options was more widely distributed, however. Regulatory changes in the early tech era, such as revisions to safe harbor rules, the introduction of Incentive Stock Options in the 1980s, and the rise of Section 409A, shifted practices toward concentrated ownership, primarily benefiting executives. These trends, along with the dominance of venture capital and the prioritization of shareholder returns, have limited the broader applicability of option pools as a form of cooperative benefit.

Nonetheless, organizations can challenge these norms. By designing broad-based ownership programs that resemble cooperatives or ESOPs, they can retain the alignment and incentive benefits of traditional option pools while extending meaningful ownership to more stakeholders. Although such structures may initially appear misaligned with investor interests, they may in fact support long-term value creation by improving employee engagement and product development. The challenge lies in making this case to investors.

Hybrid models also offer flexibility over time. ESOPs, for example, often begin with partial ownership and grow to full ownership through a series of transactions. A company might take on debt to establish a 30% ESOP and later complete a full transition if founders choose to exit. This gradual model could be adapted for cooperative transitions as well. A cooperative nested within a company could, over time, accumulate shares and expand its ownership stake, eventually operating as a kind of internal option pool. Designing for flexibility is key to making these models viable, especially in alignment with principles such as exit to community.[22]

22. Mannan, M., Schneider, N. (2021). "Exit to Community: Strategies for Multi-Stakeholder Ownership in the Platform Economy."

The Cooperative Dilemma and Leverage Risks

While hybrid models offer many possibilities, there are limits to how far co-operatives can adapt to current venture capital structures. Venture capital depends on equity-based liquidity events, which are typically incompatible with the cooperative principle of member ownership. In some cases, liquidation may serve existing members well, as in the sale of New Belgium Brewing, a 100% ESOP, to a multinational buyer,[23] but it remains fundamentally at odds with the long-term goals of cooperative ownership and value retention. Speculative dynamics, central to venture investing, conflict with the cooperative aim of insulating an enterprise from speculative pressure.

Still, there are paths forward. A mid-sized, profitable company can use debt financing to transition to an ESOP, a process that is both tax-advantaged and lucrative for sellers. This suggests the possibility of a "cooperative IPO," a model in which a company leverages customer loyalty and platform participation to distribute ownership at scale. Like an ESOP but oriented toward users or other stakeholders, this could serve as a liquidity event aligned with cooperative principles and investor interests alike.

Nonetheless, these models are not without risk. In some cases, the venture-backed entity retains all the leverage, rendering the cooperative a dependent shell. More promising are nested arrangements where cooperatives benefit structurally through mechanisms like profit-sharing. Uber, for instance, explored offering equity to drivers before its IPO.[24] One could imagine a cooperative of drivers receiving a share of company profits, providing meaningful benefit and representation. Similarly, Airbnb has considered ways to include hosts in governance.[25] A cooperative of hosts could, for example, elect a board seat. Even as a public company, Airbnb could create structures in which its platform participants share in both governance and financial outcomes.

These models suggest that hybrid forms, when carefully designed, can offer cooperatives a place within broader organizational ecosystems, without losing sight of their core principles.

Key Insights

- **Hybrid models let co-ops access new resources** by linking with nonprofits, VC firms, or other entities while keeping cooperative values intact.
- **Two main approaches:**
    1. **Sibling models,** where the cooperative operates alongside another organization (e.g., a user co-op linked to a VC-funded tech firm or a nonprofit),
    2. **Nested models,** where cooperative or shared ownership structures (e.g., ESOPs) exist within a larger corporate entity, allowing partial or evolving forms of collective ownership.
- **Fractional ownership tools** like ESOPs or broad-based option pools can blend cooperative benefits with investor-friendly models.
- **Co-ops and VCs have conflicting goals:** co-ops aim for long-term community value; VCs seek short-term liquidity.
- **A "co-op IPO" could offer a shared win,** turning user loyalty into scalable ownership and investor returns.
- **Hybrid models carry risk:** co-ops may become dependent or symbolic unless they secure real power or profit-sharing.

23. Furnari, C. (2019, November). "New Belgium Brewing Announces Sale To Kirin Subsidiary As Craft Beer M&A Heats Up."

24. Mohamed, T. (2019, April). "Uber is paying drivers up to $40,000 each to celebrate its IPO."

25. Airbnb. (2021). "An Update on Environmental, Social, and Governance (ESG) at Airbnb." ; Leonie, G., Parker, L. D. (2019, November). "Governance and control of sharing economy platforms: Hosting on Airbnb."

6. Complementary Models for Shared Data Stewardship

Cooperatives meaningfully coexisting with other organizational and legal structures is not restricted to their relationship with IOFs. A growing landscape of adjacent frameworks, legal, technical, and institutional, offers complementary tools for democratic data governance. Some, like data trusts and trusted intermediaries, focus on fiduciary responsibility and risk management. Others, such as DAOs and data commons, reimagine governance itself through novel architectures. Still others, like data donation schemes, offer immediate avenues for public benefit.

These models are not competitors to cooperatives but potential collaborators: each addresses different aspects of the data value chain, and together they can form part of a plural and resilient data economy.

Data Commons

Description	Advantages	Shortcomings	How can it combine with cooperatives
A data commons treats data as a shared resource, collectively stewarded to serve the enduring interests of a community. Examples: OpenStreetMap, Therapeutics Data Commons, CUNY Academic Commons, Wikimedia, Fairhealth.	Emphasize transparency, reciprocity, and shared responsibility, often governed by norms and rules that reflect the values of those who use and maintain the resource. Unlike cooperatives, which are structured around defined membership and internal governance, data commons tend to serve broader publics.	Given their broader scope, they often lack formal boundaries. May lack legal clarity or enforcement mechanisms, making them vulnerable to appropriation or neglect.	Cooperatives can act as institutional stewards within a commons, providing stable governance, technical capacity, and democratic accountability. By linking commons logic with cooperative infrastructure, communities can ensure that shared data remains accessible, protected, and responsive to collective needs.

Data Donation

Description	Advantages	Shortcomings	How can it combine with cooperatives
Data donation involves individuals voluntarily contributing their personal data for causes aligned with the public interest, such as medical research, environmental monitoring, or civic innovation. These acts are often motivated by solidarity or altruism, and they aim to unlock value from personal data for collective benefit. Examples: The Personal Genome Project, Salus.coop, DataSkop.	Allows individuals to contribute personal data for public-interest causes. Enables the creation of valuable datasets that support research, innovation, and policy development in fields like healthcare. Can help foster trust, data literacy, and a culture of civic data stewardship.	Lacks sustained governance or ongoing participant agency; risks extraction without long-term community benefit. Often depends on institutional goodwill, rather than rights-based or participatory frameworks.	Cooperatives offer a way to strengthen and sustain the value of data donation by coordinating contributions, managing ongoing governance, and ensuring ethical stewardship over time. Rather than treating data donation as a one-off transaction, co-ops can build frameworks where communities actively shape how their data is used, shared, and protected, anchoring generosity in collective agency.

Data Trusts

Description	Advantages	Shortcomings	How can it combine with cooperatives
A data commons treats Data trusts are legal frameworks in which a designated trustee manages data on behalf of a group, with a fiduciary duty to act in that group's best interests. Examples: ODI Data Trust Pilots, Superset.	Help ensure that data is used in ways that reflect the rights, expectations, and needs of those affected by its use. Come with distinct, built-in legal safeguards not inherent in contract-based or corporate-based cooperative structures. Can be useful for high-stakes data where misuse could have serious consequences.	Can be opaque or overly centralized; trust beneficiaries may lack meaningful input into ongoing decisions. Often limited by rigid legal structures that do not easily support participatory adaptation.	A cooperative can serve as the trustee, combining the formal legal responsibility of a trust with the participatory, values-driven governance of a co-op. Cooperatives can enhance the ethical oversight of data trusts by embedding accountability not just in law, but in the lived governance of their member communities.

Data Unions

Description	Advantages	Shortcomings	How can it combine with cooperatives
Data unions aggregate the personal data of individual members to negotiate collectively with data buyers. There are currently very few in existence. Many are currently operated on the blockchain as DAOs, mentioned below, in order to increase trust, transparency, privacy, and sovereignty. Examples: Swash, Data Union DAO.	This collective bargaining helps shift power away from platforms and toward individuals, allowing members to secure better terms, fairer compensation, and more visibility into how their data is used.	Often narrowly focused on monetization, with limited democratic governance or long-term social objectives. May reproduce market logics that undervalue privacy, equity, or broader public benefit. Few are currently in existence. Legacy unions could consider building data layers for their members.	While data unions are conceived as being more transactional and market-driven than cooperatives, they share an emphasis on collective leverage and shared benefit. By adopting cooperative principles, such as enabling participatory decision-making, reinvesting value into the community, and aligning with ethical goals beyond monetization, they can become more democratic. Data Unions formed as DAOs already blur the boundaries between union and cooperative.

Decentralized Autonomous Organizations (DAOs)

Description	Advantages	Shortcomings	How can it combine with cooperatives
DAOs are blockchain-based entities that use smart contracts to automate governance and coordination among distributed participants. Examples: Gitcoin, Uniswap, Arbitrum, ENS DAO.	DAOs offer possibilities for managing shared datasets, enforcing consent agreements, and distributing value flows in automated and auditable ways, through processes such as onchain voting and smart contracts.	Governance can be shallow, participation unequal, and technical complexity a barrier to meaningful inclusion. Lacks clear integration with existing legal or institutional systems, limiting adoption and stability.	While often experimental in form, they are united by goals that resonate with cooperative values: transparency, member control, and decentralized power. Some data cooperatives are beginning to explore how DAO architectures might extend democratic governance into technical domains, particularly when dealing with dispersed or transnational memberships. While DAOs and cooperatives differ in legal form, their convergence may offer a hybrid model of digitally-native, community-governed data systems.

Each of these models offers unique advantages when advocating for more equitable data collection, storage, and governance. However, it will likely be in their integration and cooperation with one another that broader networks of equitable data organizations will become possible. The challenges posed by the centralized digital economy are so significant that there is a need to move beyond siloed efforts and build bridges between emerging models, enabling them to complement and reinforce one another as part of a truly scalable alternative. These hybrid experiments are already happening, as with data unions formed as DAOs, or cooperatives set up in parallel with data trusts. As this landscape evolves, further experiments that are responsive to particular goals, communities, and jurisdictions will allow for a plurality of adaptive models that will hopefully lead to a more sustainable and equitable digital world.

Key Insights

- **Data cooperatives do not operate in isolation.** By aligning with adjacent models, they can build more robust, inclusive, and adaptive data governance systems suited to their contexts.
- **Data commons serve broader publics and are often governed through informal norms.** Cooperatives can enhance these structures by anchoring commons in stable institutions that provide legal accountability, technical capacity, and democratic oversight.

- **Data donation initiatives enable individual altruism for the public good.** Cooperatives can transform episodic contributions into ongoing, community-led stewardship processes.
- **Data trusts ensure fiduciary responsibility for data.** Having cooperatives as trustees can combine legal duty with democratic legitimacy and responsiveness to member values.
- **Data unions focus on collective bargaining for data monetization.** Cooperative principles can broaden their scope and potential impact.
- **DAOs represent a new frontier for cooperative values.** Cooperatives provide the social and normative foundations for DAO governance.
- **Hybrid models represent the most promising path forward.** Whether adapting legacy co-ops, moving business models from LLC to co-op, or integrating the above models with cooperative practices and governance, hybrid models built for each context have the best chance to succeed.

Conclusion

This report demonstrates that the current data-driven economy, dominated by a few large technology companies, is structurally limited in how it recognizes and understands the value of data. By narrowing data's role to that of an extractable, monetizable asset, focused on the individual rather than the collective, these companies fail to acknowledge alternative forms of value and foreclose opportunities for more democratic and participatory governance. Cooperative models, both traditional and data-oriented, demonstrate the feasibility and suitability of a pluralistic approach, where data can serve multiple functions and is accountable to the communities that create it. In forwarding this approach, this report introduces the various ways that legacy co-ops are using data in their operations, highlighting work currently being undertaken in credit unions as an example. It introduces a set of data co-op case studies that can give builders, researchers, and policymakers a window into the steps that are being taken to bring cooperative vision and values to the data economy. Finally, it presents the steps that organizations of various types can take to add cooperative elements to their business or transfer to a cooperative model entirely. By presenting models that are co-op adjacent, including data commons and DAOs, this report opens up the possibilities inherent in multistakeholder approaches that can lead to a more equitable, collective, and representative data landscape.

The cooperative model is adapting and innovating to fit and transform the data economy. But for these efforts to grow and scale, policy needs to recognize and support the cooperative model as viable, efficient, and widely applicable. With more than 3 million cooperatives worldwide and over 12% of the global population participating in them, this is not a fringe idea. It is a tested and trusted model that offers a credible alternative to the concentrated power of the centralized digital economy. The next step is clear: policymakers will need to provide clear policy and legal frameworks that will allow the cooperative model to benefit any business and startup working with data, whether using it, relying on it, or built around it.

When the limits of reactive regulation and antitrust enforcement become clear, often falling short of rebalancing the dynamics of today's highly centralized digital economy, policy must shift toward supporting and strengthening alternative models. Rather than focusing only on restraining harmful practices, a proactive approach would invest in building up proven, community-rooted structures like cooperatives that can offer a genuine alternative. This means not just correcting market failures, but enabling better models to succeed.

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