How Can Data Cooperatives Help Build a Fair Data Economy?

Preliminary Observations and Considerations for Practical Data Governance Solutions

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Project Liberty Institute

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DRC Decentralization Research Center

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.

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

In an era where data shapes every aspect of our digital lives, the question of who holds the power over this critical resource has profound implications for society. Inequities in data ownership and governance need to be addressed if individuals and communities are to have an effective voice, choice, and stake in a rapidly evolving digital economy.

Project Liberty Institute and the Decentralization Research Center are launching a multistakeholder, research-based initiative to explore whether data cooperatives can serve as viable alternatives to the extractive, feudalistic business models that dominate today's digital economy. The initiative is a response, in part, to recommendations made by Project Liberty's recent task force on building a fair data economy.[1]

With the United Nations General Assembly proclaiming 2025 as the International Year of Cooperatives, it is an ideal time to evaluate whether the potential for cooperatives to address market shortcomings, empower individuals and deliver communal benefits extends to today's rapidly evolving digital economy.

This initial report sets the agenda for an in-depth exploration of data cooperatives as scalable business models. In drafting the report, we interviewed 16 experts with a wealth of knowledge and experience related to the design and implementation of cooperatives, the evolving nature of data-driven businesses and questions of data rights in the 21st century. Their contributions highlight both the challenges and opportunities inherent in translating cooperative business models to the digital realm.

Later this spring, we will convene a still larger group of practitioners, technologists and policymakers from across the cooperative, decentralized governance and fair data realms to examine how cooperative business models might advance the goal of giving people a greater voice, choice and stake in the digital economy.

The initiative's end result will be twofold: a "roadmap" marking possible paths – and pitfalls – to applying cooperative models in a digital context and an action network of like-minded individuals and institutions dedicated to advancing individual data agency, economic fairness and shared progress in the digital age.

1. Fehlinger, P, Bell, J., McBride, C., Farrell, M. (2024, November). Toward a Fair Data Economy: A Blueprint for Innovation and Growth: Action Recommendations of the Project Liberty FDE Task Force. Project Liberty Institute.

How Could the Cooperative Model Pave the Way to Data Agency and Collective Empowerment?

Data production and use have increased exponentially over the last decade, and this trend is only set to continue, particularly with the continued development of artificial intelligence. While the volume and types of data that are being generated are ever-increasing, the control of that data remains largely in the hands of a few key corporations, giving rise to concerns over privacy, monopolistic practices, and inequitable business practices.

New models of data governance are needed to redress this imbalance and foster business models where control of data returns to the persons and communities that produce it, while also creating the scale necessary to translate collective data rights into monetary or other economic gains.

"Data co-ops are an idea whose time has come. Because we're so aware now of the consequences of irresponsible data use."

- Mei Lin Fung, Co-Founder - People-Centered Internet

This initial report establishes an agenda for critically examining the potential for cooperatives to help transform today's digital economy. It draws on interviews with 16 key experts in the field of data cooperatives, digital rights, data governance, and the digital economy. Their diverse backgrounds as lawyers, economists, academics, and technical experts offer a nuanced perspective for those seeking to understand both the potential and the challenges of this emerging model. While the concept of data cooperatives has gained traction in recent years, **real-world examples of successful, large-scale initiatives remain limited.** The interviews highlight the need for distilling lessons-learned e and charting a realistic path forward.

It should be noted that this initial report focuses on cooperatives that are formed around the governance of data, and not traditional cooperatives per se. Many cooperatives across different sectors manage and use their members' data as a growing part of their operations. The learnings inherent in those processes are not included in this initial report and require further research. We acknowledge the important and ongoing efforts that surround data co-ops and will make sure to integrate them as best as we can in our upcoming Roadmap for a Sustainable Digital Economy - the Role of Data Cooperatives.

The Current State of Data Cooperatives

A cooperative is "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" (International Cooperative Alliance, 2024). In the context of this initial report and our ongoing research, a data cooperative is, therefore, a form of cooperative organization based on the ownership and governance of data. This relatively simple definition already sets data co-ops apart from their centralized, shareholder-focused counterparts, and they enable a whole set of new assumptions about how a business is run and for whom. In terms of data, they allow us to imagine forms of data use that put the needs of producers of data first, from individuals to large collectives, reversing how we approach the use of data.

Comparing Data Co-ops, Data Trusts, and Data Commons

Data co-ops empower individuals by giving them **voice, choice,** and **stake** in their digital lives, distinguishing them from data trusts and data commons. In a data co-op, members can actively participate in democratic governance, voting on how their data is used, managed, and monetized, or delegate those responsibilities to others. This contrasts with data trusts, where trustees make decisions on behalf of contributors in a more top-down structure, and data commons, which, while participatory, often lack structured individual rights.[2] By centering decision-making with members, data co-ops ensure individuals have a direct say in shaping their digital futures.

Additionally, data co-ops offer strong privacy and economic benefits. Members decide how their data is shared, opting in or out of agreements, and can also determine whether and how their data is monetized. This level of control surpasses the protective but less flexible frameworks of data trusts and the open-sharing nature of data commons, which may not fully consider personal preferences. Additionally, data co-ops give individuals a financial stake, distributing economic returns directly to members. Unlike data trusts and data commons, which focus on protection or collective access, co-ops uniquely prioritize member ownership, autonomy, and shared prosperity.

However, there are possibilities for data co-ops, data trusts, and data commons models to complement each other by combining individual control, legal protection, and collective access, providing a balanced approach to data governance. This hybrid model will be analyzed further as the initiative proceeds.

"I think that in the future, we're going to see a lot more experimentation with different models of data ownership and governance. Data cooperatives are going to be one of the most promising models. But I think that we're also going to see a lot of hybrid models, like data trusts and data commons. The key is going to be to find models that are both fair and sustainable."

- Sylvie Delacroix, Inaugural Jeff Price Chair in Digital Law, Director of the Centre for Data Futures

Existing Initiatives

Despite the limited number of data cooperatives, several initiatives provide valuable insights into both the potential and the challenges. The Driver's Seat Cooperative was a worker-owned ride-hailing platform that demonstrated the potential of collective data governance to improve working conditions and challenge the dominance of extractive platform companies. However, their model as a co-op was financially unsustainable, and while the services the co-op provided are in large part maintained, they now exist under a different legal structure.

Salus.coop represents another data co-op experiment, this time in the field of health. A Catalonian data coop, Salus pooled members' health data. However, the data that was monetizable has already been acquired by pharmaceutical companies, while the unique data the co-op contributed—on socioeconomic status, air quality, and other metrics that can serve as precursors to ill health—were data that pharmaceutical companies and healthcare providers were unwilling to buy as they couldn't be monetized.

"Data is not going to be a magic bullet for creating economic value on its own terms."

- Nathan Schneider, Assistant Professor - University of Colorado Boulder

An Emerging Model Within a Trusted Field

At least 12% of the global population is a member of one of the 3 million cooperatives worldwide, which also represent about 10% of the world's employed population.[3]

In the U.S., around 900 electric coops power most of rural America, while credit unions, a form of financial cooperative, have over 140 million U.S. members and employ hundreds of thousands of people,[5] making them highly integrated into society already. Coops in agriculture, finance, and energy form a trusted mainstay of the American business landscape, yet the data co-op model is still very much in its early days.[4]

Data cooperatives are developing in tandem with other types of bottom-up data models, including data trusts and data associations. All of these models may currently have different scopes for growth depending on the use case, jurisdiction, and how trends around data use and regulation change. In the absence of established best practices and regulatory frameworks, there is space for experimentation and innovation. However, it also increases the likelihood of encountering unforeseen challenges and setbacks. **A realistic approach to data cooperative development acknowledges the inherent uncertainty of this emerging field and embraces a spirit of adaptive learning and iterative design**. It is also worth noting that this experimentation may come from cooperatives that traditionally operate in other sectors, but given the highly digitized economy might lead to the creation of data co-op models for their members. Experiments could also come from other digital businesses looking to more equitable ways of managing consumer data.

2. Mozilla Foundation, Shifting power through data governance. 2020
3. International Cooperative Alliance, World Cooperative Monitor. 2023
4. National Rural Electric Cooperative Association, Electric Co-op Facts & Figures. 2024
5. Credit Union National Association, The Credit Union Impact Dashboard. 2024

Addressing the Core Challenges for Data Cooperatives

The interviews highlight several critical challenges that hinder the development of data cooperatives and require careful consideration:

Bridging the Gap Between Theory and Practice

The interviews reveal a consistent theme: **the landscape of data cooperatives is still in its early stages of development, characterized more by theoretical exploration than widespread practical implementation**. As explained earlier in this initial report, the cooperative form has a history spanning more than 150 years, but data cooperatives are a more recent iteration, still in an experimental phase. While the idealized vision of user-centric data ownership and governance holds undeniable appeal, translating this vision into reality presents significant obstacles.

The abundance of academic literature and conceptual frameworks surrounding data cooperatives stands in stark contrast to the scarcity of successful, operational models. It is important to note that the lack of practical examples makes it difficult to really understand what the potential of these organizations is, as by numerous experts interviewed. **Thus, the experts caution against over-reliance on theoretical frameworks and emphasize the need for a pragmatic approach that prioritizes building functional data cooperatives that deliver tangible benefits**. This requires a shift in focus from abstract discussions of data empowerment to the practicalities of data valuation, monetization, and incentive design.

"I think they're [data co-ops] very nascent at this point and mostly theoretical."

- Mallory Knodel, Executive Director and Founder - Social Web Foundation

Reframing Data Valuation

The notion that personal data holds intrinsic value—a perspective often promoted in discussions of data cooperatives—is challenged by many experts. **The value of data is contingent upon its context, the insights it generates, and its potential applications**. This has significant implications for data cooperative business models, which must move beyond data aggregation and focus on developing value-added services.

"The business model of individual data is not a good business model. Collective data is better, but its value requires collective bargaining and verifiability—buyers must trust the data is accurate and well-constructed."

- Primavera de Filippi, Research Director - CNRS & Faculty Associate - Harvard

Developing Digital Infrastructure Solutions

While experts disagreed about the implementation of nationally or internationally-based digital infrastructure solutions, most emphasized the need for better infrastructure for the development of data co-ops. Especially to enable interoperability between the numerous data agreements individuals may have with different entities. Addressing this challenge will require targeted efforts to develop infrastructure that ensures seamless and meaningful data use.

Creating Compelling Incentives

Attracting and retaining both data contributors and data buyers requires offering meaningful incentives. While direct financial returns for individual data contributions may be limited, particularly in the early stages, data cooperatives must explore alternative mechanisms to incentivize participation, including focusing on specific niche markets or gaining traction through multi-sector partnerships and effective marketing strategies to reach a sufficient scale. Further approaches could include:

// **Access to Aggregated Data Insights:** Providing members with access to valuable insights derived from the collective data can be a strong motivator. These insights could range from trends and patterns relevant to their health or work to tailored recommendations and personalized services.

// **Enhanced Collective Bargaining Power:** Pooling data can give individuals and communities greater leverage in negotiating with companies or institutions seeking to use their data. This collective bargaining power can help secure more favorable terms of service, stronger data privacy protections, and potentially even generate revenue for the cooperative.

// **Strengthening Community Bonds:** Data cooperatives can foster a sense of community ownership and collective action. By participating in a data cooperative, individuals can contribute to a shared resource that benefits their community and helps shape the future of data governance.

"I think that there's an increasing recognition that we need to move beyond the model of data as a commodity to be bought and sold and toward a model of data as a common good to be stewarded for the benefit of all. And I think that data cooperatives have the potential to play a really important role in that transition"

- Sara Wedeman, Senior Research Psychologist - Massachusetts Institute of Technology

Addressing Legal and Regulatory Barriers

Existing legal and regulatory frameworks often present obstacles to data cooperative development. **The lack of clear legal definitions, the complexities of setting up data trusts, and the absence of supportive policies, especially at the local level where co-op usually operate create significant barriers.** Experts advocate for:

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// **Clarifying Legal Structures:** Developing clear legal frameworks that recognize and support data cooperatives as distinct entities is essential. This could involve adapting existing cooperative or trust structures or creating new legal forms tailored to the specific needs of data cooperatives.

// **Establishing Robust Data Governance:** Implementing robust data governance frameworks is crucial to protect data contributors' rights and interests, build trust, and ensure responsible data use. This includes establishing clear protocols for data collection, storage, use, and sharing, as well as mechanisms for addressing data breaches and ensuring accountability.

// **Enacting Supportive Policies:** Governments and policymakers, particularly at the local level, play a vital role in fostering a supportive environment for data cooperative development. This could involve providing funding for research and development, creating incentives for data sharing within cooperative structures, and enacting regulations that promote data portability and strengthen data privacy protections.

"I think municipal governance support is the most critical because co-ops tend to be located in particular places and jurisdictions"

- Andi Argast, Practice Lead - Hypha Worker Co-operative

Advocate for Policy Change

Engage with policymakers at all levels of government to advocate for legal and regulatory frameworks that support the development of data cooperatives. This includes promoting data portability, strengthening data privacy protections, creating incentives for data sharing within cooperative structures, and ensuring that data governance policies prioritize the needs and interests of individuals and communities.

Navigating the Future of Data Agency in a Fair Data Economy

Exploring what the cooperative model can offer will remain a vital component in enabling equitable agency and governance of data. To further this goal, data co-op experiments must establish **clear metrics for success, involve continuous community feedback**, and **prioritize transparency** to ensure they genuinely offer alternatives to current exploitative data models. By embracing a spirit of experimentation, prioritizing practical solutions, fostering collaboration across sectors, and advocating for supportive policy changes, we can contribute to the development of data cooperatives that empower individuals, strengthen communities, and harness the potential of data for collective benefit.

As we move forward, the goal is not just to theorize about better systems but to actively contribute to building them. The Roadmap for a Sustainable Digital Economy will build on this initial report, delve deeper into existing research on data co-ops, engage with additional experts and communities through the Action Network, and examine real-world use cases to provide entrepreneurs, businesses, with practical guidance for creating solutions that protect and empower individuals in managing their data.

This initiative serves as a call to action—an opportunity to experiment, learn, and refine solutions that prioritize data agency, fairness, and collective benefit.

Annex[7]

Aapti Institute and Open Data Manchester. 2024. *How to Build a Data Cooperative: A Practitioner's Handbook.* Data2X. https://data2x.org/resource-center/how-to-build-a-data-cooperative-a-practitioners-handbook/.

Bietti, Elettra, Ander Etxeberria, Morshed Mannan, and Janis Wong. 2022*. Data Cooperatives in Europe: A Legal and Governance Analysis. Berkman Klein Center for Internet & Society,* Harvard University. https://cyber.harvard.edu/sites/default/files/2022-02/Data_Cooperatives_Europe-group2.pdf

Calzada, Igor. 2021. *"Data Co-Operatives through Data Sovereignty"* Smart Cities 4, no. 3: 1158-1172. https://doi.org/10.3390/smartcities4030062

Delacroix, Sylvie, and Neil Lawrence. 2018. *"Bottom-Up Data Trusts: Disturbing the 'One Size Fits All' Approach to Data Governance."* International Data Privacy Law, forthcoming. DOI: 10.1093/idpl/ipz014. https://ssrn.com/abstract=3265315

Fink, Alexander. 2024. *"Data cooperative".* Internet Policy Review 13 (2). DOI: 10.14763/2024.2.1752. https://policyreview.info/glossary/data-cooperative.

Ligett, Katrina, and Kobbi Nissim. 2023. *"We Need to Focus on How Our Data Is Used, Not Just How It Is Shared."* Communications of the ACM 66 (9): 34–36. DOI: 10.1145/3572912.

Mehta, Shalini, Muthukumaran Dawande, and Lin Mu. 2022. *"The Key to Designing Sustainable Data Cooperatives".* World Economic Forum. https://www.weforum.org/stories/2022/02/the-key-to-designing-sustainable-data-cooperatives/.

Miller, Kathryn. 2021. *"Radical Proposal: Data Cooperatives Could Give Us More Power Over Our Data".* Stanford HAI. https://hai.stanford.edu/news/radical-proposal-data-cooperatives-could-give-us-more-power-over-our-data.

RadicalxChange Foundation. 2023. *"Data Cooperatives in the Real World: Progress and Challenges".* YouTube. https://www.youtube.com/watch?v=7r-X8ZtceQY.

Ruhaak, Anouk. 2020. *"Data Commons & Data Trusts: What They Are and How They Relate".* Medium. https://medium.com/@anoukruhaak/data-commons-data-trust-63ac64c1c0c2.

van Weyenbergh, Gertjan. 2024*. Data Cooperatives. People Centered Internet*. https://peoplecentered.net/wp-content/uploads/2024/05/10_Data-Cooperatives.pdf.

7. This is a non-exhaustive list of sources. It will be more comprehensive in our final report.