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Current.

A People-Powered Infrastructure Network for the AI Age

The device. The cooperative. The data center. The argument for all three, as one system.

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Abstract

Artificial intelligence is being built on infrastructure most people will never own. Analyst estimates and market reporting in early 2026 put AI-infrastructure spending by the largest U.S. hyperscalers in the high hundreds of billions of dollars for 2026, with Reuters reporting projections around $800 billion and Meta alone guiding to $125-$145 billion of 2026 capital expenditures.[1][2][3][4] The buildout is also moving into debt markets. Reuters reported Meta's $25 billion bond sale in April 2026 and described the major technology companies as borrowing more heavily to fund their AI projects.[3] The communities that host these facilities absorb the externalities. They take on the power demand, the water-system pressure, the tax incentives, and the labor-market exposure, and they get no participatory stake in the upside.[5][6][7][8][9][25][26] This is the central infrastructure question of the decade, and right now is close to the last point at which an alternative can plausibly be built before the buildout concretes itself.

Current is the alternative. This paper is its founding document.

Current is a people-powered infrastructure network for the AI age. It is one proposal with three parts that work as a single system. The first part is Current One, a small home device that gives every member a tangible stake in the network, runs real edge inference workloads, and serves as the visible artifact of participation. The second is the People's Compute Cooperative, the member-owned legal entity that holds the network's assets, governs its operations, and returns surplus to its members through patronage. The third is the cooperative data center, the colocated facility where the heavy compute lives and where the economics actually work. The device gets you in the door, the co-op owns and runs the thing, and the facility is where the money is made. Together they pass the four tests that every earlier attempt at people-powered infrastructure has flunked.

The model here is not the crypto mining rig. It is the rural electric cooperative. In the 1930s, the same private capital that had electrified urban America refused to serve nine-tenths of rural households because the unit economics did not work. Federal lending, member equity, and a cooperative legal structure produced more than nine hundred electric co-ops that still operate today, still member-owned, serving fifty-six percent of the American landmass. None of this is theoretical. It is running right now in your neighbor's basement, in the form of a credit union, in the cheese aisle at the supermarket, and in the press wire your morning newspaper subscribes to. What is new is applying it to AI compute, and what is urgent is doing so before the window closes.[10][12][13]

This paper lays out the diagnosis, the historical inheritance Current draws on, the architecture of the system, the governance model, the capital stack, the unit economics, and a concrete pilot. Think of it as a starting document rather than a finished plan, the kind of pamphlet that in earlier ages of infrastructure showed up a decade before the substation did.

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Preface

The Pamphlet Comes Before the Substation

Every age of infrastructure begins with a document, not a device.

The Rochdale Pioneers wrote down their principles in 1844 before they opened a single shop. The American rural electric cooperatives spent the better part of a decade circulating pamphlets through county granges before the Rural Electrification Administration existed to lend them money. The credit union movement in the United States went through more than twenty years of model legislation, state-by-state lobbying, and educational tracts before the Federal Credit Union Act of 1934 made the structure routine. In every case the order is the same. The argument comes first, the institution comes second, and the physical plant comes last.[11][12][13]

The temptation, in a technical era, is to flip that order, to build the device first, write the manifesto second, and hope the institution catches up. That is what most of the past decade's experiments in decentralized infrastructure have tried, and it is why most of them failed. Hardware with no argument behind it is just a hardware company. Hardware with no institution behind it is just a hardware company that happens to have a story.

Current takes the opposite path. The manifesto came first. This white paper, longer and slower, is the second document. The cooperative is the institution it argues for. Current One, the device that has already begun circulating in the public imagination, is the visible expression of a participation that exists in legal and economic substance at the institutional layer behind it. The device is real, and the institution is what makes it matter.

This paper does not assume the reader has decided. It assumes the reader is willing to read carefully, to argue, to forward the document to someone whose judgment they trust, and to write back. That is the work of a founding document. It is the slowest part of building infrastructure, and the most important.

You will not find a board roster here, or a token launch, or a venture round. You will find a diagnosis, a historical inheritance, an architectural sketch, a capital stack, and a concrete pilot. The reader who finishes and agrees is asked to enlist. The reader who finishes and disagrees is asked to write back.

Pamphlets only do their work when they are read out loud, in rooms, by people who are willing to argue about them. That is the work.

Part One

The Diagnosis

On the shape of the AI infrastructure buildout, the concentration it is producing, and the externalities already visible in the public record.

I. The Shape of the Buildout

Begin with the numbers, because the numbers are the part of this story that no amount of rhetoric can soften.

In the first quarter of 2026, the largest U.S. cloud and platform companies were signaling a capital-spending cycle unlike anything in the previous generation of technology infrastructure. Reuters reported AI-related capex headed toward roughly $800 billion in 2026, while separate reporting put Alphabet's 2026 AI and data-center investment plans near $185 billion and Meta's 2026 capex guidance at $125-$145 billion.[1][2][3][4] The exact company set and the analyst methodology vary, but the direction does not. The buildout has moved into the high hundreds of billions of dollars a year.

This private infrastructure cycle is now large enough to sit alongside public capital programs and prior national buildouts. Reuters reported that AI capex is rapidly eating into Big Tech cash flow and pushing the companies toward borrowing, and Meta's April 2026 $25 billion bond sale came shortly after it raised its AI-driven capex outlook.[1][3] The cycle is not identical to the late-1990s telecom buildout, though the financing pattern is starting to rhyme with it. Enormous upfront capital commitments, long-duration assets, and debt-market exposure tied to infrastructure whose future demand is still being proven.[1]

The buildout is also extraordinarily concentrated at the silicon layer. NVIDIA's data-center business has become one of the core revenue engines of the AI infrastructure cycle, and public reporting on 2025-2026 results shows the company's data-center segment generating tens of billions of dollars per quarter.[31] The practical effect is a supply chain in which accelerator availability, high-bandwidth memory, advanced packaging, and foundry capacity can shape what every downstream cloud, startup, university, hospital system, and public agency is able to build.

The buildout is concentrated geographically too. Global and U.S. data-center demand is projected to rise sharply through 2030, and the fastest U.S. electricity-demand growth is already expected in markets like ERCOT and PJM, where large data-center loads are becoming a real planning variable.[5][6] A handful of regions, Northern Virginia, central Texas, eastern Oregon, the Phoenix corridor, already host concentrations of compute, power contracts, transmission upgrades, and water negotiations that most local residents never voted on.

Two things follow, and the rest of this paper leans on both.

The first is that the AI infrastructure era is not really a market in the usual sense. Every major participant has said publicly that demand exceeds available supply. Capacity is allocated by the seller, not the buyer. The hyperscalers are now NVIDIA's customers in much the way that mid-twentieth-century railroads were Carnegie's customers, where the buyer's leverage is set by the seller's capacity to deliver rather than by competitive alternatives. The standard mechanism for spreading benefits across society, price competition, is not operating.

The second is that the buildout is being financed in a way that creates strong path dependence. A company that has issued one-hundred-year bonds to build data centers will not, in any politically conceivable scenario, allow those data centers to be repurposed, redistributed, or repriced in ways that threaten the bond covenants. The infrastructure that gets built in this cycle will be the infrastructure that society lives with for at least a generation. Decisions made in the next thirty-six months about who owns, governs, and benefits from AI compute will be very difficult to reverse.

This is not, on its own, an argument that the current model is wrong. Large concentrated capital investments built the interstate highway system, the transcontinental railroads, and the internet backbone, all of which delivered real public benefit despite their concentrated origins. Current's argument is narrower. The problem is the absence of a public-interest or cooperatively-owned counterweight in this particular cycle, which is unusual, is not historically necessary, and is more fixable than current discourse admits.[1]

II. The Concentration Problem

Concentration is the word the rest of this paper will use, but the word does not by itself do the work. Many industries are concentrated. Boeing and Airbus together produce nearly every commercial airliner in the world. A single company, ASML, makes essentially every extreme-ultraviolet lithography machine on earth, and holds roughly ninety percent of the broader market for lithography systems.[32] The question is not whether AI infrastructure is concentrated. The question is whether the concentration matters in ways that distinguish it from other concentrated industries.

It matters, for four reasons.

Reason one. AI compute is becoming general-purpose infrastructure.

The historical pattern is clear. Technologies that start as specialized tools, electricity for street lighting, the internet for academic file transfer, mobile phones for executives, turn into infrastructure that touches every economic activity over about twenty years. AI compute is on that path. It is already in search, navigation, customer service, medical imaging, fraud detection, legal research, software development, and the daily decisions of a growing share of the white-collar workforce. The frontier of AI capability is moving toward something that looks more like a labor input than a product.[1]

When a technology becomes general-purpose infrastructure, concentration in its supply changes character. One company dominating the market for commercial dishwashers is a market position. One company dominating the cognitive substrate that every other company increasingly runs on is a chokepoint. Those are different things, and the second is the one we are looking at.

Reason two. The buildout is financed by leverage.

The shift to debt financing matters because it changes who makes the decisions when the cycle turns. Equity-financed infrastructure absorbs its own losses. Debt-financed infrastructure pushes the losses onto someone else, the bondholders, the banks, and ultimately depositors and pension funds. Hyperscalers entering the debt markets at this scale are creating a class of creditors whose interests will, at any moment of stress, come ahead of users, workers, communities, and even shareholders. That is ordinary in the corporate world. It is less ordinary to layer it onto infrastructure that society now leans on for cognitive work.[24]

The closest historical analogy is the late-1990s telecom buildout, where roughly $500 billion in fiber was financed largely with debt, much of which went bankrupt when demand did not arrive on the projected timeline. The fiber survived and got bought up by the next generation at pennies on the dollar. AI infrastructure may follow a similar arc, and the social cost of the dislocation in between, the job losses, the regional collapses, the bad debt absorbed by the public, lands on people who never saw any of the upside from the original cycle.

Reason three. The silicon supply chain is a single point of failure.

NVIDIA's estimated ninety percent share of AI accelerator spend, NVIDIA's own dependence on TSMC, TSMC's dependence on ASML for lithography equipment, and ASML's dependence on a handful of specialized optical suppliers in Germany, the Netherlands, and Japan together describe a supply chain where one political, geological, or industrial event can disrupt the whole global build cycle. The recent surge in memory chip prices is a small preview. A more serious shock, a Taiwan Strait incident, a fab fire in Eindhoven, a labor action in Korea, would dwarf the COVID-era semiconductor shortage.

Cooperative infrastructure does not fix this by itself. What it does is distribute the points of decision about how to respond. A world where compute is owned by five public companies reacting to a supply shock makes a different set of allocation choices than a world where compute is also owned by cooperatives, municipalities, universities, and member-owned utilities, each deciding in conversation with their own members.

Reason four. The asymmetry of upside and downside.[31]

This is the core observation in Current's original manifesto. The people being asked to use AI, to fold it into their work, to compete with it in their professions, to absorb its disruption of industries they have spent careers in, are not the people who own the infrastructure that produces it. The upside goes to shareholders, executives, and the relatively small workforce of the hyperscalers and their suppliers. The downside, in the form of labor displacement, wage compression, and lost professional autonomy, lands on a far wider population.

None of this is new in industrial history. The cotton mills of the early industrial revolution captured the upside of mechanized textile production and handed the downside to handloom weavers. The container shipping revolution captured the upside of global logistics and handed the downside to longshoremen and Northeastern manufacturing towns. The pattern is well understood. So is the usual response. Societies tend to meet it with some mix of regulation, redistribution, and new institutions that let the displaced share in the upside on their own terms. The cooperative is one of those institutions, and it has not yet entered this cycle. Current exists to close that gap.

III. The Externalities Already Visible

A diagnosis grounded only in capital flows would be incomplete. The AI buildout is also producing observable externalities at the community level, and these externalities are themselves part of the case for an alternative model.

Power.

A modern hyperscale AI data center can draw tens to hundreds of megawatts of continuous power, and the newest AI campuses are being discussed at gigawatt scale. The Energy Information Administration has linked rising U.S. power-demand projections to large-scale data-center growth, with the fastest increases expected in ERCOT and PJM.[5] A single AI training campus, in other words, can become an electrical-planning problem on the scale of a city.

The grid was not built for this. Regional planners who had once assumed flatter industrial load now have to account for data centers as major incremental demand. In the EIA high-demand case summarized by Reuters, faster data-center growth without commensurate generation additions would increase natural-gas generation and wholesale power prices, especially in Texas.[5]

Water.

Modern AI accelerators run hot enough that air cooling becomes increasingly difficult at scale. Direct liquid cooling can improve thermal performance, but the broader data-center ecosystem still places stress on water systems through evaporative cooling, power generation, and semiconductor supply chains. Recent research on U.S. data centers finds that the industry's environmental burden is geographically concentrated and that water-system impacts can become a public-infrastructure problem, not merely a private operating expense.[6][7]

Tax base.

Hyperscale data centers are typically sited with substantial property-tax abatements, sales-tax exemptions on equipment, and other concessions negotiated with state and local governments. The pitch is jobs. The reality is often a mismatch between enormous capital expenditure, large construction workforces, relatively modest permanent employment, and major public commitments around power, land, and infrastructure. Recent reporting on Ohio's suspension of a major data-center tax break and Meta's

Louisiana project shows how quickly these deals can become public-finance and utility-planning controversies.[8][9][30]

This is not a moral indictment of the hyperscalers, who are responding rationally to the incentives offered. It is an observation that the negotiations are systematically asymmetric. The hyperscaler has dedicated site-selection teams, in-house counsel, and access to comparative data across jurisdictions. The county economic development office, in most cases, has none of these. The result is predictable.

Labor displacement.

The labor effects of AI are the subject of a huge and fast-growing literature, and this paper will not try to summarize it. One point is enough. The workforce being displaced, knowledge workers in customer service, paralegal work, junior software development, copywriting, basic analytics, is not the workforce the hyperscalers are hiring, which is overwhelmingly specialized engineering talent. Moving economic value from displaced workers to specialized engineers, through the hyperscaler balance sheet, is a redistribution. Whether it is a desirable one is a question reasonable people argue about. That it is happening, and that the displaced have no participatory stake in the infrastructure causing it, is not in dispute.[25][26]

The composite picture.

Put the externalities side by side and a familiar shape appears. An industry whose internal economics are extraordinary, whose external effects fall on communities that never negotiated the deal, and whose governance excludes the people bearing the costs. In earlier eras, that profile has eventually drawn public regulation, antitrust action, or cooperative alternatives that pull part of the activity into a different institutional form.[5][6][7][8][9]

Regulation will likely come. Antitrust action is possible. The cooperative alternative, however, has not yet been seriously attempted in this sector. Current exists to attempt it.

Part Two

Why Every Previous Attempt Failed

On the recurring temptation to solve infrastructure problems by selling hardware to households alone, the cautionary precedent of DePIN, and the four tests any serious people-powered proposal must pass.

IV. The DePIN Wager

Decentralized Physical Infrastructure Networks, or DePIN, is the term of art for a category of projects that emerged in the mid-2010s and peaked in public attention around 2021 and 2022. The thesis is simple. Physical infrastructure, wireless networks, storage, mapping data, compute capacity, has historically been built and owned by large centralized operators, and blockchain-based incentive mechanisms make it possible to push the building of that infrastructure out to thousands or millions of individual hardware operators, who get paid in tokens for the resources they contribute.[27]

The wager is that the resulting network will be cheaper to build, because the capital is distributed, more resilient, because there is no single operator, and more legitimately public, because ownership is spread out. It is backed by some genuinely impressive numbers. Helium claims hundreds of thousands of hotspots, Filecoin claims exabytes of distributed storage, and the various render networks claim aggregate GPU counts that, on paper, rival small clusters.[27]

The wager is also a case study in how partial truths produce predictable disappointment. Each of the major DePIN networks has hit a recognizable failure pattern over the past decade. The pattern is worth understanding, because the populist instinct behind DePIN, that people should own the infrastructure they help build, is correct. Current shares that instinct. What Current does not share is DePIN's structural form, and that is what separates a movement that survives its first cycle from one that does not.

The pattern, in outline.

Phase one is enthusiasm. A network launches with a credible technical premise, a charismatic founding team, and a token. Early hardware operators earn substantial token rewards, and because the token is appreciating against fiat in the early years, the hardware looks like it pays back fast. Press coverage leans on the populist framing. The people are building the network, the people are earning, the people are winning.

Phase two is hardware sales. Token rewards are high enough to push operators to buy more hardware, and a secondary market in network-compatible devices appears. Companies form to manufacture and sell them. The marketing keeps the populist framing and adds a heavy emphasis on passive income. The operator count climbs fast. The coverage map fills in.

Phase three is the supply-demand inversion. The network's supply of resources, wireless coverage, storage capacity, compute, grows faster than demand for them. Either the customer base for the underlying service is smaller than projected, or the service competes badly with cheaper centralized alternatives, and revenue per operator falls. The token, propped up partly by speculation that future revenue will validate the network, starts to slide.

Phase four is the rationalization. Operators who joined late, at the highest hardware prices, find that their returns will never pay back the investment on any reasonable horizon. Some dump their hardware on secondary markets at steep losses. Leadership announces a run of changes, token redenominations, blockchain migrations, new product categories, pivots to enterprise customers, that get described as evolution but look a lot like triage.

Phase five, for the survivors, is a quiet stabilization at a much smaller scale than originally projected, in which a residual base of committed operators continues to run hardware for ideological or hobbyist reasons, the original founding team has cashed out, and the network's relationship to its original populist framing is, charitably, complicated.

Not every DePIN network has gone through all five phases. Some are still in the earlier ones. But the pattern is consistent enough that a serious people-powered proposal must explain, in advance, what structural features prevent it from following the same trajectory. The next chapter examines the most thoroughly documented case. The chapter after that names the four tests Current is structured to pass.

V. The Helium Case

Helium is the most thoroughly documented case in the DePIN category, and the most instructive. Founded in 2013 as a conventional Internet of Things connectivity company, it pivoted in 2019 to a blockchain-based model in which individual operators would install hotspots in their homes, provide LoRaWAN wireless coverage for low-power IoT devices, and receive HNT tokens for the coverage they provided.[27][29]

The pitch was compelling. Cellular IoT was expensive. Existing LoRaWAN networks were patchy. A people-built network could in theory deliver near-universal IoT coverage at a fraction of the cost, with operators earning real income from passive participation. Multicoin Capital and other crypto-native investors funded it heavily. Hardware makers like Bobcat, Nebra, RAK, and SenseCAP produced compliant hotspots that retailed between $400 and $700. Operators bought them by the hundreds of thousands.[27][29]

By 2021, the network had attracted substantial venture backing, wide press attention, and hundreds of thousands of hotspot operators. The apparent success of the model depended on token rewards, hardware purchases, and the expectation that real network demand would follow coverage supply.[27][29]

Then the supply-demand inversion arrived. Public criticism of Helium centered on the gap between the size of the hotspot network and the amount of paying customer demand for the underlying IoT service. That gap, more than any single scandal, is the important structural lesson for Current.[29]

The consequences cascaded. HNT prices declined sharply. Operator rewards, denominated in HNT, declined further as more hotspots competed for a fixed reward pool. Hardware that had cost operators four hundred to seven hundred dollars produced returns measured, by the network's own data, in single digits of dollars over years of operation. Critical analyses of the network documented operators whose total token rewards, over years of operation, came to a tiny fraction of what the hardware had cost them.[29]

The network's leadership responded with a series of pivots. In 2022 and 2023, Helium governance approved and completed migration from its proprietary blockchain to Solana, and the ecosystem continued to develop new product categories including Helium 5G and Helium Mobile.[28]

This is not really a story about fraud. The Helium team seems to have built what they said they would build. What went wrong was structural, a mismatch between how the network was financed and how the service had to be delivered. The financing depended on continuous hardware sales, because that was how capital entered the system. The service depended on continuous paying customers, because that was the only durable source of operator rewards. The two never lined up.

The Helium case shows what the cooperative model fixes, and what a serious people-powered AI compute network has to do differently. The fix has nothing to do with the hardware. It lives at the institutional layer behind the hardware. Helium had a device and a token, and no cooperative. There was no institution with patient capital, democratic governance, member equity, and a legal obligation to return surplus to members rather than float a tradable asset on their behalf. Without that, the device was just a hardware sale, the network became a market for hardware sales, and once the underlying service failed to generate enough revenue, the whole thing came apart.

Current is built so the same collapse cannot happen here. The next chapter names the four structural tests that distinguish a survivable people-powered network from a doomed one, and how Current passes each.

VI. The Four Tests

Reading the Helium case carefully, and reading the broader DePIN literature alongside it, produces a set of four structural questions that any serious people-powered infrastructure proposal must answer before it deploys hardware. The questions are diagnostic, not rhetorical. A proposal that cannot answer all four has not yet earned the right to ship a device.

Current was designed against these tests from the beginning. The manifesto names the goal. This chapter names the structure that makes the goal achievable.

Test one. Ownership has to be a specific legal status.

In a cooperative, ownership is a specific legal status. You get it by buying a membership share, it is governed by bylaws filed with the state, and it is enforced through member voting rights, board elections, and the right to patronage dividends. In a corporation, ownership comes from equity shares whose rights are set in the corporate charter. In a DePIN network, ownership, to the extent it exists at all, usually comes from holding the network's token, with rights that vary by project and are often changed unilaterally by the founding team. Of the three, the cooperative is the only form that gives an ordinary participant a legally enforceable claim on how the institution is governed and how its surplus is shared.

Current's answer. Every Current member buys a membership share in the People's Compute Cooperative, a duly chartered cooperative association organized under state cooperative statutes. The share carries a defined set of rights. One vote in cooperative elections regardless of how many shares you hold. Access to the cooperative's services at member rates. Patronage dividends in proportion to use. The right to stand for election to the board. And the right, on demand, to inspect the cooperative's financial statements, board minutes, and major contracts. The share is not freely tradable. It is a relationship with an institution, recorded in the bylaws and enforceable by state regulators.

When Current says ownership, it means a legal status with rights a court will enforce.

Test two. The workload has to be specified and economically meaningful.

A device that processes nothing economically meaningful is a hardware sale dressed up as a network. A device that processes something meaningful has to be able to say what that something is, in technical terms specific enough for an engineer to evaluate. Helium's hotspots advertised LoRaWAN coverage. The workload existed in principle, and it had no buyers. Specifying the workload is necessary, and it is not sufficient. The workload also needs a customer.

Current's answer. Current One runs sandboxed inference on quantized open models in the seven-billion to thirteen-billion parameter range, the size class where consumer-grade hardware can run useful inference at acceptable latency and where the workload economics are real. The device is paired with the cooperative's data center, which handles what Current One cannot, the larger-model inference, the fine-tuning, the batch processing, and the long-running enterprise workloads where the cooperative's revenue is concentrated. The customers are the cooperative's own members, individuals, small businesses, and institutions, buying services at member rates from the cooperative they collectively own. The workload has a customer because the customer is the member, and the member's stake in the cooperative produces the demand the network needs.

This is the structural innovation that makes Current work where Helium did not. Helium's operators were producing a service for hypothetical outside customers. Current's members produce a service for themselves, with surplus capacity sold to non-members at competitive rates.

Test three. The institutional form has to match the economics of the service.

AI compute has strong economies of scale at the production node. The ratio of compute to interconnect bandwidth is high. Capital cost per useful FLOP drops sharply with cluster size. Operational overhead per GPU drops sharply with concentration. A network that tried to compete with hyperscale alternatives using only distributed home hardware would deliver a product orders of magnitude less efficient per dollar of capital. The economics do not work.

This is the most important lesson from the cooperative tradition. Rural electrification did not work by handing every household a generator. It worked by pooling member capital, building a central facility, and distributing the service. The cooperative form distributes ownership. It does not need to distribute the production.

Current's answer. The Current architecture has three parts, not one. Current One is the household node, with real edge inference, real participation, and a real tangible stake. The cooperative is the institution that holds the assets and governs operations. The cooperative data center is the colocated facility where the heavy workloads run and the unit economics work. The device makes membership visible and gives every member a piece of compute they can point to. The facility makes the cooperative's economics function. Both are necessary, and neither is enough on its own. That is the choice that separates Current from every earlier DePIN proposal. Current does not pretend distributed home hardware can do the work of a data center. It runs both.

Test four. The capital has to flow from members through the institution and back to members.

In a cooperative, members put capital into the cooperative, the cooperative deploys that capital to build infrastructure that serves the members, and the surplus the infrastructure generates returns to the members. Capital flows from member, through the institution, back to member. The institution is a conduit and a steward.

In a hardware-distribution model, the operator buys hardware from a manufacturer, the manufacturer takes its margin on the sale, the operator runs the hardware at home and pays the electricity and bandwidth personally, and the network's rewards come out of whatever revenue it manages to pull from outside customers, minus the founding team's operating costs. Capital flows from member, to manufacturer, and then maybe back to member if the network succeeds. The institution is a market-maker, not a steward. That is the difference that produces the Helium pattern.

Current's answer. Current One is not sold to members for profit margin. The device goes to members at cost as part of their membership, with its capital cost folded into or amortized against the membership share. The cooperative buys the devices in volume from a single contract manufacturer at its negotiated cost, and the cooperative, not the manufacturer, holds the relationship with the member. Capital runs from the member's share purchase to the cooperative, then out to the contract manufacturer for hardware, to the colocation operator for the facility, and to the workforce for staff. Surplus comes back to the member as patronage. There is no margin-extracting middleman between the member and the institution.

The summary.

So a people-powered network has to do four things. Define ownership legally. Specify a workload that has a real customer. Match its institutional form to the economics of the service. And route capital through a member-stewarded institution instead of a hardware market. Current was built to pass all four. The chapters ahead describe how.

Part Three

The Inheritance

On the cooperative idea, the rural electric movement that built ninety percent of America's countryside, and the living cooperative economy that operates around us today.

VII. The Cooperative Idea

The cooperative is one of the oldest continuous institutional forms in the modern economy, and one of the most underappreciated. Ask most readers of this paper to define a cooperative and you will get something vague about employee ownership or buying clubs. The reality is more interesting. A cooperative is a specific legal structure, with a specific history, and a specific set of operating principles refined over roughly one hundred and eighty years. Current is a cooperative. Understanding what that means is most of understanding what Current is, and why it works where other people-powered proposals have not.

The modern cooperative tradition starts in Rochdale, England, in 1844, when twenty-eight weavers and skilled workers, squeezed by falling wages, adulterated food, and predatory company stores, pooled twenty-eight pounds and opened a shop selling honest flour, oatmeal, sugar, and butter. The shop worked. More importantly, the principles the Rochdale Pioneers wrote down to govern it worked, and those principles, updated, are still the legal basis cooperatives run on today.

The Rochdale Principles, as restated by the International Cooperative Alliance in 1995, are seven.

1. Voluntary and open membership.
2. Democratic member control. One member, one vote, regardless of capital contribution.
3. Member economic participation. Members contribute equitably to and democratically control the capital of the cooperative. Surplus is allocated to developing the cooperative, returning to members in proportion to their transactions, and supporting other activities approved by the members.[11]
4. Autonomy and independence. Cooperatives are autonomous, self-help organizations.
5. Education, training, and information. Cooperatives provide education and training to members, elected representatives, and employees so they can contribute effectively.[11]
6. Cooperation among cooperatives. Cooperatives serve their members most effectively by working together through local, regional, national, and international structures.
7. Concern for community. Cooperatives work for the sustainable development of their communities through policies approved by their members.

These principles have four properties that matter for the present argument.

First, they are legally enforceable. Cooperative incorporation statutes in most American states, and in most of Western Europe, require cooperatives to follow these principles in their bylaws and operations. A cooperative that does not follow them is not really a cooperative. It is a corporation in cooperative costume, and its members and state regulators can challenge it.

Second, they separate a cooperative from both a corporation and a nonprofit. A corporation hands surplus to shareholders in proportion to capital. A nonprofit keeps all surplus for its mission. A cooperative returns surplus to members in proportion to how much they use it, which is what patronage means. That is the feature that lines the cooperative's incentives up with its members' interests in a way neither the corporate nor the nonprofit form manages.

Third, they scale. The assumption that cooperatives are stuck at small size is just empirically wrong. The largest cooperatives in the world, Credit Agricole in France, Rabobank in the Netherlands, Mondragon in Spain, the Associated Press, Land O'Lakes, Ocean Spray, REI, Wegmans, Navy Federal Credit Union, run at the scale of large corporations, with revenues in the tens of billions and memberships in the millions. The form does not cap how big you get. It governs how decision rights and surplus get distributed.[14][15][16][17][18][19][20]

Fourth, they are well established in regulated infrastructure. The rural electric cooperatives, the rural telephone cooperatives, the agricultural marketing cooperatives, and the credit unions all operate in heavily regulated sectors, under state and federal oversight, and have done so successfully for decades. The cooperative form is not exotic in infrastructure. In some sectors it is the dominant form.

The next chapter examines the most directly relevant example.

VIII. Rural Electrification, In Detail

In 1935, when President Franklin Roosevelt created the Rural Electrification Administration by executive order, only a small share of American farms had electricity. Histories of the Rural Electrification Act generally put rural farm electrification at around ten percent in the mid-1930s.[12][13] The reason was not technology. The United States had been generating commercial electricity for half a century. It was not regulation either. It was economics. Investor-owned utilities had run the numbers on stringing transmission lines across thinly populated country and decided it would not earn a return, so they declined to do it. That was rational for the utilities. It left the countryside roughly a generation behind the cities in standard of living.

The cooperative response started before the federal program. Through the 1920s and early 1930s, farmers in Wisconsin, Minnesota, Iowa, and a few other states had been organizing local cooperatives, pooling capital from membership shares, and contracting with friendly investor-owned utilities or municipal systems to wholesale electricity. These early co-ops were small, technically marginal, and financially fragile. They proved the model could work in principle. On their own, they could not electrify the country.

The REA, created by executive order in 1935 and made a permanent agency by the Rural Electrification Act of 1936, supplied the missing piece. Low-interest, long-term federal loans, available only to cooperatives and other non-profit entities, for building rural electric infrastructure. The terms were generous for the time, thirty-five year amortization at interest rates roughly matching the federal government’s own cost of capital. The structural move was that the loans went to cooperative entities rather than investor-owned utilities, and the loan covenants protected the cooperative form.[12][13]

The results were extraordinary. Between the mid-1930s and the early 1950s, the share of electrified American farms rose from roughly ten percent to roughly ninety percent or more.[12][13] More than nine hundred rural electric cooperatives still operate today, and rural electric co-ops continue to serve tens of millions of people across the United States.[10]

Several features of the rural electric model deserve particular attention because they are directly relevant to how Current is structured.

Federal lending as catalyst, not subsidy.

The REA loans were not grants. They were loans, low interest, long term, made to entities that agreed to operate as cooperatives. They got repaid. Over the long run the default rate on REA loans came in lower than on commercial loans of comparable size. The federal role was to supply patient capital on terms the commercial market would not offer, not to prop up the operation forever. That distinction matters. A cooperative backed by federal lending is a self-sustaining institution. A cooperative backed by federal subsidy is a dependent. The rural electric co-ops became the first kind. Current is built to do the same.[12][13]

The cooperative as borrower of record.

The REA loans went to cooperative entities, and those entities were on the hook for them. That is structurally different from a model where the federal government builds infrastructure and hands it to private operators, and different again from one where the federal government subsidizes private operators to build it. The cooperative had skin in the game. Its members had committed equity. Its directors answered personally to those members. The discipline that structure imposed is part of why the loans were repaid.[12][13]

Service-area exclusivity.

The rural electric statutes in most states, and the REA regulations themselves, gave each cooperative an exclusive service territory. That was essential. Without it, an investor-owned utility could cherry-pick the most profitable rural customers, the biggest farms and the towns closest to the existing grid, and leave the cooperative with everyone no one else wanted. With exclusivity, the cooperative could cross-subsidize inside its territory, charge uniform rates across the whole service area, and use the surplus from the dense parts to reach the sparse ones. Current’s version of this is the member relationship. A member who holds equity in Current and gets services at member rates does not get casually picked off by a hyperscaler waving a temporarily lower price.[10][12]

Federation as institutional support.

Individual rural electric cooperatives are usually small, with a few thousand to a few tens of thousands of members. On their own they could not carry the legal, regulatory, financial, and technical expertise that operating in a regulated industry demands. They solved that through federation. The National Rural Electric Cooperative Association, the National Rural Utilities Cooperative Finance Corporation, and a network of generation-and-transmission cooperatives that wholesale power to the distribution co-ops. The federation supplies expertise, capital, and bargaining power no single co-op could afford. Current is built to federate from the start. The first facility is not the last. The People’s

Compute Cooperative is not the only People's Compute Cooperative. Federation is what lets the movement scale.[10]

Patient member returns.

Rural electric cooperatives do not pay dividends the way corporations do. They retain capital credits, which are the cooperative equivalent of equity, and return them to members over long stretches, usually twenty to thirty years after the patronage that earned them. That gives the institution extraordinarily patient capital, which is exactly what infrastructure with long payback periods needs. Current uses the same model. A member who joins today and uses the cooperative's services for the next twenty-five years gets the immediate benefit of member rates and the long-term, compounding benefit of capital credits returned in retirement. That is what cooperative membership has meant in the rural electric and credit union sectors for the better part of a century, and it is what it means in Current.

The rural electric movement is not a perfect analogy. AI compute differs from electricity in several ways. It is more geographically concentrated, it depreciates faster, its technology moves quicker, and its workload mix is more varied. Later chapters take each of those on. The point here is narrower. In the fairly recent American past, the cooperative model built infrastructure at a scale comparable to what this moment demands, it produced durable institutions still running ninety years later, and the ingredients of that success, federal lending, cooperative borrower-of-record, service-area exclusivity, federation, and patient capital, are all available today in updated form to Current.

IX. The Living Cooperative Economy

Before leaving the historical and present-day picture, it is worth showing how thoroughly the cooperative form is already woven into the everyday American economy. People who think of cooperatives as a fringe choice are usually working from an incomplete map. What follows is illustrative rather than complete. Current did not invent the cooperative form. It is taking a proven one into a new sector.

Financial services.

There are thousands of credit unions in the United States, with combined assets in the trillions of dollars and membership well over one hundred million Americans.[14] The largest, Navy Federal Credit Union, has more than fourteen million members and a balance sheet comparable to a large American bank.[15] Credit unions are cooperatives. Their depositors are their members. Their boards are elected by their members. Their surplus returns to their members as better rates, lower fees, and capital strength. They have run through every recession of the past century, including the 2008 financial crisis, as durable member-owned financial institutions.

Agricultural production and marketing.

Land O'Lakes, Ocean Spray, Sunkist, Sun-Maid, Welch's, Blue Diamond, Cabot Creamery, Organic Valley, and Florida's Natural are all agricultural cooperatives, owned by their producer-members. Land O'Lakes alone has annual revenues above $17 billion. These cooperatives process, brand, and market agricultural products on behalf of thousands of farmer-members, and return surplus as patronage dividends. The cooperative form has been the dominant structure for American agricultural marketing for over a century.[16]

Wholesale and retail.

Ace Hardware is a retailer-owned cooperative. Its roughly 5,000 stores are independently owned but buy through the cooperative, which negotiates supply terms and provides marketing, technology, and operational support no single store could afford on its own. True Value runs a similar model. REI, with more than twenty million members, is a consumer cooperative, where members pay a one-time lifetime fee and get an annual patronage dividend based on what they buy. Each of these runs at a scale you might assume was reserved for corporations.[17][18]

Insurance.

Many of the largest mutual insurers, State Farm, Liberty Mutual, Nationwide, and USAA, are technically mutual companies, a structural cousin of the cooperative where the policyholders are the owners. The mutual form has long dominated property and casualty insurance because aligning owner and policyholder produces, over long horizons, lower underwriting losses and lower rates.

News.

The Associated Press, the wire service that supplies a large share of the news content read in American newspapers and seen on local television, is a cooperative owned by its member newspapers and broadcasters. It has operated continuously since 1846. Its cooperative structure has been credited with both its longevity and the relative consistency of its journalistic standards across one hundred and eighty years.[19]

Housing.

Cooperative housing, where residents own shares in a corporation that owns the building rather than owning their individual units, is the dominant form of multi-family ownership in New York City and is common in several other American metros. It runs at much larger scale in continental Europe, where Sweden, Norway, and Switzerland have cooperative housing sectors that house big portions of their populations.

Worker cooperatives.

Mondragon Corporation, based in the Basque country of Spain, is a federation of worker cooperatives with combined annual revenues of roughly eleven billion euros and on the order of seventy thousand worker-owners across industrial manufacturing, retail, finance, and education. The Mondragon model is studied internationally and has direct analogues in the United States, including the Cooperative Home Care Associates in the Bronx, the largest worker cooperative in America by employment, and a growing network of conversions in which retiring small-business owners sell to their employees through cooperative structures rather than to private equity.[20]

The point.

These are not historical curiosities. They are operating, scaling, and in many cases growing right now. They handle deposits, sell groceries, market crops, insure homes, gather news, house people, and employ workers, all of it under member ownership and democratic governance. The claim that cooperatives are too small or too slow or too ideologically marginal to run AI compute does not survive contact with that list. It reflects unfamiliarity with the landscape more than a real objection.

What is true is that no cooperative currently operates AI compute infrastructure at scale. That is the gap. Current exists to fill it.

Part Four

The Architecture of Current

On the three-part system of device, cooperative, and facility, and how each part makes the others work.

X. The Three-Part System

Current is one proposal in three parts that work as a single system. The parts are not optional, and they do not arrive in phases. Each one is needed because the other two exist. This chapter lays out the architecture, and the next three take each part in turn.

The parts.

Current One is the device. A small, quiet appliance that lives in a member's household, runs sandboxed inference on quantized open models, and gives every member a tangible piece of compute they help operate.

The People's Compute Cooperative is the institution. A duly chartered cooperative association under state law, owned by its members, governed by an elected board, run by professional staff under bylaws the members can amend. It holds the assets, signs the contracts, employs the workforce, and answers to its members. It is the legal substance of Current.

The cooperative data center is the infrastructure. A colocated facility, owned by the cooperative and run for its members, where the heavy workloads run and the unit economics work.

How the parts fit together.

The device is the recruitment surface. A person becomes a member of Current by buying a membership share, and the visible expression of that membership is the Current One that shows up at their home. The device matters less because consumer hardware will displace hyperscale facilities, which it will not, and more because it makes membership real. There is a difference between holding a brokerage statement that shows shares of a fund and walking past your own crops in a field. The first is ownership in the abstract. The second is ownership you can stand next to. Cooperative membership has historically depended on both, and the abstract form on its own has consistently failed to recruit members at scale. The device is the part you can stand next to.

The cooperative is the legal and economic core. It is the entity members own, the entity that owns the facility, the entity that holds the device fleet, the entity that returns patronage. Strip out the cooperative and the device is a consumer product and the facility is a colocation tenant. Keep it, and both become member assets. The cooperative is what turns hardware into infrastructure and operators into owners.

The facility is where the workload economics work. AI compute has strong economies of scale at the production node. A facility with two thousand GPUs serves member workloads at a per-unit cost distributed home hardware cannot touch. It is where most of the cooperative's revenue is generated and most of its surplus is produced. Without the facility, the cooperative is a hobbyist club. With it, the cooperative is an infrastructure provider.

Integrating the three is the architectural innovation. Helium had the device and neither the cooperative nor the facility. The render and storage networks had distributed hardware, in some cases at real aggregate scale, and no institution that owned the hardware on behalf of participants and no central facility where the economics worked. Current has all three. That is the structural difference, and it is what determines whether the network survives its first cycle.

What the device actually does.

This is the question every reader of the original manifesto asks, and it deserves a direct answer. Current One runs sandboxed inference on quantized open-weight language models in the seven-billion to thirteen-billion parameter range. The workloads routed to the device are the ones where model size fits in consumer-grade memory, latency tolerance is moderate, and the cooperative's network of household nodes can produce useful aggregate throughput. The dashboard the member sees reports the workloads actually processed and the patronage credits actually accrued.[24]

This is, on purpose, a meaningful fraction of the total inference workload and not all of it. Anything that needs larger models, lower latency, higher throughput, or specific hardware runs on the cooperative facility. Members do not need to follow the routing decisions. The cooperative's orchestration layer makes them. What members do need to understand is that the device performs real work, that the work is credited to their membership, and that it is one component of the cooperative's overall service offering.

This is the architecture. The next three chapters describe each part in operational detail.

XI. Current One, the Device

The object.

Current One is a small home appliance, roughly the dimensions of a hardcover book stood on its spine. It plugs into a standard wall outlet and connects to the household network over Wi-Fi or Ethernet. It has a single status indicator on its front face, no user-facing console, no buttons beyond the initial pairing button, and no display. It is designed to be set up once and then forgotten.

The simplicity is the design discipline. Every prior people-powered hardware network has, over time, piled up complexity that forced operators to develop expertise, troubleshoot problems, and engage with technical communities. The complexity served the network at the operator's expense. Current One flips that priority. The member's experience is meant to be trivial, and whatever complexity exists gets absorbed by the cooperative's orchestration layer and operations staff.

What runs on it.

The device runs a hardened inference runtime that executes quantized open-weight models in the seven-to-thirteen-billion parameter range, with weights loaded on demand and rotated based on the cooperative's workload mix. The runtime is sandboxed. Workloads run in an isolated environment, with no access to the household network beyond the cooperative's gateway, no persistent storage of workload inputs or outputs beyond what processing requires, and no operator-visible insight into the workload contents. Members do not see what they are processing. The cooperative's audit committee does. This is the same model under which credit unions process member transactions. The institution sees what operations require, and the individual member sees their own activity.[24]

The workloads come from the cooperative's orchestration layer, which routes inference requests across the network by workload characteristics. A short, low-latency request for a member's own use might be routed to that member's device for instant local processing. A larger request for a member's enterprise use might go to the cooperative's data center. A batch workload from an institutional member might be split across many devices. The orchestration is what holds the network together across the device-and-facility architecture.

What it does not do.

Current One does not train models. It does not host frontier-scale workloads. On its own it does not remove the need for centralized infrastructure. It does not earn its operator passive income that would justify the hardware as a financial investment. The device is not a financial instrument. It is membership made tangible.

This is a deliberate break from the DePIN model. The DePIN device was sold to its operator as a financial proposition. Buy the hardware, run it at home, earn passive income. That proposition fell apart when the underlying service did not generate enough revenue. Current One is not sold as a financial proposition. It is provided to members as part of their membership, the way a credit union member receives a debit card or a rural electric co-op member receives a service drop and a meter. The device is a tool. The financial relationship runs through the cooperative.

How members get it.

Membership in the People's Compute Cooperative includes, among other rights, the right to receive a Current One. The device's capital cost is built into the membership share at the individual tier, or amortized against patronage at the small-business and institutional tiers. The cooperative buys the devices in volume from a single contract manufacturer at its negotiated cost. The cooperative, not the manufacturer, holds the warranty, the support relationship, and the operational responsibility for the device.

This structure has two consequences worth naming. First, the device's cost is decoupled from any margin-extracting middleman. The cooperative is not in the business of selling hardware. It is in the business of operating infrastructure for its members. The device is an operating expense, not a profit center. Second, the device's end-of-life is the cooperative's responsibility, not the member's. When devices reach the end of their useful life, the cooperative collects, refurbishes or recycles, and replaces them as part of its ongoing capital plan. The member is never stuck with stranded hardware, the way DePIN operators repeatedly have been.

The dashboard.

Each member has a dashboard showing their device's status, the workloads it has processed, and their accumulated patronage credits. The dashboard also shows the cooperative's aggregate operating data, total workloads processed, total facility utilization, monthly operating financials, and annual patronage allocations. This is the cooperative tradition of transparency applied at the device level. Every member can see what their device is doing and what the cooperative is doing. The transparency is not a marketing claim. It is a bylaw requirement.

XII. The Cooperative, the Institution

The People's Compute Cooperative is the legal entity that holds Current's assets, governs its operations, and is owned by its members. This chapter describes its form.

Incorporation.

The PCC is incorporated under the cooperative association statutes of its home state. State law matters here. Wisconsin and Minnesota have the most developed cooperative statutes in the country, the product of more than a century of agricultural and rural electric cooperative activity. Either state's statute provides the protections Current needs, a clear definition of cooperative membership, protection of the one-member-one-vote rule, statutory recognition of patronage dividends, and exemption from securities registration for membership shares that meet cooperative criteria. The pilot facility's siting decision will turn substantially on which state's cooperative statute and lending environment best support the early years.

Membership tiers.

Membership is open to any person or entity that buys a membership share and agrees to the bylaws. Three tiers exist, with different share prices and different rights of participation.

- Individual members. Natural persons. Share price in the range of one hundred to two hundred and fifty dollars. One vote, a Current One, access to cooperative services at member rates, and patronage.
- Small-business members. Sole proprietorships, professional practices, small partnerships, and small LLCs. Share price in the range of one thousand to five thousand dollars. Same governance rights as individual members, a higher service tier, and the right to deploy multiple devices for distributed workforce use.
- Institutional members. Universities, hospital systems, municipal governments, large nonprofits, regional corporations. Share price in the range of twenty-five thousand to one hundred thousand dollars. Same governance rights as individual members, one vote regardless of share contribution, which is the central cooperative principle and is not negotiable. Bulk service access, priority in capacity planning, and the right to nominate institutional representatives to board committees.

The tiers right-size the capital contribution to the member’s scale of use. They do not create classes of members with different governance rights. Every member, regardless of tier, has one vote. That is the rule that separates a cooperative from a corporation.

The board.

The cooperative is governed by a board of directors elected by the membership. The proposed structure is a board of eleven seats, composed as follows.

- Six member-elected directors, drawn from the general membership, serving staggered three-year terms. These seats are the cooperative's democratic core.
- Two technical-expert directors, elected from a slate of qualified candidates vetted by the membership committee, with required expertise in AI infrastructure, data center operations, or cooperative finance.
- One worker-elected director, drawn from the facility's operational staff, elected by the staff itself.
- One community director, drawn from the host community where the facility is sited, nominated by community partners and ratified by the membership.
- One federation director, drawn from the broader cooperative movement (rural electric, credit union, agricultural marketing), present to provide institutional ballast and to integrate Current with the federated cooperative economy.

Six of the eleven seats are general-member seats. This ensures member control as the structural majority. The remaining five seats provide technical, operational, community, and movement expertise without dominating governance.

Six of the eleven seats are general-member seats, which keeps member control as the structural majority. The other five bring technical, operational, community, and movement expertise without dominating governance.

The bylaws are the constitution of the institution. They specify the rights of members, the duties of directors, the powers of the board, the rules of election, the principles of patronage allocation, and the procedures for amendment. They are visible to every member. Amendments require member approval through a process the bylaws themselves define. This is not a minor procedural matter. The bylaws are what makes the cooperative form legally binding. A founding member of Current is, in the strict sense, a co-author of the bylaws by virtue of the right to vote on amendments.

Transparency.

The cooperative's financial statements, board minutes, major contracts, and operational policies are visible to members on demand. The bylaws spell this out. The rural electric standard is that members may request and receive any document relevant to the cooperative's operations, subject only to legitimate confidentiality interests like personnel matters, vendor pricing under non-disclosure, and member-specific information. Current adopts the same standard with one extension specific to its sector. Members are entitled to know what categories of workloads are accepted, what policies govern acceptance and refusal, and what the cooperative's overall workload composition has been over the past quarter. This is the audit right that makes the cooperative's governance legible. It is not a marketing feature. It is the institution's accountability mechanism.

XIII. The Facility, the Infrastructure

Current's data center is the cooperative's most expensive asset, its largest operational responsibility, and the place where most of its economic value is produced. This chapter describes the facility in technical and operational terms.

Scale and siting.

The pilot facility is sized at roughly one to three megawatts of IT load. Small by hyperscale standards, which now routinely exceed one hundred megawatts, substantial by community data center standards, and right-sized for a first-instance cooperative pilot. It occupies leased space in a Tier III or Tier IV-capable colocation operator under a multi-year lease, with provisions for expansion as membership grows. The lease-versus-build decision comes down to capital efficiency. A leased facility minimizes upfront capital and lets the cooperative concentrate its capital on hardware and operations, where its competitive advantage lives.

Siting considerations include reliable and reasonably-priced power, in the range of forty to eighty dollars per megawatt-hour, redundant fiber connectivity, a regional cooperative tradition that can supply legal expertise and institutional partners, and proximity to a credible founding member base. The pilot section proposes a specific region. The principles apply more broadly.

Hardware mix.

The cooperative facility runs a tiered hardware mix matched to its target workload composition.

- A near-frontier tier. A smaller cluster of current-generation training-class accelerators, NVIDIA H100/H200 or successor, with NVLink interconnect, sized to support the cooperative's high-end inference workloads, fine-tuning for institutional members, and limited training runs for academic and research members.
- A mid-tier inference layer. A larger fleet of inference-optimized accelerators, NVIDIA L40S, AMD MI300X, or successor inference-class hardware, where the cooperative's bulk inference revenue is generated and where unit economics favor a cost-disciplined operator.
- A cost-optimized batch tier. Lower-cost, lower-utilization hardware for batch processing, scientific computing, and long-running workloads with high latency tolerance. This is the workload class that is economically unattractive to

hyperscalers but valuable to research members, academic users, and members running periodic batch jobs.

The exact ratios depend on the founding member workload mix and get calibrated during the capital raise. The principle is that the cooperative does not try to beat hyperscalers at their strongest products like frontier training. It competes on the products where its structure produces real cost advantages and its governance produces real product differentiation.

Software stack.

The cooperative runs conventional inference and training software. The major open model families, Llama, Qwen, Mistral, and successors. The major inference engines, vLLM, TensorRT-LLM, SGLang. The major training frameworks, PyTorch and JAX. Current is not building a new AI stack. It is offering a member-owned alternative on the same stack the hyperscalers run.[24]

Where Current diverges from hyperscale offerings is at the trust and governance layer. Members have, by bylaw, the right to audit the workloads running on the facility, the data flowing through it, and the policies under which it operates. That is materially different from the hyperscale offering, where the operator's policies are set unilaterally and can change at any time without member input. For workloads that touch sensitive data, healthcare, legal, financial, educational, the cooperative's governance is a real product differentiator, not a rhetorical one.

Orchestration.

The cooperative's orchestration layer is what makes the device-and-facility architecture function as one network. It receives inference requests from members, through the cooperative's API, member applications, or direct partner integrations, and routes each request to the right execution target. A member's own Current One for local processing where applicable, the nearest member's Current One for low-latency distributed processing, or the facility for everything that does not fit the device profile. It aggregates results and credits the operating members through the patronage accounting system.[24]

The orchestration layer is the cooperative's most important software asset, developed and maintained by the cooperative's engineering staff. It is also, by bylaw, audit-accessible to the membership. Members may inspect the routing logic, the policies that govern it, and the operational metrics of the orchestrator. This is what cooperative governance of technical infrastructure looks like at the software layer.

Federation.

A single cooperative facility, at the pilot scale, will not have the geographic redundancy, the workload diversity, or the technical specialization to serve all of its members' needs in all conditions. The rural electric model handled this through federation. Distribution cooperatives federated into generation-and-transmission cooperatives, and into national associations that supplied expertise and capital. Current adopts the same structure from the outset.[10]

A federation of People's Compute Cooperatives, each owning and operating one or more facilities, sharing technical standards, pooling member benefits across facilities, and federating into a national cooperative association for legal, regulatory, and financial support, can scale in ways no single facility can. It can also operate at the workload level. Members of one cooperative can use the facilities of another under defined inter-cooperative arrangements, the way credit union members access ATMs at other credit unions through shared networks. The pilot facility is the first node of the federation. It will not be the last.

XIV. Governance

Governance is where the cooperative's structural advantage is real, and where most well-meaning attempts at people-powered infrastructure have failed. The temptation, in a technical era, is to handle governance through software, token voting, on-chain proposals, dashboards. The track record of that approach is poor. Software governance tends to produce capture by sophisticated actors, low participation, and brittle decisions. The cooperative tradition has spent a century and a half developing a different toolkit. The toolkit is unglamorous. It works.

One member, one vote.

This is the single most distinctive feature of cooperative governance, and the one most often misunderstood. In a cooperative, every member has one vote, regardless of how much capital they have contributed, how much they use the services, or how senior their professional standing. The largest farmer in an agricultural cooperative has the same vote as the smallest. The wealthiest depositor in a credit union has the same vote as the most modest.

This is not a sentimental commitment. It is a structural one. The single-vote rule is what keeps the cooperative from being captured by its largest members and reorganized for their benefit at the expense of the smaller ones. The history of cooperative failure, and there is a history of cooperative failure, is largely a history of cooperatives that abandoned one-member-one-vote, formally or informally, and found the structure no longer protected its members. The rule is the constitution. Abandoning it is constitutional revision.

In Current's context, one-member-one-vote has a specific implication. An institutional member that runs ten million dollars of compute a year does not get more votes than an individual member who runs fifty dollars. The institutional member gets a much larger patronage dividend, which is fair compensation for the volume they bring. They do not get to set the policies the cooperative operates under. That right is shared equally.

Patronage.

Surplus in the cooperative, revenue above expenses after appropriate reserves, returns to members in proportion to how much they use the cooperative's services. A member who bought ten percent of the cooperative's inference capacity in a given year receives ten percent of the patronage allocated to that service line. The patronage may be returned in cash, retained as additional member equity in the form of capital credits, or some mix, with the proportions set annually by the board within ranges the bylaws permit.

The patronage mechanism is what makes the cooperative an economically rational choice for members, beyond ideological preference. A member who would otherwise pay a hyperscaler full retail for inference pays Current member rates, and on top of that receives a year-end patronage return based on the cooperative's surplus. The combined economics are favorable once the cooperative reaches operational scale, the same way credit unions consistently beat commercial banks on deposit and loan rates for members who do the volume.

Patronage also sets the right incentive for management. Management is not pushed to maximize quarterly margin at the expense of member relationships, because surplus returns to members regardless. It is pushed to grow the cooperative's services, hold operational excellence, and steward the long-term capital base. That is a different incentive structure from a public corporation, and it is the one that has, in the rural electric and credit union sectors, produced institutions of remarkable durability.

Elections.

Director elections are held annually, with roughly one-third of the member-elected seats up each year. Candidates may self-nominate or be nominated by other members. The cooperative runs a member-funded candidate forum, distributes statements from every candidate to the full membership, and conducts the election by secure electronic ballot, with paper alternatives for members who request them. Results are audited by an independent auditor and published to the membership. This is the cooperative-sector standard. It works because hundreds of cooperatives have refined it over decades.

Member voice.

Beyond formal elections, the cooperative keeps active member-voice mechanisms. An annual membership meeting, in person and virtual, where the board reports and members raise concerns. A member-elected advisory council that meets quarterly with management. An open comment period on major policy changes. And a direct petition mechanism by which a defined fraction of the membership can put an item on the agenda of a member-wide vote. These are borrowed from the rural electric and credit union sectors and adapted for a network whose members are spread across many states.

The discipline of governance.

Cooperative governance is not glamorous. It runs on bylaws, board minutes, capital credit allocations, audit committees, election procedures, and patient member education. It does not produce viral moments. It does not generate token price action. What it does produce, over time, is institutions that outlast most corporations, serve their members more durably than most service providers, and weather economic cycles with far less damage than their for-profit competitors. That is the empirical record of the cooperative tradition. Current adopts that tradition because it works, not because it is fashionable.

XV. Capital and Economics

This chapter describes how Current is financed and how it pays for itself. The numbers are illustrative, sized for a pilot facility at the lower end of what is technically and economically viable. They will be replaced with specific figures during the capital raise. The structure matters more than the figures.

The capital target.

An initial pilot facility of one to three megawatts of IT load, with several hundred to several thousand GPUs in a mixed-tier configuration, plus the device fleet for the founding membership, plus operating reserves and working capital, needs a total capital stack in the range of forty to one hundred million dollars depending on hardware mix and the lease-versus-build decision. That is small relative to a hyperscale facility, which is the point. The pilot is not competing with a hyperscale facility on capacity. It is demonstrating that the cooperative model works at a scale where the unit economics are credible and the institutional foundations can be built right.

Layer one. Member equity.

Members contribute equity by buying membership shares. For a pilot of the size described, member equity should be sized to fifteen to twenty-five percent of total capital, roughly eight to twenty-five million dollars, contributed through the following.

- Individual memberships. Five thousand to twenty-five thousand individuals at $100-$250 per share, contributing one to five million dollars.
- Small-business memberships. Five hundred to two thousand small businesses at $1,000-$5,000 per share, contributing one to ten million dollars. This is the cooperative's most important early constituency, the real estate firms, marketing agencies, law practices, accounting firms, medical practices, regional manufacturers, and the broader population of companies that need AI services and have no comfortable seat at the hyperscalers.
- Institutional memberships. Fifty to two hundred institutions at $25,000-$100,000 per share, contributing five to twenty million dollars. Universities, regional hospital systems, municipal governments, nonprofit research institutes, and other anchor institutions. These provide capital and a base of high-volume, low-churn users.

Member equity is patient capital. It is not redeemable on demand. Under the bylaws, the cooperative may return capital credits to members over a long-term schedule (twenty to thirty years), but members may not, in normal circumstances, demand return of their equity. This is what distinguishes cooperative equity from a deposit or a bond and what gives the cooperative the long-term horizon necessary for infrastructure investment.

Layer two. Federal lending.

The Rural Utilities Service, the modern successor to the REA, currently makes loans for rural broadband and distance learning infrastructure under several programs, including the ReConnect Program and the Rural Broadband Access Loan and Loan Guarantee Program. The case for extending RUS authority to AI compute infrastructure in rural and underserved areas is straightforward. AI compute is increasingly an input to economic activity the way electricity, telephony, and broadband became. The access gap between rural and urban areas in AI compute is large and growing. The rural electric and rural telephone cooperatives are themselves looking for AI infrastructure for their members. And the RUS has, by statute and tradition, exactly the borrower profile that Current represents, cooperatives, municipalities, and public-private partnerships.[21][22][23]

Whether or not RUS extends its programs to AI compute, analogous federal and quasi-public lending vehicles exist. USDA's Rural Business Investment Program, the SBA 504 loan program for fixed-asset financing, the Treasury's Community Development Financial Institutions Fund, and state-level economic development financing authorities. Current's job is not to wait for a perfect federal program. It is to assemble the lending it needs from the programs that exist now, and to advocate for explicit programs as the movement scales.[21][22][23]

Federal and quasi-public lending sizes to twenty-five to thirty-five percent of capital, or twelve to thirty-five million dollars. The terms, long amortization, low interest, and modest covenants, are consistent with the historical rural electric model and with current rural broadband lending.

Layer three. Mission-aligned private debt.

Several categories of private lenders have both the mandate and the interest to lend to Current. Community development financial institutions, which exist specifically to lend to projects commercial lenders will not underwrite. Mission-driven foundations with program-related investment authority. Pension funds and endowments with environmental, social, and governance mandates. Cooperative-to-cooperative lending, where existing cooperatives, credit unions, rural electric co-ops, agricultural co-ops, lend to new cooperatives as part of the federation principle. And religious orders and university endowments with explicit cooperative-economy commitments.

This layer sizes to fifteen to twenty-five percent, or seven to twenty-five million dollars.

Layer four. Vendor financing and operating leases.

Hardware vendors and colocation operators have real incentives to offer vendor financing or operating-lease structures to a cooperative customer. Vendor financing lowers the cooperative's upfront capital requirement and shifts a portion of working-capital management to the vendor. The downside is the usual one. The vendor may impose terms that limit the cooperative's flexibility. Vendor financing should be used judiciously.

This layer sizes to ten to twenty percent, or four to twenty million dollars.

Layer five. Anchor customer commitments.

Institutional members, universities, hospital systems, municipalities, can provide capacity commitments at the founding, multi-year contracts to use a defined fraction of facility capacity at member rates, prepaid for the first one to three years. These commitments work as working capital, give lenders revenue visibility, and align institutional members' interests with the cooperative's long-term success.

Anchor commitments size to five to fifteen percent of capital, or two to fifteen million dollars in prepaid revenue.

Unit economics, illustrative.

For a pilot facility with roughly one thousand H100-equivalent GPUs at seventy-five percent average utilization, with member workloads priced at sixty percent of hyperscale list and non-member workloads at ninety percent, the cooperative can plausibly produce gross revenues in the range of twenty to forty million dollars a year. Operating costs, power, cooling, bandwidth, staff, depreciation, for a facility of this scale run twelve to twenty-two million dollars a year. Device fleet operations add roughly two to four million. Gross surplus, before debt service, lands in the range of six to sixteen million dollars a year.[1][3]

Debt service on the federal and private debt layers, for a capital stack of the size described, is in the range of three to seven million dollars per year. Current's net surplus, available for patronage, capital credits, and reserve, is therefore in the range of one to nine million dollars per year on the central case.

This is not a high-margin business, and it is not meant to be. The cooperative's competitive advantage is not margin. It is member alignment. The combined economics, member rate plus patronage, should produce a five to fifteen percent improvement on the all-in cost of comparable hyperscale services for active members, which is material at scale.

These figures are illustrative and depend heavily on hardware selection, power costs, member workload mix, and macroeconomic factors outside the cooperative's control. A serious financial model, built with vendor quotes and a defined site, will replace the illustrative figures with specific ones before any capital is committed.

Part Five

How We Build It

On the pilot, the sequence of work, and the objections any serious proposal has to answer.

XVI. The Pilot

A founding document that ends in the abstract is a document that does not get read twice. This chapter names a concrete pilot, with the understanding that any actual pilot will differ from this one in ways the early work will reveal. The point is to make the proposal specific enough to argue with.

Region.

The pilot facility should be sited in a region that combines three properties. Available power at reasonable cost. Existing concentrations of small and mid-sized businesses that make a credible founding member base. And a cooperative tradition that can supply legal expertise, institutional partners, and political support for the unusual incorporation choice.

Several American regions fit. Wisconsin and Minnesota host strong agricultural cooperative traditions, have substantial small-business economies, and have wholesale power markets with available capacity. Iowa has the same profile with the added benefit of being a major existing data center hub. The Upper Peninsula of Michigan and parts of northern New England combine cheap hydroelectric power, distressed economies that would benefit from anchor employment, and cooperative traditions that go back to the timber and dairy industries.

For an illustrative pilot, this paper proposes the Upper Midwest, a facility somewhere in the corridor between Madison, Wisconsin and Minneapolis, Minnesota. The region has rural electric cooperatives that can wholesale power. It has a strong network of community banks and credit unions that can anchor financial relationships. It has the Wisconsin and Minnesota cooperative statutes, among the most developed in the country. And it has small-business and university populations that make a credible founding member base.

Founding member base.

The illustrative founding member base.

- Five to ten thousand individual members, drawn primarily from the Upper Midwest professional, technical, and small-business population, contributing one to three million dollars in individual equity.
- Five hundred to fifteen hundred small-business members, drawn from the region's real estate, marketing, professional services, manufacturing, and

healthcare practice sectors, contributing two to seven million dollars in small-business equity. The cooperative's strongest commercial pitch is to this constituency.

- Twenty-five to seventy-five institutional members, drawn from regional universities, the University of Wisconsin system, the University of Minnesota, regional state university systems, private liberal arts colleges with technology programs, regional hospital systems, county governments, and existing cooperative institutions like the rural electric and agricultural co-ops and regional credit unions, contributing five to fifteen million dollars in institutional equity and anchor commitments.

Sequence.

The work proceeds in five phases. Each has a definable milestone, a defined capital requirement, and a defined point at which the project can be reassessed.

Phase one, the document, the network, and the legal foundation. The work of the next six to twelve months. Refine and circulate this paper. Identify and recruit three to five co-founders with complementary expertise across technical, cooperative legal, finance, community organizing, and AI infrastructure. Incorporate the cooperative under Wisconsin or Minnesota law. File the bylaws. Establish the founding board on an interim basis pending member elections. Open initial membership at modest scale, starting with the people who responded to the original Current manifesto and to this paper. Capital requirement is roughly fifty to two hundred thousand dollars, from founding members and small grants.

Phase two, the anchor customer and the financial model. The work of months six through eighteen. Sign three to five anchor institutional members with capacity commitments. Build a detailed financial model with vendor quotes, site options, and a specific hardware and software architecture. Identify and open lender conversations with the Rural Utilities Service, the relevant CDFIs, and the cooperative-friendly foundations. Sign a memorandum of understanding with a colocation operator for the pilot facility. Begin device prototyping with the chosen contract manufacturer. Capital requirement is roughly five hundred thousand to one million dollars.

Phase three, the capital raise. The work of months twelve through twenty-four. Close the full capital stack. Sign the colocation lease and the hardware purchase orders. Place the initial device manufacturing order. Recruit the operational staff. Capital requirement is the full forty to one hundred million dollar capital stack.

Phase four, the build. The work of months eighteen through thirty. Build out the facility, install and commission the hardware, complete the software stack, run member onboarding, ship the first wave of Current One devices to founding members. Launch services. Capital requirement is substantially included in phase three, with working capital reserves of three to seven million dollars from the capital stack.

Phase five, operation and federation. The work of years two through five. Operate the pilot facility at scale. Refine the operating model. Begin work on a second facility, possibly in a different region under a federated structure. Establish the national cooperative association that will federate future facilities. Capital requirement comes from operating surplus and from the next facility's capital stack.

What this pilot is not.

It is not a competitor to the hyperscalers. The pilot's scale is roughly one-thousandth of a single hyperscale campus. It will not move the AI market. What it will do is demonstrate that the cooperative model works in this sector, at a scale where success is plausible and failure does not consume the movement. It is a proof of concept and a foundation for federation. Building a cooperative compute sector at meaningful scale is the work of decades, the same way the rural electric movement took decades. The pilot is the first step, and the first step is the part that proves the rest is possible.

XVII. Objections, Answered

This paper has anticipated certain objections and answered them in context throughout. This chapter gathers the most common ones in a single place and takes them on directly, on the principle that a founding document should make its objectors visible.

Objection. The hyperscalers will simply outcompete Current on price.

They may. Current's response is not to match hyperscale prices but to offer a differentiated value proposition rooted in governance, alignment, and patronage. The empirical question is whether some defined fraction of the AI compute market will pay a modest premium, or accept a modest service-feature trade, for those properties. Credit unions have answered that question yes in financial services for ninety years. REI has answered it in outdoor retail for almost as long. Agricultural cooperatives have answered it in food production for over a century. The pattern is consistent. Cooperatives do not capture whole markets. They capture meaningful minorities of markets, sustainably and durably. A meaningful minority of the AI compute market is a substantial business.

Objection. The device is just hardware. What makes this different from Helium?

Four things, as Chapter VI laid out. First, the device is not sold for profit margin to its owner. It is provided as a benefit of membership at the cooperative's cost. Second, the device is not the financial proposition of the network. The membership is. The member's economic relationship runs through the cooperative, not the device. Third, the device works alongside a facility rather than in place of one. The workload economics are made viable by the centralized data center, not by aggregating consumer hardware to imitate one. Fourth, the institution that holds the relationship is a cooperative with legal substance, not a token issuer. Helium had a device and a token. Current has a device, a cooperative, and a facility. The Helium failure mode cannot reproduce here because the structure that produced it does not exist here.

Objection. AI compute depreciates too fast for cooperative finance to work.

AI hardware depreciates faster than electric generation infrastructure, closer to the refresh logic of high-performance computing systems. Current's response has two parts. First, faster depreciation makes patient capital and disciplined refresh planning more important, not less. Second, the cooperative's refresh cycle should be planned around different workload classes. Newer accelerators for high-value inference and fine-tuning, mid-life hardware for stable production workloads, and older hardware for batch workloads that tolerate latency.[31]

Objection. Governance at scale will fail.

This is a real risk and deserves a direct answer. The largest cooperatives in the world, Credit Agricole, Rabobank, Mondragon, operate with millions of members and decision-making structures that have, at times, grown bureaucratic and distant from their bases. Current has to learn from those cases. The structural defenses include keeping individual cooperative facilities at scales where direct member democracy stays viable, low tens of thousands of members per cooperative, federating multiple cooperatives rather than letting single ones grow without limit, mandating regular bylaw reviews by the membership, and keeping the cultural and educational practices the rural electric co-ops have used to keep their boards member-rooted. None of these defenses is perfect. All of them beat no defense.[20]

Objection. The technical talent will not work for a cooperative.

Current will not compete with hyperscale compensation for elite AI research talent, and it does not need to. It needs solid operational engineers, infrastructure specialists, and a small core of technical leadership with conviction about the project. By every available indicator the pool of such people is substantial. The senior engineers who have left hyperscalers, the founders of failed AI startups looking for a meaningful next chapter, and the infrastructure specialists with cooperative-economy commitments outnumber what the pilot facility needs by orders of magnitude. The talent question is real and solvable.

Objection. This is just another nonprofit dressed up in cooperative language.

It is not. The legal structure matters. A nonprofit has no owners, keeps all surplus for its mission, and is governed by a self-perpetuating board. A cooperative has owners, its members, distributes surplus to those owners, and is governed by a board those owners elect. The two forms are structurally different. Current is a cooperative because the surplus and the governance run to the members, not to a mission-defined institutional purpose. That distinction is not pedantic. It is the entire mechanism by which the cooperative stays accountable to the people it serves.

Objection. Federal lending will never extend to this.

It may not. Current does not depend on a single source of capital, and the federal lending layer is not the largest one in the stack. If RUS authority is not extended to AI compute infrastructure in a reasonable timeframe, the cooperative can be capitalized without it, using member equity, CDFI debt, mission-aligned private debt, vendor financing, and anchor commitments. Without federal lending the cooperative will be slower to build and the unit economics will be tighter, and the model does not collapse. The federal lending case is still worth making in parallel with the cooperative organizing case.

Objection. The hyperscalers will copy any successful feature.

They cannot copy the structure. A hyperscaler can offer member rates. It can offer transparency. It can offer governance features. What it cannot do is be member-owned. Current's structural moat is not a feature. It is the form of the institution. That is exactly the moat that has protected credit unions from commercial bank competition for ninety years. The commercial banks have copied every feature of the credit union, better rates, friendlier service, mobile banking, free checking, and the credit unions have kept growing. The form is the product.

Objection. This is utopian.

It is, by any standard, more practical than the alternatives on offer. The status quo concentrates AI infrastructure ownership in five corporations whose combined balance sheets exceed the GDP of most countries. Current proposes an institutional form that has been operating continuously in the United States for one hundred and eighty years, that built rural electricity at national scale in under two decades, that currently operates member-owned financial institutions holding more than two trillion dollars in assets, and that has produced some of the most durable economic institutions of the modern era. The utopian proposal is the one where two hundred million people use AI infrastructure they have no participatory stake in, indefinitely, with no structural intervention. Current is the practical one.[1][14][10]

Coda

We Are the Current.

The original manifesto closes with the refrain. This paper has been the long form of the same argument.

The current is what flows. It is the energy in motion, the cognitive work being done across silicon at billions of operations per second, the labor of every member every time they ask the model a question. Current, the project, the cooperative, the device, the facility, is the institutional form that lets the people doing the work own the means of doing it.

This is not a romantic vision. It is a working description of how the rural electric co-ops, the credit unions, the agricultural marketing co-ops, and the consumer cooperatives already operate. The mechanism is unglamorous. It runs on bylaws, board meetings, capital credit allocations, and audit committees. It involves disagreements about pricing, debates about service quality, and slow institutional learning. It involves the patient compounding of small commitments over long horizons. And at every step it involves the discipline of returning to the membership for direction rather than improvising from above.

None of this is what venture capital, crypto economics, or manifesto websites on their own are good at. All of it is what people have done before, in this country, at large scale, with institutions that still operate. The proposal in this paper is not to invent something new. It is to apply something old and proven to a new sector, before that sector concretes itself into a shape that cannot be undone.

The window for this work is narrower than it looks. The hyperscalers will finish their current capital cycle by 2028 or 2029. The infrastructure built in that cycle will define the operating substrate of AI for at least the decade after. A cooperative movement that begins its work in 2026 has perhaps twenty-four to thirty-six months to establish the legal entities, raise the founding capital, build the first pilot, and prove the model works. After that window the cooperative movement does not become impossible. It becomes much harder.[1][2][3]

The work begins with documents. It continues with conversations. It proceeds to legal formation, capital raising, and the building of the first facility. It scales through federation. It becomes durable through the slow accumulation of institutional habit. It succeeds when, twenty years from now, a member of a People's Compute Cooperative receives their annual capital credit allocation in the mail and thinks of it as routine.

That is the goal. That is what this paper is for.

The reader who agrees is asked to enlist. The reader who disagrees is asked to write back.

The pamphlet only does its work when it is read out loud, in rooms, by people who are willing to argue about it.

That is the work.

We are the current.

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