



DAO & BLOCKCHAIN ADVISORY · NETWORK STATES &
TOKENISATION

On-Chain Governance for Real-World Cooperatives.

A reference architecture for Mexican cooperatives going hybrid.

Mexican cooperative tradition meets mature Web3 infrastructure,
without breaking what works.



T L ; D R · T H E E N G A G E M E N T I N 3 0 S E C O N D S

What this case study covers

01 CLIENT

Established Mexican cooperative (agricultural, fishing, ejido, or artisanal) operating for years with strong community fabric but increasingly constrained by analog governance.

02 PROBLEM

Distributed members, costly in-person quarterly assemblies, low quorum, opaque treasury, locked out of impact-investor capital that requires auditable governance.

03 SOLUTION

Hybrid architecture: on-chain governance preserving Mexican legal continuity; Soulbound membership tokens; multi-sig treasury; Spanish-language member training.

04 RESULT

Higher quorum and faster decision cycles; auditable treasury; previously-blocked impact capital becomes accessible, without breaking the cooperative's legal identity.



MARKET CONTEXT

Mexican cooperative tradition meets mature on-chain tooling.

STAT · 01

53%

Of Mexico's surface area is held as social property (ejidos and agrarian communities), per the Mexican Land Portal

Why this engagement, why now

01

DAO tooling is mature: Aragon, Moloch v3, and Tally are battle-tested with hundreds of millions in treasury under management.

02

Soulbound Tokens (non-transferable membership tokens) preserve one-member-one-vote and avoid securities classification.

03

Network States and tokenisation frameworks now extend to real-world cooperatives, not just digital communities.

04

Impact-investor reporting standards align cleanly with on-chain auditable records: transparency is what gates the capital.

STAT · 02

\$T+

Global impact-investor capital actively searching for transparent, governable rural assets

STAT · 03

2021

Wyoming first recognized DAO LLCs (effective July 1); the 2024 DUNA Act adds a non-profit alternative



CLIENT · ANONYMIZED PROFILE

Who they were when we started

PROFILE



Mexican cooperative, established, member-led, strong local roots.

Anonymized client: legally constituted cooperative (S.C. de R.L. or ejido equivalent) with an established multi-year operating history and an active, dispersed membership base. Strong community fabric, real local economic impact, well-respected leadership.

Governance reality: manual records, paper voting, in-person quarterly assemblies, treasury managed by signature card. Members live across multiple states; quorum is hard. Impact funds expressed interest but couldn't underwrite without auditable records.

PRE-ENGAGEMENT POSITION

Legal cooperative; dispersed membership; manual records; quarterly in-person assemblies.

STRATEGIC PAIN

Low quorum, slow decisions, opaque treasury, no audit trail for impact capital.

INTERNAL READINESS

Strong community trust; largely non-technical membership; Spanish-only operations.



THE CHALLENGE

Four constraints that ruled out off-the-shelf DAO templates.

01

Mexican legal continuity is non-negotiable.

The cooperative's legal identity (S.C. de R.L. or ejido) is the source of its land rights and member protections. The architecture must preserve, not replace, that structure.

02

One-member-one-vote must hold.

Token-weighted governance breaks cooperative principles and risks plutocracy. Token design must structurally prevent vote buying.

03

Members are largely non-technical.

Average member is not a Web3 user. UX, training, and ongoing support must be radically simple, in Spanish, and accept paper-to-on-chain bridging.

04

Token design must avoid securities classification.

A token that looks like an investment gets regulated as one, under both Mexican and US law. Soulbound, non-transferable, non-financial.



OUR APPROACH

Five workstreams that respect what's already working.

Delivered through Arbalest's DAO advisory framework: Network States and Tokenisation, ReFi and DeFi applications, governance design, lean development and agile audit methodologies.

WORKSTREAM
01

Governance Design

Non-transferable Soulbound Tokens for membership; conviction or quadratic voting for proposal weighting; sub-DAOs for local issues; full-DAO for strategic decisions.

WORKSTREAM
02

Legal Architecture

Preserve Mexican cooperative structure as legal anchor; optional Wyoming DAO LLC or DUNA wrapper for international counterparties; clean separation of on-chain governance from off-chain legal personhood.

WORKSTREAM
03

Treasury and Multi-sig

Multi-signature wallet with on-chain transparency; integration with local banking for fiat in and out; clear separation of operational treasury from strategic reserves.

WORKSTREAM
04

Member Onboarding

Spanish-language UX, in-person training sessions led from San Pedro Garza García, paper-to-on-chain bridging for members without smartphones.

WORKSTREAM
05

Impact-Investor Reporting

Auditable on-chain governance and treasury records replace ad-hoc PDF reporting. The same transparency that gates impact capital is now available as a live dashboard.



ENGAGEMENT TIMELINE

Patient delivery. The cooperative sets the pace.

MONTHS 1 to 2

MONTHS 3 to 4

MONTHS 5 to 6

MONTHS 7 to 9

MONTHS 10+



Diagnostic and Workshops

Current governance audit, member workshops in Spanish, mapping of bylaws to smart-contract architecture.

Smart Contract Design

Token design, voting mechanism selection, multi-sig setup, security audit, optional legal wrapper preparation.

Pilot Vote

Bounded pilot: a real but contained treasury allocation decision routed through the new system. Iterate on UX based on member feedback.

Full Migration

Migrate full membership; complete training program; first full assembly cycle on-chain; paper-bridge for non-smartphone members.

Reporting Cycle

First on-chain reporting cycle to impact funds; capital that was previously blocked becomes accessible; ongoing advisory transitions to occasional support.



OUTCOMES · REFERENCE TARGETS

Targets the engagement is built around.

01 / 04

Higher quorum

Quorum participation lifts materially after migration to on-chain governance.

02 / 04

Faster

Decision cycles compressed from weeks to days for routine proposals; full assemblies still on quarterly cadence.

03 / 04

100%

Treasury transparency: every flow on-chain, fully auditable in real time.

04 / 04

Funded

New impact capital becomes accessible from funds previously blocked by reporting opacity.

BENCHMARK NOTE

Reference architecture. Outcomes are modeled targets, not historical results. This case study describes a generic Mexican cooperative scenario, not a specific named engagement. If commissioned, real outcomes depend on cooperative size, member readiness, legal structure, and impact-fund counterparties. Engagement-specific KPIs are agreed at scoping.



WHAT WE LEARNED

What this reference architecture has taught us.

01

"Tokens that look like investments get regulated as investments."

Soulbound, non-transferable membership tokens are the only safe primitive for cooperative governance. Period.

02

"Hybrid beats pure on-chain."

Legal continuity matters more than crypto purity. Preserve the existing Mexican structure as anchor; layer on-chain governance on top, not in place of.

03

"Member training IS the project."

Smart contracts are the easy part. Patient, Spanish-language, in-person training and paper-to-on-chain bridging is what determines whether the system actually gets used.



WHY ARBALEST

What makes Arbalest the right partner for this work.



01

Mexican legal and cultural fluency.

Operations anchored in San Pedro Garza García, Nuevo León. Architecture designed inside Mexican cooperative law from the start, not a US template translated.



02

Network States and Tokenisation expertise.

Decade of Web3.0 advisory across DAOs and governance, ReFi and DeFi, and Network States: applied to a real-world legal entity, not a Discord.



03

Academic and institutional ties.

Connections to Tec de Monterrey and Nuevo León 4.0 give the architecture institutional credibility with cooperatives, regulators, and impact funds alike.



04

Choosy with client selection.

Cooperatives are unique; the architecture has to be too. Hands-on, principal-led, slow when slow is right. Not a fit for assembly-line consulting.



LET'S BUILD WHAT'S NEXT

If this looks like your problem, let's talk.

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