

GOSPLAN 2.0 · OPEN PLANNING

Blockchain marketplaces: role model

Research of blockchain marketplaces with role model for governance.
Combining strategic goals of gosplan with market coordination through
on-chain marketplaces.

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A data centre hall: the physical infrastructure on which distributed ledgers and marketplaces actually run. Why they represent the future of planning and governance: combining strategic goals of "gosplan" with market coordination through on-chain resource and contract marketplaces

Main Idea

Combine strategic goals of "gosplan" (frameworks, priorities, limits) with market coordination "on the ground" — through on-chain resource and contract marketplaces. Participant roles and rights are embedded in smart contracts, data is confirmed by oracles/telemetry, and payments are tied to KPIs. Result — less bureaucracy, more transparency and fast feedback.

1. WHAT EXACTLY BREAKS CLASSICAL GOSPLAN

Where the classic model fails

- • No price signals → chronic shortages and surpluses
- • Distorted incentives ("output at any cost") → quality suffers
- • Slow, opaque reporting → padded figures and late corrections
- • The centre drowns in data → decisions arrive too late

The blockchain answer, with roles

- • Quota marketplace: tokenised quotas allocated by auction
- • Contract marketplace: NFT work orders with KPIs and a deposit
- • KPI escrow: automatic payment against results
- • Oracles and IoT: facts confirmed by telemetry
- • Rolling amendments: updates through on-chain governance

2. ROLES AND RIGHTS (WHO DOES WHAT)

Strategic centre (ministry or DAO)

Publishes targets and limits, issues quotas, amends the rules by vote

Sector regulators

Set auction parameters, KPIs and the control of quality metrics

Public buyers and municipalities

Post work orders as NFTs and accept the delivered result

Contractors and suppliers

Compete on the marketplaces, deliver the work, receive payment

Oracles and auditors

Confirm facts and quality, and are liable through their stake

Citizens and non-profits

See public KPIs and budgets without commercial secrecy

3. WHY IT WORKS: KEY ADVANTAGES

Transparency and traceability

Order status, quota movement and acceptance criteria sit in an open register. Reports become harder to invent.

Incentives towards quality rather than tonnage

Vector KPIs, a quality threshold and deferred payment reduce the gaming of metrics.

Fast feedback

Telemetry and oracles deliver data almost in real time, which makes correcting the plan easier.

Plan and market combined

The centre sets the frame while allocation happens through market auctions — fewer shortages.

Bureaucracy automated

Smart contracts absorb the routine: milestones, penalties, indexation, budget limits.

4. MODERN CASES

Food traceability — Walmart and IBM Food Trust

Tracing a consignment of mangoes back to its origin took almost seven days; on a shared ledger it took 2.2 seconds. Traceability has since stopped being voluntary: the FDA's additional recordkeeping rule for certain foods (FSMA 204) makes it mandatory, with the compliance date moved to 20 July 2028. *Retail is where traceability pays for itself first: batch, shelf life, supplier.*

Electronic transferable records — TradeTrust (Singapore)

The UNCITRAL Model Law on Electronic Transferable Records entered Singapore law in 2021. In 2026 four TradeTrust-compatible platforms were approved by the IG P&I mutual insurance clubs: an electronic bill of lading now carries the same legal standing as paper in insured maritime trade. A programme testing interoperability between platforms and carriers, running to March 2027, was launched at the same time. *A bill of lading transfers title to the cargo. While it stays on paper, the speed of the deal is the speed of a courier.*

Electricity and grid balance — Energy Web

A non-profit whose members include grid operators and utilities; an open stack for identifying distributed energy assets and letting them take part in a market. The subject here is not reporting but the ability to connect somebody else's asset to a flexibility market without manual reconciliation. *In electricity, accounting for distributed resources is not a reporting question but a real-time balancing one.*

Notarising public data — the Chilean regulator

The National Energy Commission publishes open data anchored to a public blockchain: the dataset itself stays in an ordinary system, while the ledger holds a fingerprint that proves the data was not altered after the fact. A cheap, narrow use — exactly what a blockchain is good at.

5. HOW TO BUILD A WORKING SYSTEM

Technical architecture

- • Network: a permissioned ledger for operations, anchored to a public chain for non-repudiation
- • Contracts: PlanRegistry, QuotaToken, WorkOrder NFT
- • Data: ERP, SCADA and IoT → OracleHub

Governance

- • Privacy: ZK proofs for commercial secrets
- • Governance: sector DAOs with a timelock
- • Security: staking and slashing for false data

6. WHAT THIS GIVES YOU, AND WHAT IT DOES NOT

Gives you: small decisions delegated

Millions of line items cannot be reconciled by hand. The protocols let small decisions go to the market while the centre keeps the frame.

Gives you: one checkable version of the fact

A shared ledger is cheaper than endless reconciliation between parties. The cases above show that on specific operations rather than in the abstract.

Does not give you: truth at the point of entry

A ledger protects a record from being rewritten afterwards and says nothing about whether it was true when it was written. That is a separate problem, and not a technical one.

Does not give you: a substitute for an institution

A smart contract executes a condition. Who is liable in a failure, on what authority the registry operator acts, how on-chain acceptance maps onto budget accounting — code answers none of these. Hence the frame: marketplaces belong where the subject is standardised and the fact is measurable by instrument — quotas, work orders, logistics, energy. End-to-end on-chain accounting at national scale falls outside that frame and remains an unsolved problem. An analytical platform for economic models • 2024–2026

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