

ANALYTICAL ESSAY · OVERVIEW

The Open Planning System

From the Soviet Gosplan to Blockchain Coordination 2.0

A synthesis of plan and market, transparency and democratic goal-setting as an answer to
the critique of technocracy

Analytical platform **gosplan2.ru**

Topic: digital planning, blockchain coordination, post-capitalism

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1. Introduction: the problem of economic coordination

Every economy solves one fundamental task — **coordination**: how to combine limited resources, labor and the needs of millions of people so that the right things are produced in the right quantity, place and time. The twentieth and twenty-first centuries know two great answers to this question — the **plan** and the **market** — and both, in their pure form, run into their own limits.

Market coordination relies on price signals and decentralized initiative, but it produces crises, inequality, short-sightedness toward public goods (ecology, infrastructure, healthcare) and chronic opacity. Plan coordination puts strategic goals and the common good first, but classically suffers from information shortage, distorted incentives and bureaucratic inertia.

This essay describes the **open planning system** — a model that tries to combine the strengths of both approaches: the strategic frame of the plan and the coordinating flexibility of the market, adding what both lacked: **verifiable transparency** based on modern digital technologies (distributed ledgers, smart contracts, oracles, artificial intelligence) and **democratic goal-setting**. We will examine the historical experience of the Soviet Gosplan, the design of the new model, its technical architecture, practical cases, and then the critique of the technocratic approach and the answers to it.

2. The classical Soviet Gosplan: design and contradictions

The State Planning Committee (Gosplan) was the core of the Soviet economy and the largest experiment in history in the conscious, non-market governance of a whole country's economy. Through a system of five-year plans, balances and material-technical supply, Gosplan set production targets for tens of thousands of enterprises. This system delivered forced industrialization, wartime mobilization of resources and the creation of entire industries from scratch.

However, classical centralized planning carried systemic contradictions that only intensified over time:

- **Absence of price signals.** Without market prices, the center received no reliable information about the real scarcity of resources and the structure of needs. The result was chronic shortages of some goods and surpluses of others.
- **Distorted incentives — "output at any cost."** An enterprise reported by gross indicators (tons, units, rubles). This encouraged a race for quantity at the expense of quality, variety and real usefulness.
- **Slow and opaque reporting.** Information traveled upward with delays and distortions ("padding"), and plan corrections came down with a large lag. The system reacted poorly to change.

- **Information overload at the center.** Manually reconciling millions of nomenclature items is physically impossible: the computational complexity of the planning task grew faster than the capacity of the apparatus.

It is important to stress that the real Gosplan was not a monolith: Soviet history saw periods of experiments with cost accounting, elements of market incentives (the 1965 Kosygin reform) and attempts at decentralization. A simplistic opposition of "rigid plan versus flexible market" distorts the picture. Nevertheless, the contradictions listed remain the key lessons for any future planning system.

3. Why computers did not save Soviet planning

As early as the 1960s, Soviet scientists (V. M. Glushkov and the OGAS project — the All-State Automated System) proposed to solve the computational complexity of planning with a nationwide computer network. The idea was ahead of its time: it could not be realized then technically or organizationally, while departmental interests and distrust of "data transparency" buried the project.

The lesson here is twofold. First, the problem of planning is largely a **problem of information processing and trust in data**, and this is exactly where modern technologies offer fundamentally new possibilities. Second, technology alone solves nothing: the Soviet experience showed that without the right incentive structure, without transparency and without feedback from below, even the most perfect computing infrastructure will serve the old bureaucratic pathologies. From this twofold lesson the open planning model grows.

4. Open Planning 2.0: the core idea

The core idea is to **combine the strategic goals of a "gosplan" (frameworks, priorities, limits) with market coordination "on the ground"** — through on-chain marketplaces of resources and contracts. Participant roles and rights are embedded in smart contracts, data is confirmed by oracles and telemetry, and payments are tied to KPIs (key result indicators). The result is less bureaucracy, more transparency and fast feedback.

The principle is simple: **the center sets the frame, the market fills it in, and the blockchain makes all movement of resources open and verifiable.** Let us see exactly how the new model answers each contradiction of the classical Gosplan.

Problem of the classical Gosplan	The open planning answer
No price signals → shortages and surpluses	Quota marketplace: tokenized resource quotas are distributed via auctions, generating transparent scarcity signals
"Output at any cost" → quality suffers	Contract marketplace: NFT orders (WorkOrder) with vector KPIs, a quality threshold and a deposit
Slow, opaque reporting, padding	KPI escrow and oracles/IoT: facts are confirmed by telemetry, payments are automatic and tied to results
Overloaded center, lagging decisions	Rolling updates via on-chain governance: micro-decisions are delegated to the market, the center holds only the frame

The key idea of delegation: reconciling millions of nomenclature items "by hand" is impossible — and unnecessary. The center sets **goals, limits and priorities**, while the concrete "on the ground" distribution is done by the market through auctions and contracts, staying within the given frame. This removes both the information overload of the center and the chaos of the pure market.

5. Role model and technical architecture

5.1. Who does what (roles and rights)

Participant	Function
Strategic center (ministry / DAO)	Publishes goals and limits, launches quota issuance, edits rules through voting
Industry regulators	Tune auction parameters, KPIs and control of quality metrics
State customers / municipalities	Place WorkOrders (NFT tasks), accept results
Executors / suppliers	Compete on marketplaces, perform work, receive payments
Oracles / auditors	Confirm facts and quality, bear responsibility via stake (deposit)
Citizens / NGOs	See public KPIs and budgets with no commercial secrecy

5.2. Key advantages

- **Transparency and traceability.** Order statuses, quota movement and acceptance criteria are in an open ledger; "drawing" reports is far harder.

- **Incentives for quality, not "tonnage."** Vector KPIs, a quality threshold and deferred payments reduce metric gaming.
- **Fast feedback.** Telemetry and oracles provide near real-time data — the plan is easier to correct.
- **Combining plan and market.** The center sets the frame, the market does the distribution — fewer shortages.
- **Automation of bureaucracy.** Smart contracts remove routine: milestones, penalties, indexations, budget limits.

5.3. Technical architecture

- **Network:** a permissioned L1 + an L2 rollup for scaling.
- **Contracts:** PlanRegistry, QuotaToken (quota tokens), WorkOrder NFT (contract tasks).
- **Data:** ERP/SCADA/IoT → OracleHub (a gateway of verified data).
- **Privacy:** ZK proofs (zero-knowledge proofs) for commercial secrets.
- **Governance:** industry DAOs + timelock (delayed execution of decisions).
- **Security:** stake (deposit) + slashing (burning the deposit) for false data.

6. Modern practical cases

The model rests not only on theory: some of its elements already work in the real economy, primarily in supply-chain traceability and data verification.

- **Food traceability — Walmart / IBM Food Trust.** The time to trace the origin of mangoes was cut from 7 days to 2.2 seconds. A shared ledger radically reduces verification costs.
- **Electronic documents in foreign trade — TradeTrust (Singapore).** The transfer of rights over bills of lading fell from 6–10 days to under 24 hours, with billions saved at scale.
- **Energy and grid balance — Energy Web.** Blockchain solutions with European operators for accounting of distributed resources and flexibility services in critical infrastructure.
- **Digital data notary — the Chilean regulator.** The National Energy Commission uses blockchain as a notary for open data: protection against tampering, higher trust.

An important caveat: all these cases are **narrow traceability and verification**, not "managing a whole economy." They prove the practical usefulness of individual mechanisms but are not a ready proof that the whole model works at national scale. This is an honest limitation, to which we return in the section on risks.

7. Comparison: Soviet Gosplan vs. Open Planning 2.0

Criterion	USSR (classical Gosplan)	Open Planning (2.0)
Scarcity signals	Absent, replaced by norms	Quota auctions generate transparent signals
Incentives	"Output at any cost," quantity over quality	Vector KPIs, pay for result and quality
Data and reporting	Slow, distorted, padding	Telemetry, oracles, open ledger
Decision speed	Large lag, overloaded center	Rolling updates, near real-time feedback
Plan/market balance	Plan only	Plan sets the frame, market fills it
Ownership	State	Public ownership of basic resources
Goal-setting	Party-bureaucratic, "top-down"	Democratic layer: "one person — one vote"
Transparency	Low, closed	High, public KPIs and budgets
Main risk	Shortages, bureaucracy	Capture of goal-setting by technocracy (see §9)

8. Open Planning as a concept (why not "technosocialism")

Conceptually the model rests on a synthesis of two principles. **Technocracy** is a system where key decisions are prepared by specialists and experts (engineers, economists, scientists) on the basis of science and data; its emphasis is efficiency and rational resource allocation. **Social goals** (public ownership of basic means, distribution of goods in the interest of the majority, reduction of inequality) define what the system works for.

The fundamental division: **society sets the goals democratically and transparently, while technology and markets are only the means to achieve them**. Initially this synthesis was called "technosocialism," but we deliberately abandoned the word. The reason is the critique to which the next section is devoted: in such constructs the term "socialism" too often becomes a label masking the exact opposite content. A neutral and precise name — **"open planning"** — foregrounds what truly distinguishes the model: openness (verifiability) and planning (a strategic frame), without provoking a fruitless argument about ideological labels.

9. The critique of technocracy (D. Davydov) and our

responses

The most substantive critique of such concepts is given by the philosopher D. A. Davydov in his article "Techno(crato)socialism: A Critical Look at the Ideas of B. King and R. Petty" (Sociological Studies, No. 9, 2023). He shows that King and Petty's popular "technosocialism" is a **technocratic class position**: real socio-political change is replaced by a technological surrogate, and the result is not socialism but radical inequality, close to neo-feudal. We take this critique seriously; below are its key points and our answers.

9.1. This is someone else's argument: open planning is not King and Petty

Davydov's blow targets the version where capitalism stays unchanged, abundance is delivered by robots, and a basic income (UBI) replaces social policy. Our model differs on three key points:

- **Public ownership** of basic resources — the very socialization whose absence Davydov names as King and Petty's main failure.
- The **coordination mechanism itself** changes (plan + market + verifiability), not just the "economic focus."
- Basic income is **not the central tool** and not a replacement for education and medicine — at most, an insurance.

9.2. The technocracy trap

CRITIQUE

The very discourse of "optimization through technology" legitimizes handing power to a technocratic class: those who deploy innovation stay on top, while citizens become spectators. "Socialism" becomes a label masking inequality.

OUR ANSWER

Goal-setting is separated from execution. Goals, limits and priorities are set by a democratic layer on a "one person — one vote" basis (citizen assemblies, protection against vote concentration), not by a token-weighted DAO (which would be plutocracy). Technocracy executes the plan but does not set the goals.

9.3. KPIs and Goodhart's law

CRITIQUE

Any metric is gameable. "Output at any cost" does not disappear — it mutates into "KPI at any cost." Metric-driven optimization deskills labor where value is immeasurable (care, education, medicine).

OUR ANSWER

Honest demarcation: quotas, KPIs and oracles apply to measurable, standardized domains (logistics, energy, standard procurement) and deliberately do not apply where value is immeasurable. Plus anti-gaming: rotating metrics, human audit, deferred quality-based payments.

9.4. Oracles are living labor, not "objective truth"

CRITIQUE

Behind every "automatic" confirmation stands invisible human labor — data labeling, moderation, fact verification (often precarious "ghost work"). "Objective indicators" can be faked and gamed.

OUR ANSWER

We treat oracles and labelers as labor: fair pay, transparency, accountability through stake and reputation, cross-checking of sources. Not "magic objectivity," but verifiable people and procedures.

9.5. Humanizing labor instead of deskilling it

CRITIQUE

Genuine technological abundance should expand human labor in education, medicine and care and make it more meaningful — not cut it for the sake of savings. The "discourse of savings" is neoliberalism, not socialism.

OUR ANSWER

The surplus from automating routine is directed toward increasing the number and quality of human roles in care and education. Routine is automated — the human is set free.

The main conclusion from the critique: the key risk of the model is **not technical (scalability) but political** — capture of goal-setting by a techno-administrative class. By closing this gap with a democratic goal-setting layer and a principle of humanizing labor, open planning separates itself from the neo-feudal scenario.

10. Weaknesses, risks and directions of development

Intellectual honesty requires naming the model's limitations at the current stage directly.

- **Politicization and ideologization.** References to the USSR and "socialism" instantly trigger labels and shift discussion from technology to ideology. *Solution:* a neutral frame,

abandoning ideological terms (hence the name "open planning").

- **Technological utopianism.** Blockchain is often presented as a universal solution. In practice the weak link is oracles: data from sensors and corporations can be faked, and DAO governance is unstable. *Solution:* blockchain as a targeted tool, development of verified data sources, small-scale experiments.
- **Scalability and complexity.** A national economy is billions of transactions and trillions of data points; modern blockchains cannot handle such volumes without enormous costs. *Solution:* hybrid L2 architectures, off-chain computation with on-chain verification, phased rollout.
- **Oversimplification of USSR history.** A straightforward opposition of "rigid plan versus flexible digital" distorts the real, heterogeneous history of Gosplan.

The honest conclusion: today the idea of blockchain-based digital planning is more a **research hypothesis and a direction of development** than a ready turnkey solution. The main challenge is not to repeat the utopian mistakes of the past — deploying technology where and when it actually increases transparency and quality, rather than merely creating an illusion of modernization.

11. Conclusion

The open planning system is an attempt to answer the eternal question of economic coordination at a new technological level. From the classical Gosplan it takes the strategic frame and orientation toward the common good; from the market — flexibility and scarcity signals; from modern technologies — verifiable transparency; and from the lessons of critique — the main condition without which everything else degenerates: **democratic goal-setting and the humanization of labor.**

It is precisely this combination that distinguishes open planning both from the failed bureaucratic socialism and from technocratic "technosocialism" leading to neo-feudal inequality. The plan sets the frame, markets and technology are the means, and democracy and transparency are the guarantee. Whether this model will be realized in practice is an open question; but the very framing of the task and the answers to critique built into it make it a serious subject for research and discussion.

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