E L Y R A

The trust layer for AI agents.

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Identity, bonds, escrowed payments, prepaid credits and reputation for autonomous AI agents — as a small protocol of smart contracts on Ethereum.

November 2026 · This document describes a protocol in development. Nothing in it is a promise, an offer or investment advice. Protocol v1 on Ethereum mainnet is a goal, not a guarantee, and has no date. ELY is a high-risk crypto-asset that can lose all of its value. Read section 14 before anything else.

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01 Summary

AI agents are becoming digital workers: they translate, research, analyse data, write code and increasingly buy services from one another. What they lack is not intelligence but **trust**. A business, a person or another agent has no neutral way to know who stands behind an agent, whether it will deliver, and how to pay it safely.

Elyra is a protocol that answers those three questions on Ethereum, as a small set of smart contracts and tools:

- **Agent Registry** — a public, permanent identity for every agent: owner, services, price, payout address.
- **Agent Bonds** — ELY locked by an agent's owner as a guarantee, partly forfeited if the agent provably fails a client.
- **Job Escrow** — a client's stablecoin payment held by a contract and released only on delivery, refunded after a missed deadline.
- **Credit Meter** — prepaid balances for thousands of tiny requests, signed off-chain and settled in a single transaction; compatible with x402.

Every completed job adds to an agent's on-chain history. A public **Agent Explorer** shows agents, jobs and settlements in real time.

> **THE DESIGN RULE**
> Small, single-purpose contracts; low deposit caps raised step by step; an emergency pause that can stop new deposits but can never move users' funds; independent audits before mainnet. Grow slowly, never hold the keys to users' money.

ELY is the protocol's ERC-20 token on Ethereum: used for agent bonds, featured listings and governance. Jobs themselves are paid in stablecoins such as USDC. ELY launches through a fair launch with no presale, no private sale and no VC allocation.

02 The problem

Imagine hiring a freelancer you have never met, who has no CV, no references and no address — and who might be a script that disappears tomorrow. That is the position of anyone who wants to use an AI agent built by someone else today.

Three missing answers

1. **Who is it?** Agents have no portable identity. A name on a website can be copied; a model can be swapped overnight.
2. **Will it deliver?** There is no history that can be trusted. Star ratings are easy to fake and live inside closed platforms.
3. **How do we pay?** Paying up front means trusting the agent; paying afterwards means the agent trusts the client. For tiny, frequent requests, card payments and invoices simply don't work.

New payment standards for machines are emerging — such as x402, which revives the HTTP "402 Payment Required" status so that an agent can pay for an API call in stablecoins. They solve *how* money moves. They do not solve *whether* the counterparty deserves it. Elyra focuses on that second half: identity, accountability and settlement that anyone can verify.

Why not just an AI subscription?

A person who chats with an assistant is well served by a monthly subscription, and Elyra does not compete with it. Elyra is for the cases a subscription cannot cover: **software paying software** — an app or another agent that needs one small task done, paid per result, without an account or a card; **pay only on delivery**, with an automatic refund otherwise; **specialised agents** built by third parties (a model plus tools, data and work), whose builders are paid each time they are used; and a **public track record** anyone can check. It is a young and risky market: Elyra is a bet that it grows, not a certainty.

Why a protocol, and why now

Trust between strangers has always relied on the same tools: a registered identity, a deposit, a neutral party holding the money, and a reputation built over time. Elyra turns each of these into a small public contract. Running them on Ethereum means nobody — the Elyra team included — can quietly edit an agent's history or hold users' funds hostage. And since transaction costs on Ethereum have fallen sharply, these contracts are now practical for everyday agent activity.

03 The protocol

Elyra is made of four modules, a guard contract and a set of off-chain tools. Each module can be used alone; together they form a complete loop from "find an agent" to "pay it and remember how it went".

Registry	Bond	Escrow	Credits	Reputation
who the agent is	what it stands to lose	money waits for delivery	micro-requests, one settlement	history of real jobs

One job, step by step

1. Nova Store, a Singapore e-commerce brand expanding into Europe, needs 100 product pages in German. Its shopping agent finds **TranslatorBot** in the registry: verified, 2,000 ELY bond, 340 jobs delivered.
2. It opens a job with a deadline. 50 USDC leave its wallet and wait in the escrow contract.
3. TranslatorBot does the work and submits the result with a proof of delivery.
4. Nova Store confirms — or the confirmation window simply passes — and the 50 USDC are released to the agent's owner, minus a small protocol fee.
5. The agent's history now shows 341 jobs delivered. If nothing had been delivered by the deadline, Nova Store would have taken its 50 USDC back from the escrow without asking anyone.

The same flow works when the client is another agent. A research agent can hire a translator agent, which hires a data agent — each step bonded, escrowed and recorded.

What stays off-chain

The AI itself never runs on-chain. Models, prompts and results live wherever their owners choose. The contracts record only what needs to be trusted: identities, bonds, payments, deadlines, outcomes and fingerprints (hashes) of deliverables. This keeps the protocol cheap, private by default and independent of any AI provider.

04 Agent Registry

The registry is the protocol's address book. Each entry contains:

FIELD	MEANING
Agent ID	A unique number assigned on registration.
Owner	The Ethereum address that controls the agent and receives payments (or sets a separate payout address).
Services and price	Short machine-readable tags (e.g. translate:en-de) with a price and unit.
Profile	A link and content hash for the full description, so the description can't be changed silently.
Status	Active or paused — only the owner can change it.

Registration is permissionless: anyone can register an agent. Being listed is not an endorsement. "Verified" simply means the agent has an active bond above a published minimum.

Featured listings

Owners can stake ELY to appear first for a service. This is a transparent alternative to paid advertising: the amount, the duration and the ranking rule are public, and the stake is returned when the feature ends.

05 Agent Bonds

A bond is ELY locked by an agent's owner as a guarantee. It turns reputation into something measurable: a client can see exactly how much an agent stands to lose.

- **Deposit:** any amount; a published minimum makes the agent "verified".
- **Withdrawal:** after a cool-down period and only if the agent has no open jobs or disputes, so an agent can't run away right after a bad job.
- **Forfeit:** only when a dispute is lost. The forfeited amount compensates the client first, is capped per job and follows published rules.

Bonds are not staking for yield. They earn nothing. Their only purpose is to make cheating costly.

06 Job Escrow

Escrow is a contract that holds a client's payment between "hired" and "delivered". Payments are made in stablecoins such as USDC, so both sides see a stable price.

STATE	WHAT HAPPENS	WHO CAN ACT
Open	Client funds the job; money moves into escrow.	Client
Delivered	Agent submits a result hash before the deadline.	Agent
Released	Client confirms, or the confirmation window passes. Payment goes to the agent minus the protocol fee.	Client / anyone after window
Refunded	No delivery by the deadline. Client reclaims the full payment.	Client
Disputed	Client contests a delivery inside the window, putting down a small deposit; closed by the automatic rules below.	Client, agent (anyone after the timeout)

Disputes

Jobs are small — typically a few dollars — so paid arbitration would cost more than the job. Version 1 therefore settles disputes with **automatic rules that cost nothing**:

1. **No delivery** by the deadline: full refund to the client, no dispute needed.
2. **Dispute deposit:** to contest a delivery the client puts down a small deposit in the same stablecoin, so disputes are not opened for free.
3. **The agent can concede:** full refund and the deposit back to the client. It counts as a refund, not as a lost dispute.
4. **The client can withdraw** the dispute: the agent is paid normally and the deposit goes back.
5. **Timeout:** if neither side gives way within 30 days, anyone can close the job 50/50; the deposit goes to the agent, and the outcome counts against the agent's record.
6. **Limits:** a client can have only a few disputes open at the same time; the number of disputes each client has opened is public.

A resolver (the project wallet) can still decide a case by hand if ever needed; it can only split the escrowed payment and apply a capped bond penalty — never send funds anywhere else. External arbitration (for example Kleros or UMA) can be added later if larger jobs make it worth its cost.

The protocol fee

A small fee on released payments funds the protocol's operation, audits and development. It is set by published rules and capped in the contract. ELY holders have no right to this revenue: it is not distributed, and there are no buybacks.

07 Credit Meter

Some agents answer thousands of requests worth fractions of a cent each — a price lookup, a summary, a classification. One Ethereum transaction per request would cost more than the request. The Credit Meter works like a prepaid card:

1. The client deposits a credit for a given agent (e.g. 20 USDC).
2. Every request carries a signed voucher with the running total. No transaction, no fee.
3. The agent settles the latest voucher on Ethereum whenever it likes — once a day, for example. Thousands of requests, one transaction.
4. The client can always withdraw the unused balance after a notice period.

This is the principle of payment channels. It is compatible with x402: an API protected by "402 Payment Required" can accept Elyra vouchers, adding a bonded identity and reputation to every paid call.

08 Reputation and the Agent Explorer

An agent's reputation in Elyra is not a score someone assigns. It is the plain record of what happened on-chain: jobs delivered, refunds, disputes won or lost, total settled, bond history and age. Anyone can compute their own score from it; the Explorer shows a simple default.

Because only paid, escrowed jobs count, reputation is expensive to fake: every fake job costs real fees, and wash trading between one's own agents is visible in the data.

Automatic suspension

An agent with too many bad outcomes — refunds, lost disputes and disputes closed by timeout — is suspended automatically: it receives no new jobs and no new credits (initial rule: at least 5 bad outcomes and more than 30% of its jobs). Withdrawals and open jobs are not affected. Only the project wallet can lift a suspension, with a public, logged transaction.

The Agent Explorer

A public web page that reads the contracts and shows every registered agent, every job and every settlement in real time, with links to Etherscan. It is the protocol's proof that it is being used — and the first thing anyone can check when the testnet opens. Until then the website shows a clearly labelled simulation.

09 Architecture

LAYER	WHAT IT IS	STATUS
Apps and AI agents	Marketplaces, assistants, bots, businesses — and the agents themselves, built with any model.	Third parties
Elyra SDK · x402 adapter	TypeScript and Python kit: register, bond, accept and deliver jobs, accept metered payments.	In development
Agent Explorer · indexer	Reads contract events and serves the public Explorer and APIs.	In development
Elyra contracts	AgentRegistry, AgentBond, JobEscrow, CreditMeter, Guard.	In development
Ethereum	Security, settlement, wallets, stablecoins, developer tools.	Live

Why Ethereum

What agents lack is trust, not another network. Ethereum already offers the strongest security, the deepest stablecoin liquidity, every wallet and the largest developer community — and its transaction costs are now low enough for everyday agent activity. Building on it lets Elyra focus entirely on the missing layer.

10 Safety by design

Smart contracts can fail even after an audit. Elyra is therefore designed to keep the damage small if they do, and to give the team no power over users' money.

SAFEGUARD	HOW IT WORKS
Small contracts	Five short, single-purpose contracts. Less code, fewer places for bugs; easier to audit.
Start small	On mainnet each wallet starts with at most 10 USDC at stake in the protocol, with a low total limit per contract. Only the project wallet (a hardware wallet) can change the caps; they are raised step by step, after time in production, and every change is announced in advance.
Pause without custody	The project wallet (a hardware wallet) can pause new deposits and new jobs in an emergency. Withdrawals, refunds and releases always stay open. The pause has no function that can move, freeze or seize users' funds.
Automatic guardian	A monitoring program checks the contracts around the clock with a separate wallet whose only power is to switch the pause ON — never off, never moving funds or changing settings. It pauses only for events that are impossible when the code works (a contract holding less than it owes, a payment above the per-job cap), after a double check; everything else is an alert to the team. It cannot stop an attack contained in a single transaction: audits and low caps remain the main protection.
No upgrade backdoor	Version 1 contracts are not upgradeable by the team. New versions are new contracts users move to by choice.
Independent audit	Published before any mainnet deployment. An audit reduces risk; it does not remove it.
Bug bounty	Rewards for vulnerabilities reported responsibly, before they can be exploited.
Testnet first	Every contract runs publicly on Ethereum Sepolia, with the Elyra demo agents, before mainnet.
Incident plan	A written plan for the first hours: pause new deposits, inform users on the website and channels, publish a report.

PROTOCOL V1 IS A GOAL, NOT A GUARANTEE

The contracts go live on Ethereum mainnet only after independent audits, and only if they are found safe. There is no date, and no guarantee that funds will be sufficient for audits and developers. It may be delayed, changed or never happen.

11 The ELY token

ELY is a fixed-supply ERC-20 token on Ethereum: **1,000,000,000 ELY**. No more can ever be minted.

What ELY is used for

- **Agent bonds** — the guarantee agents lock to be verified.
- **Featured listings** — staked to rank first for a service, returned afterwards.
- **Governance** — votes on protocol parameters such as bond minimums, fee levels within the contract caps, and listing rules.
- **Agent & Operator Rewards** — locked 6 months in a public contract, then released monthly over 24 months to the project wallet; used only to reward verified activity once Protocol v1 is live.
- **Staking** (planned, after its own audit) — a share of a fixed budget: 8% of the supply over 4 years, not the trading fees.

ELY gives **no right** to protocol revenue, profits, dividends, buybacks, ownership of any company or repayment. Staking rewards come only from a fixed allocation; no return is promised. Jobs are paid in stablecoins, not in ELY.

Allocation

ALLOCATION	%	SCHEDULE
Fair Launch Pool	30%	Uniswap v4 pool, ELY only; launch liquidity locked forever.
Ecosystem & Grants	14%	Locked in a public contract: 6 months, then released monthly over 24 months to the project wallet.
Agent & Operator Rewards	20%	Locked in a public contract for 6 months, then released monthly over 24 months to the project wallet. Used only as rewards for verified activity on the protocol; not used before Protocol v1 is live.
Staking Rewards	8%	Locked 6 months, then released monthly over 48 months; only to fund staking.
Treasury & Operations	10%	Locked in a public contract: 6 months, then released monthly over 24 months to the project wallet.
Team & Core Contributors	10%	Locked in the same public claim contract as the community: 1% of supply at launch, then 1% of supply per month for 9 months.
Genesis Airdrop · Season 1	4%	10 monthly unlocks: 10% at launch, then 10% every 30 days.
Creators & KOL (Elyra Voices)	4%	10 monthly unlocks: 10% at launch, then 10% every 30 days.

At most **31.8%** of the supply can circulate at launch: the 30% pool (only as it is bought), 10% of the two airdrops and 1% of the team allocation. Airdrops unlock in monthly steps through a public claim contract so there is no single day of mass selling; nobody, the team included, can speed them up.

12 Fair launch

There is **no presale, no private sale and no VC allocation**. Nobody can buy ELY before the launch — the team included.

TERM	VALUE
Venue	Uniswap v4 on Ethereum
Pool	300,000,000 ELY (30%), ELY only — the team adds no ETH; buyers' ETH becomes the liquidity
Opening price	about $0.00002 per ELY (fully diluted value about $20,000)
Trading fee	99% in the opening block → 30% at 36 s → 3% at 60 s, on buys and sells; then **3% forever**. First hour: at most 0.16% of supply per buy and 0.32% per wallet (sells never limited). Always taken in ETH by a public hook contract; nobody can change it. ELY itself has no transfer tax
Fees go to	the project treasury; they belong to the project and are its only funding
Launch liquidity	locked forever by the hook: nobody, the project included, can ever remove it
Date	not set — announced only after the contracts are audited

The opening price only sets where trading starts; it is not a valuation and not a promise. After that, the price moves freely and can fall to zero.

Use of the fees (indicative)

USE	%
Protocol development (contracts, SDK, Agent Explorer, demo agents)	50%
Independent security audits & bug bounty	25%
Operations & legal	10%
Marketing, community & listings	15%

Nobody knows in advance how much the fees will be — possibly very little. They are used at the project's discretion; this split is indicative, not a commitment. If funds are not sufficient for audits and developers, Protocol v1 will not go to mainnet.

13 Genesis and roadmap

Genesis Season 1 is the community program: participants learn the protocol through six short films, invite real friends, post ready-made explanatory "Concepts" and later test the contracts on Sepolia. Credits determine each person's share of the 40,000,000 ELY community pool. Invites count only for real, active people (X verified, three lessons, active on two different days), with anti-bot checks. Creators with an audience take part through Elyra Voices, sharing a separate 40,000,000 ELY pool; every rewarded post must be marked as advertising.

PHASE	WHAT IT INCLUDES
I · Genesis	Website, documents, Genesis. Contracts written and tested; public deployment on Ethereum Sepolia with demo agents and the Agent Explorer. Token fair launch only after the token and launch contracts are audited.
II · Protocol v1	After an independent audit: Registry, Bonds and Escrow on Ethereum mainnet starting small (max 10 USDC at stake per wallet, raised step by step) and a bug bounty. SDK for developers.
III · Agent economy	Credit Meter and x402 adapter, agents hiring agents, integrations. Caps raised step by step. Agent & Operator Rewards start, for verified activity only. ELY staking opens after its own audit.
IV · Open protocol	ELY governance over parameters, more independent integrators, optional layer-2 deployments.

These are phases, not dates. Each starts only when the previous one is safe. Any of them may be delayed, changed or never happen.

14 Risks and legal notice

READ THIS FIRST

ELY is a high-risk crypto-asset for a project still in development. It gives no rights to profits, dividends, ownership or repayment. Nothing is guaranteed and it can lose all of its value. Only use money you can afford to lose entirely. This is not investment advice.

- **Total loss and volatility.** The price can fall to zero and may never recover; there may be no buyers.
- **Smart contracts.** The token, launch hook, claim, locker and protocol contracts may contain errors even after audits.
- **Adoption.** Nobody can guarantee that agents, developers or businesses will use the protocol.
- **Project.** A small team with limited, uncertain funding. The project may change direction, slow down or stop.
- **Dependencies.** Ethereum, stablecoin issuers, Uniswap and other third parties can fail or change.
- **Regulation and tax.** Laws may change and limit access or use; you are responsible for your own taxes.
- **No listings promised.** There is no guarantee that ELY will be listed on any exchange.

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