Ethereum Institutional

State of the Ledger

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Ethereum’s usage, transaction economics, security, and the upgrades that matter to institutions.

Ben Thalman, Benjamin Chodroff 5 November 2026

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Quick read

Mainnet is busier, and cheap to use. Ethereum mainnet averaged 2.17M transactions a day from January to October 2026, up 54% year over year. Its median fee averaged 3.5¢ over those months, down from 35¢ a year earlier. Ethereum and its layer 2s together averaged about 25M transactions a day.

Money is moving, not just sitting. Stablecoins moved $25.8T on Ethereum mainnet from January to October 2026, 61% more than in the same period of 2025.

More capital secures the network. On 31 October 2026, 44.2M ETH was staked, 36.1% of circulating supply, against 33.3M and 27.6% a year earlier.

The next two upgrades change how institutions build, not whether they can. Glamsterdam, which could arrive in early 2027, is designed to support higher execution capacity and reprices state creation; its activation date is unconfirmed. Hegotá, expected in 2027 with scope still settling, schedules frame transactions, which bring account abstraction into the protocol.

The ledger today

Usage and cost

Growth comes from both layers. Ethereum mainnet, the settlement layer, averaged 54% more transactions a day from January to October 2026 than in the same months of 2025. Layer 2s averaged 23.3M transactions a day from January to October 2026, up 18% on the same period of 2025; the full-year average in 2022 was 0.4M. Layer 2s here are the 47 networks Token Terminal counts as settling to Ethereum mainnet, through bridge deposits on Ethereum or fees paid to it, with today's membership applied to earlier years. Over the 30 days to 2 November, the busiest were Base (8.3M a day), Robinhood Chain (6.9M), Arbitrum One (1.6M) and OP Mainnet (1.5M).

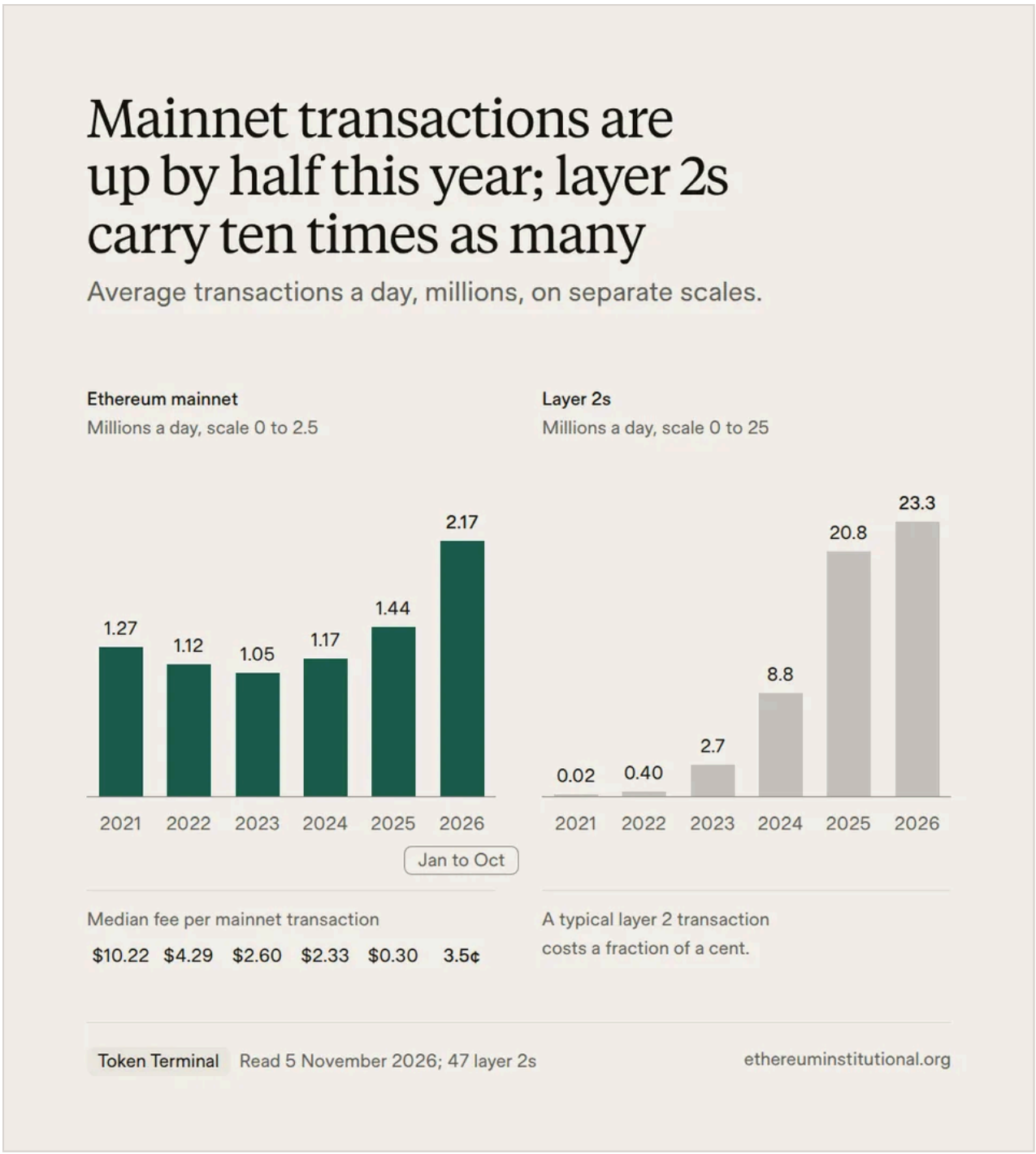


Figure 1.
Token Terminal, read 5 November 2026: yearly averages of daily transactions for Ethereum and a 47-chain layer 2 cohort, and the average of daily median mainnet fees; 2026 is January to October.

Transactions are not users or institutional payments. Fees are Token Terminal's median fee per transaction, averaged across days. The fee strip covers mainnet only; on layer 2s, where most transactions happen, a typical transaction costs a fraction of a cent. Years before 2026 are full-year averages; 2026 covers January to October.

Stablecoin activity

From January to October 2026, stablecoin transfer volume on mainnet totaled $25.8T, 61% more than in the same months of 2025, and the number of transfers rose 2.5x to 463M. Transfer volume is not the same as payments or institutional settlement, and it spikes at each quarter end, so like periods must be compared.

Note: these figures count every transfer. Visa's onchain analytics filters out activity it judges to be bots or internal transfers; on that stricter measure, mainnet stablecoin volume grew about 50% in the year to 30 September 2026.



Figure 2.
Token Terminal, read 4 November 2026: stablecoin sector on Ethereum mainnet, monthly sums, unadjusted, October 2024 to October 2026.

Capital securing Ethereum

Staked ETH is the economic weight behind Ethereum's consensus: validators vote with it and lose part of it for misbehaving. Between 31 October 2025 and 31 October 2026, staked ETH rose from 33.3M to 44.2M, and from 27.6% to 36.1% of circulating supply. A third more ETH now secures the network than a year ago. The economic security behind Ethereum's consensus has grown with it (in ETH terms).

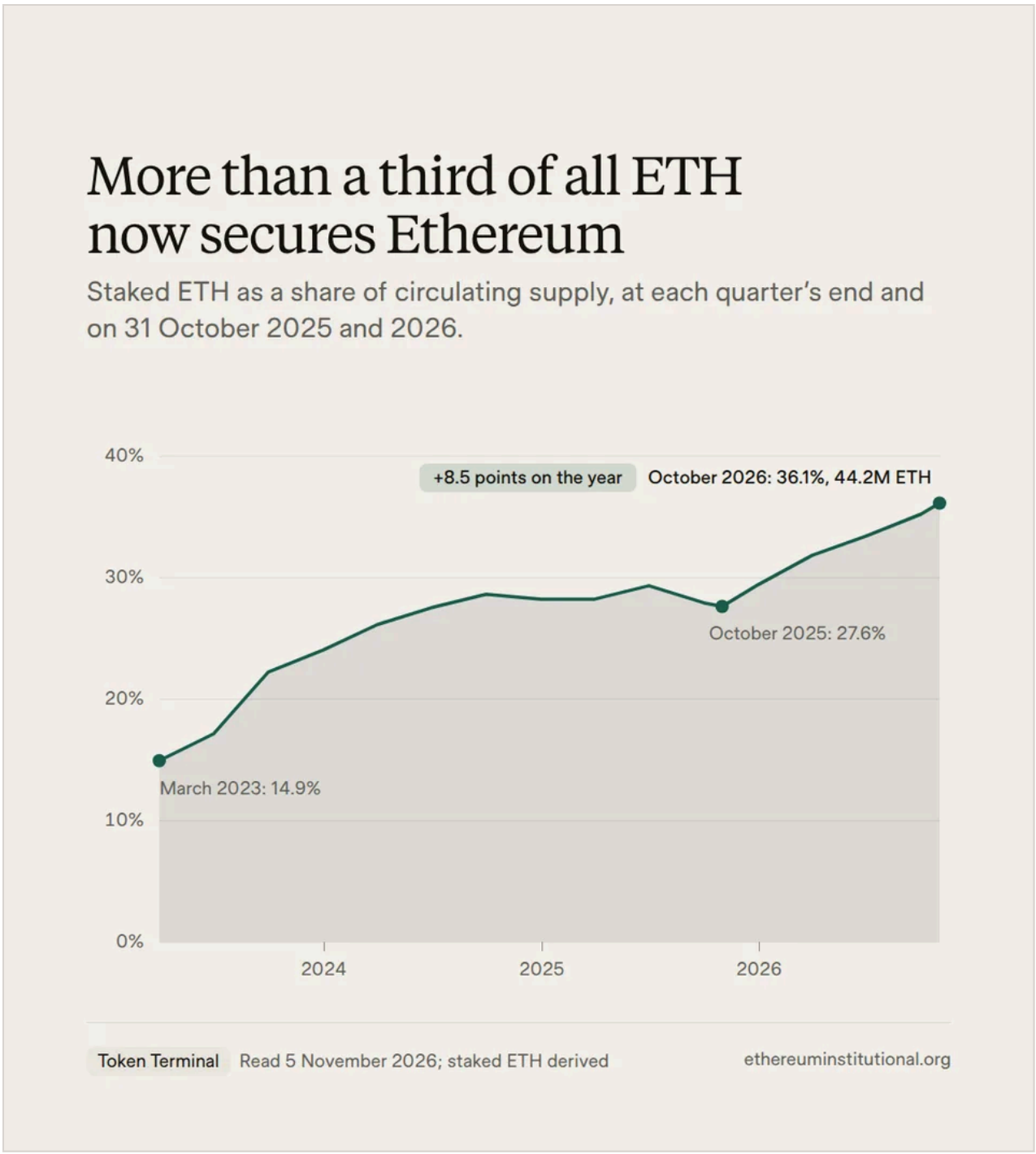


Figure 3.
Token Terminal, read 5 November 2026: staked ETH derived as staking market cap divided by ETH price, as a share of circulating supply, Q1 2023 to 31 October 2026.

What the next upgrades change

Glamsterdam adds capacity and changes what things cost; Hegotá changes how accounts authorize transactions. Neither has a confirmed mainnet date.

Glamsterdam (early 2027, Ethereum Institutional's estimate)

The Ethereum Foundation postponed the Hoodi testnet fork on 22 October to study how one repricing change interacts with live contracts. No new date is set.

Three changes matter to institutions:

1. More room per block. Enshrined proposer-builder separation (EIP-7732) and block-level access lists (EIP-7928) support a higher gas limit, including a proposed 200M level against 60M today, subject to testing and validator adoption.

2. State creation is repriced. A simple ETH transfer to an existing account stays at 21,000 gas; operations that create new state, such as a first transfer to a new address or a contract deployment, cost more gas (EIP-8037, parameters not final). Issuers should benchmark first-time holder transfers, allowlisting, wallet creation and contract deployment separately: the effect on total fees depends on which operations create state, the final parameters and gas prices.

3. Faster staking exits. Exit capacity rises about 5x at current stake (EIP-8061), easing exit queue risk for institutional stakers.

What this means for institutions. Glamsterdam is designed to support more activity while limiting the storage burden that new accounts, balances and contracts create. A simple ETH transfer to an existing account keeps its 21,000-gas cost. Token payments and other contract interactions may use more gas, including when they update existing balances. The largest increases are for creating new state, because it adds to the data Ethereum must maintain as capacity grows.

At the illustrative prices below, the extra network fees are modest: about three cents for the reported first-time USDC transfer, and about $10.70 for the account-creation and code-deposit components of a large contract. These are examples, not full onboarding or deployment costs. The table holds the gas price fixed (0.144 gwei, with ETH at $2,262; Etherscan, 3 November 2026, 12:02 UTC) to isolate the repricing:

Operation	Gas today	Gas under the current draft	Cost today	Cost after, same gas price	Gas-price fall that offsets it, at unchanged ETH price
Simple ETH transfer to an existing account	21,000	21,000	0.7¢	0.7¢	None needed
ETH transfer that creates a new account	21,000	204,600	0.7¢	6.7¢	90%
USDC transfer to a first-time holder (reported Sepolia example)	62,760	153,921	2.0¢	5.0¢	59%
Code-deposit and account-creation components, 24 kB contract	About 4.9M	About 37.8M	$1.61	$12.31	87%

Source: OpenZeppelin's relayer issue 949, measured on Sepolia, and Etherscan's gas tracker.

Greater capacity could put downward pressure on gas prices, partly or fully offsetting the higher gas use. The outcome depends on demand, each operation's gas use and the ETH price. The last column shows the gas-price fall needed to offset the increase; it is a threshold, not a forecast.

Note: transfer figures as reported from Sepolia, where Glamsterdam has run since 6 October (OpenZeppelin); the USDC example is contract-specific. Parameters are not final.

What to do: ask your wallet, custody and token providers to confirm they have tested under the new rules on the rescheduled testnets. The full EIP list is in the appendix.

Hegotá (2027, scope not final)

Two headline proposals are scheduled: frame transactions (EIP-8141) and fork-choice enforced inclusion lists (FOCIL) (EIP-7805).

Frame transactions bring account abstraction into the protocol. Much of this already works through smart accounts like Safe and ERC-4337. The gain is native support for any account type, swappable signature schemes, and fee sponsorship, where a sponsor pays ETH and takes a stablecoin in the same transaction. The EIP is still in Draft.

A bank treasury can already use smart-account infrastructure for multiple approvals, fee sponsorship and atomic execution. Frame transactions would bring more of this into Ethereum's native transaction format and add a native path to post-quantum signatures. The institutional question is what this simplifies relative to the treasury's existing setup, not whether these controls become possible for the first time.

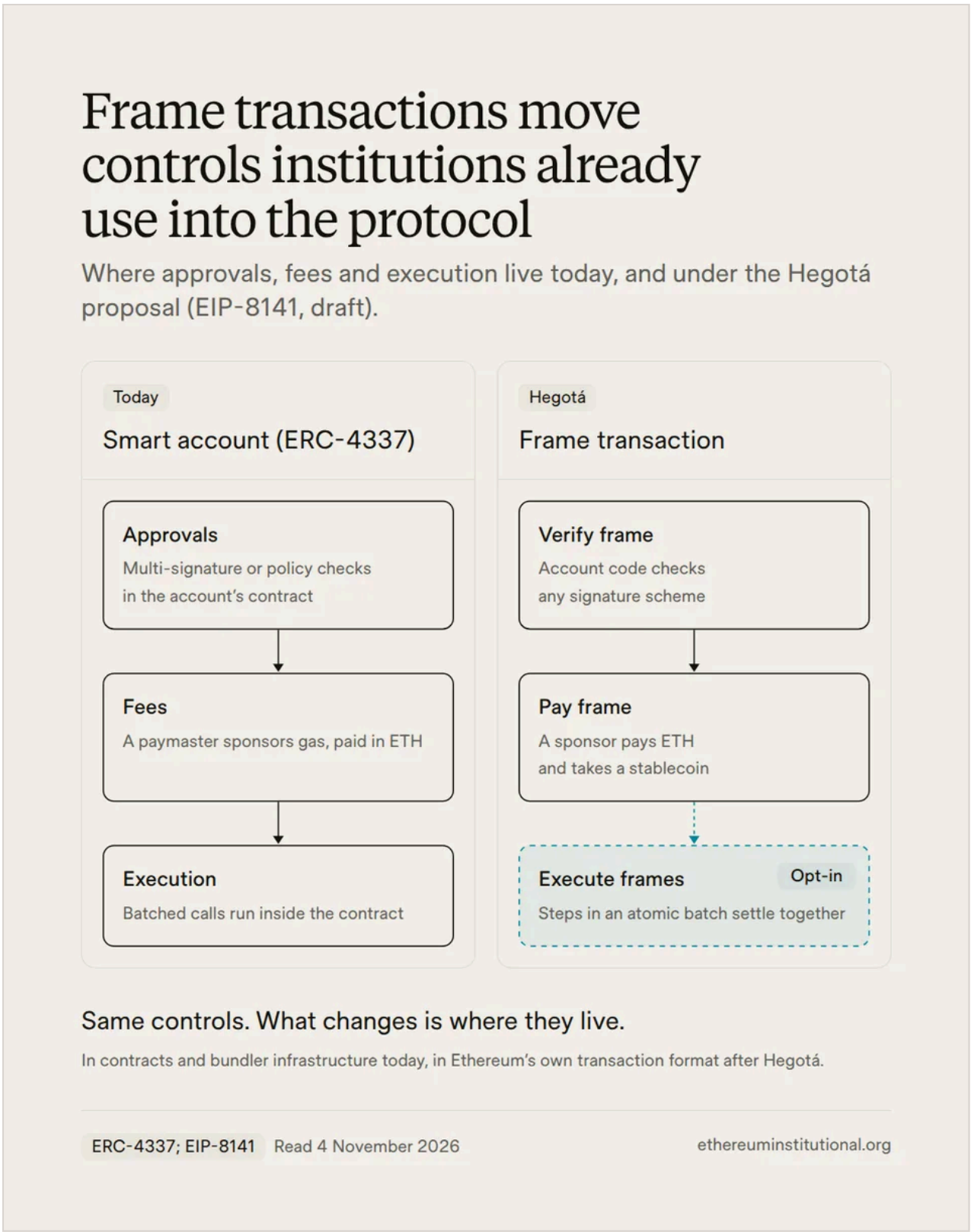


Figure 4.
Smart account today and proposed frame transaction. Sources: ERC-4337, EIP-8141 (draft).

FOCIL strengthens censorship resistance. A committee of validators can require certain transactions to be included in blocks, reducing dependence on individual builders. For regulated institutions, that raises a question worth answering properly: how stronger inclusion guarantees interact with sanctions and

compliance obligations, and what controls remain at the application, wallet and validator level. Part 2 of this report (forthcoming) will cover it in detail.

Post-quantum: an updated view

An accelerated ambition was outlined this week. At Devcon 8 on 3 November, Justin Drake set an aspirational December 2028 goal for Ethereum's full post-quantum and post-AI transition, ahead of the EF's published December 2029 target (The Crypto Times). The two dates cover different scopes, and the EF reassesses in January 2027 (TokenPost).

EI's view: institutions don't need to wait for a protocol deadline to inventory where keys and signing flows depend on elliptic curves, and to plan migration. That planning should keep three things apart: account-level signature experiments, which are possible today; production-ready implementations, which the cited verifiers are not yet; and network-wide quantum resistance, which depends on the forks above.

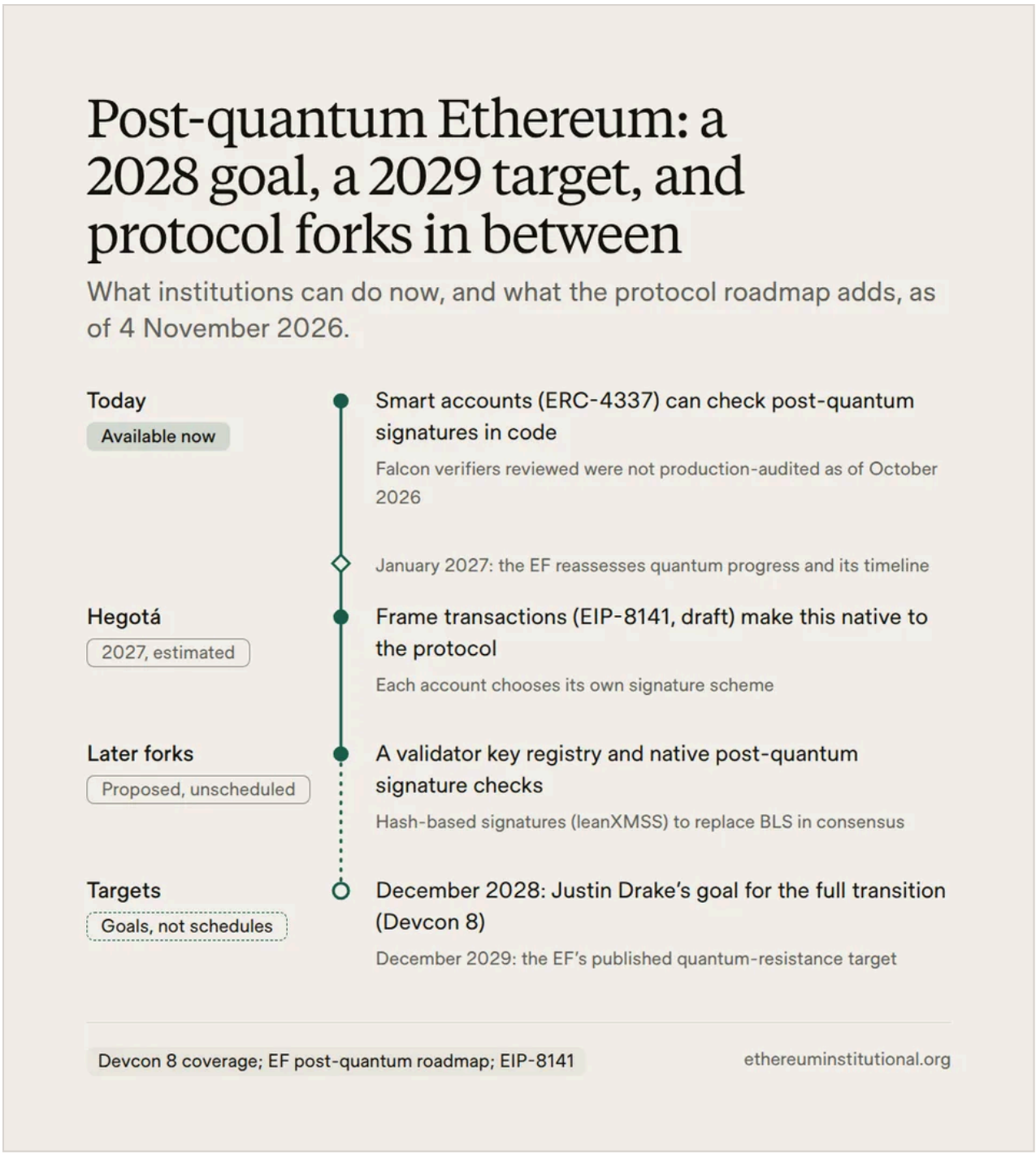


Figure 5.
Post-quantum path. Sources: Devcon 8 coverage, EF Protocol post-quantum roadmap, EIP-8141.

Institutional priorities on the roadmap

The Ethereum Foundation's strawmap, a guide to the future rather than a prediction, names five long-term goals. Every recent upgrade moves at least one of them.

Goal	What it means	Where it stands today	What's next	What it means for you
Fast L1	Transactions included and finalized within seconds, not today's 15 minutes	Inclusion takes seconds; finality about 15 minutes	Glamsterdam: fast confirmation, offchain. Hegotá: quicker slots, only considered. Finality in seconds: later forks	Don't model future finality times as today's settlement guarantee
Gigagas L1	Mainnet runs 1 billion gas a second, about 10,000 transactions a second if each averages 100,000 gas, as an illustration; validators check proofs instead of re-running transactions	60M gas limit since Fusaka; blocks run near their target	Glamsterdam is designed to support up to 200M gas. Gas-limit increases continue from Hegotá	For many workflows capacity is not the binding constraint; benchmark your own
Teragas L2	Layer 2s get 1 gigabyte a second of data space, roughly 10 million transactions a second, as an illustration; nodes sample the data instead of downloading it all	Fusaka added data sampling and raised the blob target from 6 to 14 and the maximum from 9 to 21	Glamsterdam: sparse blobpool work toward the goal. Hegotá: none	Expanded data capacity aims to keep layer 2 data costs low; choose a layer 2 by its trust and exit assumptions
Post-quantum L1	Mainnet cryptography stays quantum-secure using hash-based methods	Smart accounts can verify post-quantum signatures; the Falcon verifiers reviewed by EI, such as ZKNox's ETHFALCON, had not been audited for production use as of October 2026. Fusaka's CLZ opcode is said to aid post-quantum signatures	Hegotá: frame transactions let accounts pick their signature scheme. EF target December 2029; Drake's goal December 2028	Inventory where your keys and signatures depend on elliptic curves
Private L1	Shielded mainnet transfers keep financial history private; the EF says privacy lets institutions choose partners and meet compliance	Confidential tokens run on layer 2s and mainnet using zero-knowledge proofs or fully homomorphic encryption (FHE); Zama's FHE tokens rely on 3-of-5 coprocessor signatures, not a validity proof	Protocol-level privacy work starts in Hegotá; keyed nonces and recent roots are considered to ship with frame transactions	Choose an architecture by who must see what: positions, counterparties, amounts, audit trail

Source: Ethereum Foundation Protocol, L1 strawmap, updated 23 October 2026; Fusaka from its mainnet announcement.

Ethereum Institutional's read

The view from EI is that account controls and confidentiality now deserve at least as much attention as throughput and fees. Usage has grown on both layers, mainnet fees sit at a few cents, and over a third of all ETH secures the network.

The questions EI hears most from institutions are about account controls and confidentiality. Who can authorize a transaction, who pays its fees, and who can see it. Smart accounts already answer the first two. Hegotá's frame transactions bring them into the protocol and open a path to post-quantum signatures. Privacy is less far along: production options exist, each with its own trust assumptions, and protocol-level work only begins around Hegotá.

The next phase of adoption depends on turning those capabilities into deployable workflows. With Hegotá's scope still settling, institutional input on specifications is timely now. Part 2 of this report will take on inclusion and compliance.

Appendix: Glamsterdam EIPs that touch institutional operations

These nine of Glamsterdam's 25 proposals, listed in the EIP-7773 meta EIP, touch institutional operations. Inclusion status checked 4 November 2026; gas figures are components, not total fees, and may change.

EIP	What changes	Inclusion status in EIP-7773
EIP-7732, block building moves into the protocol for opted in parties	The protocol enforces builder payments for opted-in parties, with no trusted middleware; payloads are checked later in the slot	Scheduled for inclusion
EIP-7928, each block lists what it touches	Blocks list every account and storage slot they touch, so nodes can check in parallel and sync by copying results	Scheduled for inclusion
EIP-2780, resource-based intrinsic transaction gas	A transfer to an existing account stays 21,000 gas; to a new account it adds 183,600 state gas; a new contract costs 24,000 plus 183,600. Wallets must update	Scheduled for inclusion
EIP-7976, higher floor for data-heavy transactions	Data-heavy, low-computation transactions pay at least 64 gas a byte, up from 10 or 40; the EIP says DeFi and token transfers are unaffected. Wallet estimates must update	Scheduled for inclusion
EIP-7981, access lists priced by size	Access lists cost 64 gas a byte: 1,280 an address, 2,048 a slot. Normal use largely unaffected; estimates must update	Scheduled for inclusion
EIP-8037, higher price for creating onchain data	A new account costs about 7 times the gas (25,000 to 183,600), a storage slot 5 times, a 24 kB contract 8 times. Rate not final. Wallets must update	Scheduled for inclusion; the Hoodi test fork was postponed on 22 October to examine its interactions with contracts
EIP-8038, higher price for reading and writing stored data	First account lookup 3,000 gas (was 2,600); storage write 10,000 (from about 2,800); contract creation access 12,000 (from 7,000). Wallet estimates must update	Scheduled for inclusion
EIP-8261, recommended gas limit schedule	Advice, not a rule: validator defaults may follow a published gas limit schedule, check with specific clients. Operators can set any value, with a warning above it; blocks stay valid	Listed as informational, not scheduled for inclusion
EIP-8061, faster validator exits and consolidations	Exit capacity rises about 5 times and consolidation 2 times at current stake, easing exit queues	Scheduled for inclusion

Source: Ethereum Improvement Proposals, updated 23 October 2026

Sources

1 Token Terminal, Fundamentals for crypto, read 4 November 2026. Transaction counts for Ethereum and a 47-chain L2 cohort; mainnet stablecoin transfers; staked ETH, derived; median transaction fee.
https://tokenterminal.com/

2 Visa Onchain Analytics, Transactions, adjusted stablecoin volume, year to 30 September 2026.
https://visaonchainanalytics.com/transactions

3 Ethereum Foundation, Glamsterdam on Hoodi postponed, 22 October 2026.
https://blog.ethereum.org/2026/10/22/glamsterdam-hoodi-delay

4 Ethereum Improvement Proposals, EIP-7773, Glamsterdam meta.
https://eips.ethereum.org/EIPS/eip-7773

5 Ethereum Improvement Proposals, EIP-8037.
https://eips.ethereum.org/EIPS/eip-8037

6 Ethereum Improvement Proposals, EIP-8141: Frame Transaction.
https://eips.ethereum.org/EIPS/eip-8141

7 Ethereum Improvement Proposals, EIP-7732: Enshrined Proposer-Builder Separation.
https://eips.ethereum.org/EIPS/eip-7732

8 Ethereum Improvement Proposals, EIP-7805: FOCIL.
https://eips.ethereum.org/EIPS/eip-7805

9 Ethereum Improvement Proposals, EIP-7928: Block-Level Access Lists.
https://eips.ethereum.org/EIPS/eip-7928

10 Ethereum Improvement Proposals, EIP-8061: Increase Exit and Consolidation Churn.
https://eips.ethereum.org/EIPS/eip-8061

11 Ethereum Improvement Proposals, EIP-7976: Increase Calldata Floor Cost.
https://eips.ethereum.org/EIPS/eip-7976

12 Ethereum Improvement Proposals, EIP-2780: Resource-Based Intrinsic Transaction Gas.
https://eips.ethereum.org/EIPS/eip-2780

13 Ethereum Improvement Proposals, EIP-7981: Increase Access List Cost.
https://eips.ethereum.org/EIPS/eip-7981

14 Ethereum Improvement Proposals, EIP-8038: State-Access Gas Cost Update.
https://eips.ethereum.org/EIPS/eip-8038

15 Ethereum Improvement Proposals, EIP-8261: Gas Limit Schedule.
https://eips.ethereum.org/EIPS/eip-8261

16 Ethereum Foundation, strawmap.
https://strawmap.org/

17 The Crypto Times, Drake's December 2028 target, 3 November 2026.
https://www.cryptotimes.io/2026/11/03/ethereum-advances-quantum-security-deadline-to-2028-at-devcon/

18 TokenPost, Drake's 2028 hope vs the EF's 2029 target.
https://www.tokenpost.com/news/technology/47699

19 cryptonews.net, post-quantum fork sequence.
https://cryptonews.net/news/ethereum/33698261/

20 OpenZeppelin, relayer issue 949, gas measured on Sepolia after the Glamsterdam fork, October 2026.
https://github.com/OpenZeppelin/openzeppelin-relayer/issues/949

21 ChainSecurity, Glamsterdam Hard Fork: When Spent Gas Comes Back, 13 October 2026.
https://www.chainsecurity.com/blog/glamsterdam-gas/

22 Etherscan, gas tracker, gas price and ETH price, 3 November 2026.
https://etherscan.io/gastracker

23 figment.io, Glamsterdam: What Ethereum’s Next Upgrade Means for Institutional Stakers.
https://www.figment.io/insights/glamsterdam-what-ethereums-next-upgrade-means-for-institutional-stakers/

About Ethereum Institutional

Ethereum Institutional is an independent nonprofit dedicated to accelerating the institutional adoption of Ethereum, its Layer 2s, applications and overall ecosystem.

Founded in 2026 with anchor funding from BitMine, SharpLink, Joseph Lubin and Mihai Alisie, Ethereum Institutional translates institutional requirements into credible onchain deployments and helps institutions navigate Ethereum with clarity and confidence.

Through its events, Ethereum Institutional brings institutions and Ethereum ecosystem stakeholders together on neutral ground to set priorities, address challenges and coordinate the solutions that drive new deployments on Ethereum.

Important information

Ethereum Institutional is not the Ethereum Foundation and does not speak for the Ethereum protocol. Nothing here is investment advice.

As of 5 November 2026.