L1 strawmap by EF Protocol
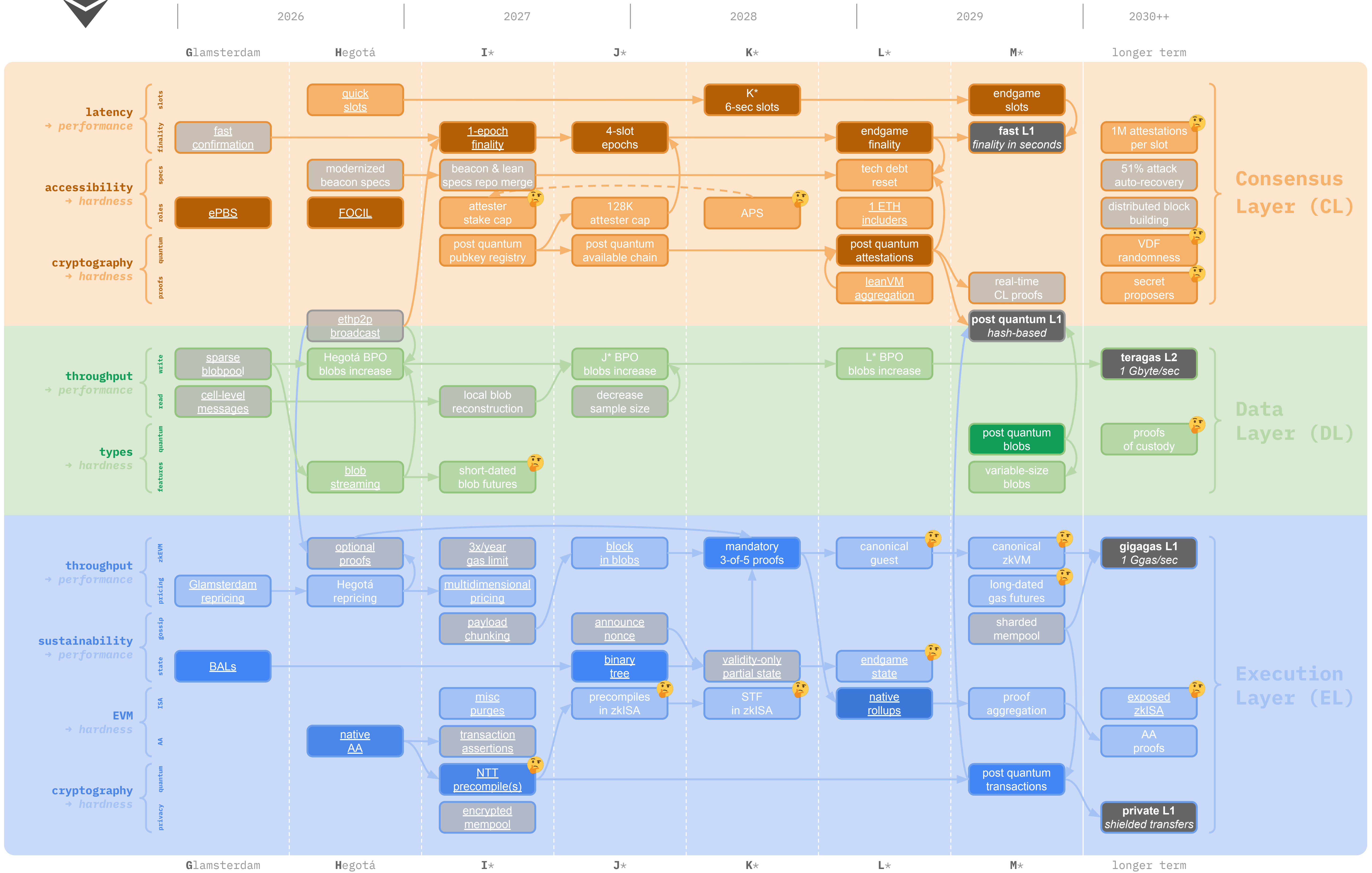
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live on strawmap.org

	2026	2027	2028	2029	2030++
	Glamsterdam	**H**egotá	I⋆ / J⋆	K⋆	L⋆ / M⋆ / longer term

Consensus Layer (CL)

latency → performance
- slots: quick slots → K⋆ 6-sec slots → endgame slots → 1M attestations per slot 🤔
- finality: fast confirmation → 1-epoch finality → 4-slot epochs → endgame finality → fast L1 *finality in seconds* → 51% attack auto-recovery

accessibility → hardness
- specs: modernized beacon specs → beacon & lean specs repo merge → tech debt reset → distributed block building 🤔
- roles: ePBS, FOCIL → attester stake cap 🤔 → 128K attester cap → APS 🤔 → 1 ETH includers → VDF randomness 🤔

cryptography → hardness
- quantum: post quantum pubkey registry → post quantum available chain → post quantum attestations → secret proposers 🤔
- proofs: leanVM aggregation → real-time CL proofs

post quantum L1 *hash-based*

Data Layer (DL)

ethp2p broadcast

throughput → performance
- write: sparse blobpool → Hegotá BPO blobs increase → J⋆ BPO blobs increase → L⋆ BPO blobs increase → teragas L2 *1 Gbyte/sec*
- read: cell-level messages → local blob reconstruction → decrease sample size

types → hardness
- quantum: post quantum blobs → proofs of custody 🤔
- features: blob streaming → short-dated blob futures 🤔 → variable-size blobs

Execution Layer (EL)

throughput → performance
- zkEVM: optional proofs → 3x/year gas limit → block in blobs → mandatory 3-of-5 proofs → canonical guest 🤔 → canonical zkVM 🤔 → gigagas L1 *1 Ggas/sec*
- pricing: Glamsterdam repricing → Hegotá repricing → multidimensional pricing → long-dated gas futures 🤔

sustainability → performance
- gossip: payload chunking → announce nonce → sharded mempool
- state: BALs → binary tree → validity-only partial state 🤔 → endgame state 🤔

EVM → hardness
- ISA: misc purges → precompiles in zkISA 🤔 → STF in zkISA 🤔 → native rollups → proof aggregation → exposed zkISA 🤔
- AA: native AA → transaction assertions → AA proofs

cryptography → hardness
- quantum: NTT precompile(s) 🤔 → post quantum transactions
- privacy: encrypted mempool → private L1 *shielded transfers*

Legend

Glamsterdam	Hegotá	I⋆	J⋆
CL north star	DL north star	EL north star	cross-layer north star
CL headliner	DL headliner	EL headliner	
CL onchain	DL onchain	EL onchain	
CL offchain	DL offchain	EL offchain	cross-layer offchain

DISCLAIMERS
→ **strawman:** work-in-progress rough consensus
→ **EF takes:** not authoritative or representative
→ 🤔 **emoji:** uncertainty about ever shipping upgrade