FSL Decentralization Roadmap

FSL Decentralization Roadmap

Current State + Migration Path to Full Sovereignty

July 10, 2026

FULLY SOVEREIGN ✅

Component	Implementation
Wallet authentication	EIP-6963 provider discovery (vendor-neutral; any announcing wallet extension)
Payment rails	ETH on Sepolia (live); XRPL scaffolded; other chains listed on ticker only, not payment-integrated
Smart contracts	9 v2 contracts on Ethereum Sepolia (including SovereignSession)
IPFS storage	Pinata (active) + Lighthouse (gateway returns 402; upload API unresponsive as of July 15, 2026)
DNS	Traditional DNS (Cloudflare); Unstoppable Domains registered but not serving
HNT token	Sovereign contract, no central issuer, earned-only
Health records	Tiered: mood/nutrition = pseudonymous plaintext server-side; AlchemistForge = client-side AES-256-GCM; on-chain = wallet addresses, hashes, timestamps, ciphertext only
Fonts	Self-hosted Chakra Petch (no Google Fonts CDN)

PARTIALLY DECENTRALIZED 🟡

Component	Current	Target	Timeline
Smart contracts	Sepolia testnet	Ethereum mainnet	Q3 2026 (after audit)
Session data	PostgreSQL on VPS	Ceramic / Tableland	Post-mainnet
Code hosting	GitHub (Microsoft) + Gitea (live)	Radicle + Gitea dual-mirror	Gitea live; Radicle TBD
IPFS pinning	Pinata only	Pinata + Lighthouse dual-pin	When Lighthouse API recovers

CENTRALIZED — DOCUMENTED 🔴

Component	Why centralized	Mitigation	Roadmap
Vercel hosting	Frontend CDN, fast deploys	IPFS backup via Lighthouse	Q4 2026
IONOS VPS	Backend API + PostgreSQL	Multi-region VPS, then decentralized DB	Q3 2026
Daily.co	Video sessions	Migrate to Huddle01 (Web3-native)	Post-revenue

CODE HOSTING MIGRATION PLAN

Phase	Action	Timeline
1 (Now)	GitHub stays as public portfolio + primary	Active
2	Mirror all repos to Radicle	Slipped — TBD
3	Self-hosted Gitea on VPS as backup	Live at git.futuresystemslab.io
4	IPFS snapshot of each release	Q3 2026

SOVEREIGNSESSION STATUS (July 2026)

SovereignSession (0xbeb13A360C6F0C77Ea3af3650Ab9762a1B9965A1) — wallet-native session attestation contract.

Phase	Description	Status
Phase 1	Contract deployment and verification	Deployed
Phase 2	Guide-initiated single-party attestation (EIP-191 wallet-signed)	Scaffolded (deployer-signed attestation deployed; guide-initiated signing not yet implemented)
Phase 3	Integration with EncryptHealth session booking	Not started (session booking writes to PostgreSQL only; SovereignSession contract is not invoked by any code path)
Phase 4	On-chain attestation with session metadata hash	Specified

MAINNET READINESS GATES

See `PRE_MAINNET_GATES.md` for full checklist. Per last audit, **6 of 13 pre-mainnet gates are closed**. Key remaining blockers: - [ ] Smart contract audit (third party) - [ ] ToS attorney review - [ ] First paying user + MRR validated

MIGRATION TARGETS

Dependency	Migration Target	Rationale
GitHub (code hosting)	Radicle + self-hosted Gitea mirror	Decentralized code hosting; Gitea at `git.futuresystemslab.io` as backup
Daily.co (video)	Huddle01 (Web3-native, wallet-gated rooms)	NFT-gated natively; post-revenue sprint

ACADEMIC NOTE

This roadmap is part of Margarita Montañez Davenport's Doctor of Engineering (DEng) Applied Project at Arizona State University (applied July 11, 2026, ref. 2049170; target enrollment Spring 2027).

Thesis: "Bilateral Wallet-Signed Consent: A Custom Signature Protocol for Decentralized Sovereign Data Governance, with Behavioral Health as Proving Ground"

The tension between pragmatic centralization and sovereignty-first architecture is a core research theme — documented here transparently as an engineering management decision log. Every centralized dependency is acknowledged, mitigated, and scheduled for migration. The ecosystem is framed by the central research question: can wallet-signed bilateral consent serve as a defensible governance primitive for sovereign

behavioral health data? The BUILD/PROVE/VALIDATE committee structure (Dr. Bošković primary, Dr. Ahn and Dr. Ghasemzadeh co-advisors) guides the applied research.

Document version 2.4 — July 15, 2026 Verified against Sepolia Blockscout chain state.