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Litepaper

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Executive Summary

1. Executive Summary

InceptionLRT v2 is an omnichain restaking protocol on EigenLayer offering both isolated and native restaking to users.
While the isolated architecture enables the issuance of one iLRT dedicated to each LST, increasing transparency and lowering associated risks, the native restaking solution allows InceptionLRT to choose the best node operators in the space, featuring DVT technology. Both iLRTs and native LRTs can be freely traded and used in other DeFi protocols while maintaining segregation from the underlying LSTs/ ETH, respectively.
InceptionLRT is specifically designed to bolster the EigenLayer framework by addressing a critical challenge: the issue of liquidity locking in the protocol.

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Staking & Restaking

2. Staking vs. Restaking

Liquid staking extends the benefits of traditional staking services by enabling the utilisation of staked assets as collateral throughout the DeFi ecosystem.
Liquid staking providers solve the illiquidity problem inherent to traditional staking services by staking tokens, deposited by users, on their behalf and minting a new token, that is redeemable for and represents a claim on the underlying staked asset. The user has then the opportunity to trade or deposit the liquid staking token (LST) in other DeFi protocols to earn yield, for instance.
Restaking lets users allocate their ETH to support validation across various networks at once, including Ethereum and others integrated with a restaking protocol. By leveraging Ethereum's security framework, it enhances capital effectiveness, offering stakers extra rewards for their validation efforts. Stakers can leverage their collateral, initially committed to secure transactions on the Ethereum blockchain, to simultaneously secure other applications, ranging from dApps to layer-2 sidechains.

2.0.1 Restaking Advantages & Challenges

Restaking has several advantages:

1. **Protocols Economic Security:** Establishing economic security for new protocols is challenging. EigenLayer offers developers an affordable option to achieve this.
2. **Protocol Flexibility**: While focusing on application-specific decisions, protocols can still maintain full control over consensus and penalty terms.
3. **Enhanced Capital Efficiency for Stakers:** Through restaking, stakers can earn extra rewards from validating various services without committing extra funds, optimizing their capital use, and increasing their validation-related earnings.

It also poses some risks, including:

1. **High Fees:** Claiming rewards from staking and restaking can be costly due to high fees, highly impacting smaller players.
2. **Liquidity Constraints:** Once ETH is staked or restaked, it's locked and can't be used until the unbonding period concludes, posing significant challenges for urgent risk mitigations.
3. **Opportunity Cost:** Users must decide between staking-related activities and DeFi ventures, weighing the risks and rewards with limited data, which can be daunting.
4. **Limited DeFi Composability:** EigenLayer halts the DeFi journey post-restaking, posing liquidity risks and increasing perceived risk for Layer 2 chains.
5. **Yield Accrual and Competition:** Fierce competition in Ethereum LST yield farming opportunities with higher rewards.

6. **LST Baskets Risk:** DeFi LST baskets do not reduce risk vs. single LSTs. Risk diversification in portfolio theory is meant to diversify market price volatility of assets within a portfolio. There are no such benefits in a DeFi LST basket, and they also increase smart contract risk if it includes several LSTs.

2.1 Restaking on EigenLayer

Built on Ethereum, EigenLayer introduced restaking, a novel concept that enhances crypto-economic security. Restaking allows those who stake ETH, either directly on the beacon chain or through liquid staking tokens (LSTs), to repurpose their staked ETH via EigenLayer's smart contracts. By doing so, they can bolster the security of various applications on the network and receive additional rewards. With EigenLayer, Ethereum participants can amplify the security of numerous services. They do this by reallocating their already staked ETH to specific node operators. These operators then commit to offering economic protection to several services at once. Through restaking, the same ETH ensures the safety of multiple services, leading to increased incentives for both the stakers and the node operators involved in the validation process.

2.2 Restaking with InceptionLRT

InceptionLRT offers great advantages:

1. **Restaking of multiple LSTs and ETH:** It supports the 12 LSTs accepted by EigenLayer and native ETH.
2. **Delegation to EigenLayer Node Operators:** The protocol selects and interacts with multiple EigenLayer node operators to maximize yield on LSTs. InceptionLRT does not run any EigenLayer node, ensuring neutrality when selecting node operators.
3. **Transparency and Trustworthiness:** The isolated architecture minimizes potential conflicts of interest and promotores operational transparency.
4. **Low-Risk Profile:** It keeps the low-risk profile of EigenLayer, eliminating the need to attract yield farmers directly into the ecosystem and increasing the risk. Yield farmers can continue DeFi composability and yield farming via the Inception Protocol.
5. **Higher Yields:** It brings an opportunity to expand market share while increasing yields.
6. **DeFi Composability Enabled:** It offers yield through restaking while maintaining the liquidity of assets. The potential for further DeFi composability also provides additional yield opportunities besides restaking.
7. **Scalability:** It is more scalable to generate rewards on top of LSTs than yield farming on protocols on Layer 1 chains.
8. **Maintained Liquidity:** Ensuring assets remain liquid.

9. **Ethereum Ethos Alignment:** Dominance of LST providers threatens to overturn Ethereum's key values of decentralization and censorship resistance. InceptionLRT intends to be fully collaborative ETH foundation values and commits to share a portion of Liquid Restaked Tokens (LRTs) fees to solo-validators.
10. **Technical Advancement:** Inception Protocol isn't a forked protocol; it's designed from scratch to offer an enhanced restaking experience. Moving forward, our dedication is to remain at the forefront and consistently delve into the newest EigenLayer breakthroughs.

2.3 Restaking Market Analysis

During Ethereum 2.0's initial phase, the traditional staking process required ETH to be locked in a contract for network support, rendering the ETH non-liquid and unusable in DeFi applications. Liquid Staking Tokens (LSTs) were introduced to address this liquidity issue, gaining prominence in the ecosystem.

By Q3 2020, Phase 0 of ETH 2.0 necessitated a staking amount of 524,288 Ether for consensus security, with PoS Chains comprising 17.4% of the total market cap. By February 2022, Ethereum LSTs reached 6M ETH, and within the next year and nine months, this figure doubled to 12M ETH.

Currently, EigenLayer's introduction of restaking mechanisms has significantly impacted the staking landscape. This innovation saw about 450k ETH staked in six months, paralleling the early growth of Ethereum LSTs. The next six months saw a tripling in value. This trend suggests that if LRTs and EigenLayer follow a similar path, they could reach a total value locked (TVL) of $9 billion in about 1.5 years. Over 2.5 years, LST protocols attracted approximately $17.8B in Ethereum, indicating a maturing DeFi ecosystem and potentially faster growth for restaking and LRTs compared to LSTs.

InceptionLRT, particularly, is advancing EigenLayer's restaking capabilities, positioning itself as a leader in the restaking domain. This improvement introduces liquidity to both staking and restaking processes and extends the potential for reward accumulation by integrating DeFi functionalities. This enhancement is poised to drive significant attention and activity towards restaking in the near future.

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Technical Architecture

3. System / Technical Architecture

3.1 Risks and Challenges of the Existing Solution

EigenLayer's restaking solution introduces an approach to enhance crypto economic security and trust. However, its growth potential can be limited by several challenges and risks. These include liquidity risks, limited DeFi composability, and the competition it faces in comparison to ETH LST yield farming opportunities.

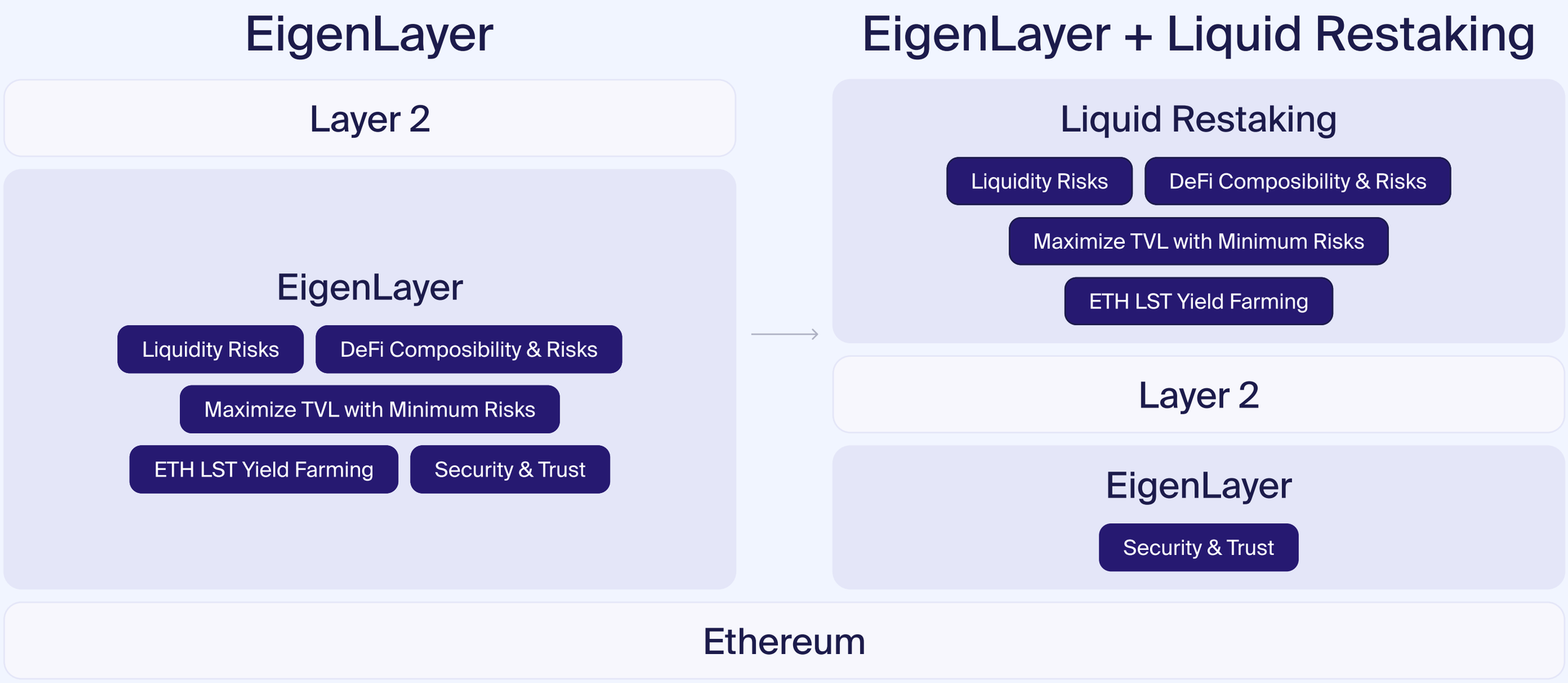

Figure 1 – EigenLayer's Restaking Solution

3.2 InceptionLRT Solution & Architecture

Inception Protocol will create a healthier DeFi ecosystem on Layer 2 by unlocking the full potential of DeFi composability through efficient restaking which will attract more liquidity, solve the capital inefficiency, and create opportunities to accelerate the growth of restaking on EigenLayer.

3.2.1 Protocol Flow – Isolated Restaking

1. **Deposit Assets on Inception Vault:** A user deposits stETH/rETH into the Vault.
2. **Deposit Assets to Eigen Layer:** LSTs are deposited into EigenLayer via the StrategyManager contract.
3. **Choose Strategy and Provide Assets:** stETH or rETH strategies are chosen, and assets are deployed.
4. **Delegate user assets to a specific Node Operator:** User's LSTs are delegated into a specific EigenLayer Node Operator.
5. **Check the amount of Users Assets and delegate them:** Smart contract checks the amount of user's assets and delegates them via the DelegationManager.
6. **Mint LRT or rNFT for the User:** LRTs or rNFTs are minted to the user.

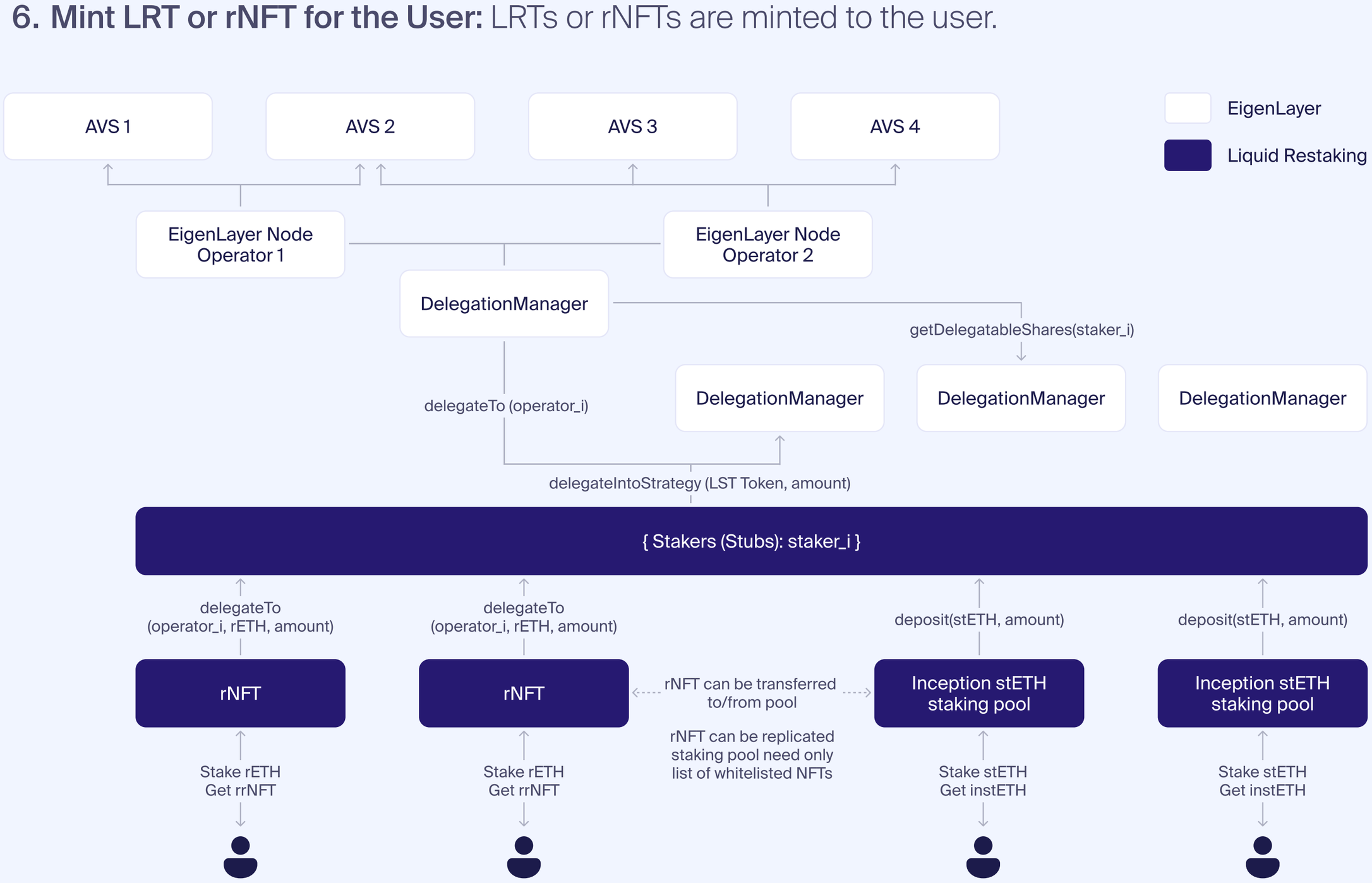

Figure 2 – InceptionLRT Isolated Solution & Architecture

3.2.2 Protocol Flow – Native Restaking

1. **Deposit Assets on Inception Vault:** A user deposits ETH into the Vault.
2. **Deposit Assets to Eigen Layer:** ETH is deposited into EigenLayer via the StakeDeployer contract.
3. **Choose Strategy and Provide Assets:** ETH strategies are chosen, and assets are deployed.
4. **Delegate user assets to a specific Node Operator:** User's ETH are delegated into a specific EigenLayer Node Operator.
5. **Check the amount of Users Assets and delegate them:** Smart contract checks the amount of user's assets and delegates them via the DelegationManager.
6. **Mint LRT or rNFT for the User:** LRTs or rNFTs are minted to the user.

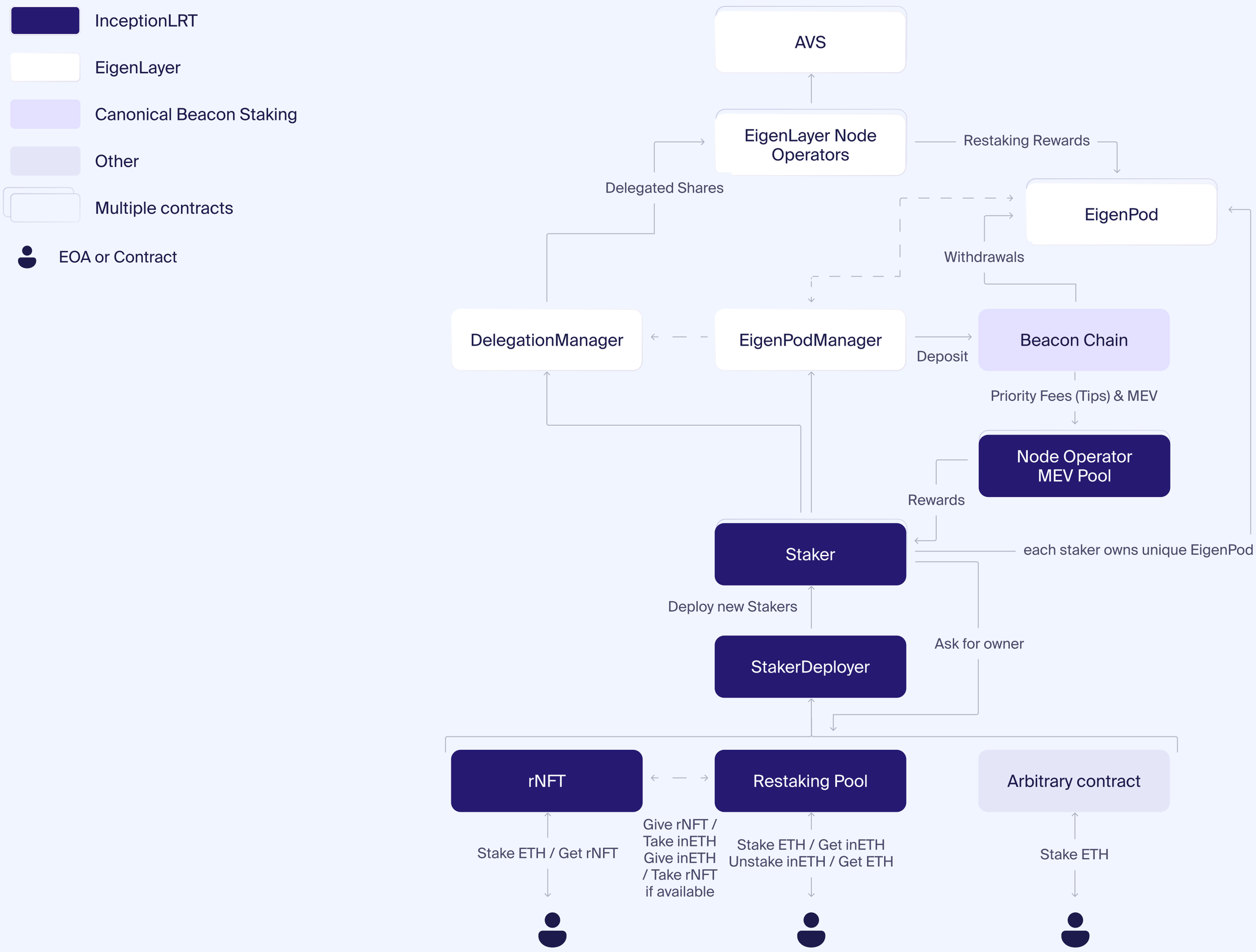

Figure 3 – InceptionLRT Native Solution & Architecture

InceptionLRT addresses the liquidity challenge inherent in EigenLayer's system. EigenLayer's restaking approach involves a seven-day unbonding period for withdrawals, adding to Ethereum's similar period. Unlike liquid staking protocols, EigenLayer doesn't provide liquidity through receipt tokens, leading to illiquid positions for its users. InceptionLRT resolves this by offering Liquid Restaking Tokens (LRTs) as receipt tokens. Users can restake popular LSTs like stETH, rETH, and ETH and receive corresponding LRTs – instETH, inrETH, and inETH. These LRTs facilitate liquidity and enhance DeFi composability, mitigating EigenLayer's liquidity constraints.

3.3 ING Token

InceptionLRT is set to introduce its native token named ING. While its final structure is still under deliberation, the token is intended to serve a couple of primary roles:

1. **The protocol governance token:** Protocol governance through delegate voting: Participate in the selection of the best EigenLayer's Node Operators to boost rewards on restaked assets.
2. **Incentivizing protocol expansion** via liquidity mining, gauges, referrals and airdrops.

3.3.1 ING Allocation

The planned token allocation scheme is:

1. **Liquidity Incentives**: 41%
2. **Pre-seed:** 3.33%
3. **Seed:** 12%
4. **Strategic Round:** 7.5%
5. **KOL Round:** 1.17%
6. **Public Sale:** 1%
7. **Airdrop & Marketing:** 4,5%
8. **Team:** 15%
9. **Protocol Reserves:** 6%
10. **Advisory:** 6%
11. **ING Liquidity:** 2.5%

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Risks & Mitigations

4. Risks & Mitigations

4.1 EigenLayer Risks

Slashing Risk: EigenLayer's restaking mechanism significantly enhances security by raising the costs associated with malicious attacks. It achieves this by consolidating previously fragmented security pools. Instead of these pools operating independently, they converge onto EigenLayer. This convergence makes the financial cost of mounting an attack far greater than the potential financial gains.

To maintain this system, EigenLayer introduces new slashing conditions enforced through smart contracts. These contracts manage the withdrawal credentials for staked ETH when a user chooses to opt in (via EigenPod). If any malicious activity occurs, the slashing mechanism comes into play, resulting in the staker's inability to withdraw the original principal amount they deposited. Within the current Ethereum design, it is possible to slash up to 50% of the staked ETH. Consequently, when a withdrawal is initiated, at least 50% of the ETH remains accessible. EigenLayer goes further by enabling the slashing of the remaining 50% staked on the protocol.

Centralization Risk: EigenLayer may attract ETH stakers seeking higher yields, potentially redirecting their withdrawal credentials to the platform. This shift towards EigenLayer creates centralization risks, as it concentrates staking activity. In the event of an exploitation or vulnerability within EigenLayer, it poses a systemic risk to the broader Ethereum network.

Yield Risk: As restaking gains more traction, protocols may use Ethereum for enhanced security. However, EigenLayer stakers may prioritize maximizing their returns by seeking the highest yield available. This can lead to a competitive race among protocols to offer higher yields to attract stakers. While this benefits stakers, it may result in lower yields for users of these protocols, creating a potential yield risk.

4.2 Liquid Staking Risks

Security Risks: The primary concern with liquid staking is security. Staked assets are typically held in smart contracts, which may have vulnerabilities and be susceptible to hacking or cyber-attacks. This means your original assets are in the hands of a third party, increasing counterparty risk.

Low Liquidity & De-Pegging: Liquid staking tokens rely on liquidity pools to maintain their peg to the underlying assets. If liquidity in these pools decreases significantly, it can lead to a loss of peg, resulting in high slippage when swapping between assets. Investors may find it challenging to sell their staked assets promptly.

Hacks: Smart contract vulnerabilities can expose your original assets to theft if the protocol gets hacked. For instance, if you mint liquid-staked assets using your cryptocurrency, a hack on the protocol could jeopardize your initial holdings.

Validator Slashing & Counterparty Risk: Liquid staking providers manage the staking process, including selecting validators. If unreliable validators are chosen, there's a risk of asset slashing. Operational issues like system downtime or network outages can also impact the safety of staked assets. To mitigate this, it's crucial to select reputable and trusted providers.

4.3 Inception's Additional Security

InceptionLRT effectively manages slashing risks for those restaking their Liquid Staking Tokens (LSTs). It ensures safety by rigorously vetting EigenLayer operators, allowing delegators to choose from highly reliable node operators. The platform utilizes a comprehensive scoring system based on performance, quality, and governance to rate operators. This system guides delegators in selecting trustworthy operators, ensuring stable reward generation without slashing concerns.

Additionally, InceptionLRT offers insurance for whitelisted operators to cover potential losses from slashing, providing a safeguard for LST restakers against unexpected interruptions in their reward generation.

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Roadmap

5. Roadmap

Inception plans to release on Ethereum and gradually expand to other Layer2 chains while integrating multiple DeFi Protocols.

Q2-Q3 2023: Project MVP.

- Pre-seed funding and initial project development.
- Focus on MVP Creation.

Q4 2023: Seed Round and TestNet Deployment

- Seed Funding round and key audits.
- Deployment of instETH and inrETH on TestNet.
- UX/UI enhancements and selection of node operators / AVS.

Q1 2024: Private Round and Mainnet Launch

- Private funding round to cover operational expenses and expansion.
- Mainnet launch, focusing on ING Governance Token and development of key features.
- L2 deployment and new LST integrations.
- First AVS testing.

Q2 2024: Token Generation Event and Omni-chain LRT

- Token Generation Event (end of Q2, early Q3)
- Omni-chain bridge development, auto-compounding features and LST integration.
- Expansion to new Layer 2s.
- AVS TestNet integration.
- AVS Reward system and Strategy manager MVP.

Q3-Q4 2024: AVS and Strategy Manager Mainnet

- Development of Omni-chain LRT and rNFT marketplace.
- Expansion to new Layer 2s.
- Continuous research and integration efforts.
- AVS reward distribution Mainnet.
- Strategy Manager Mainnet.

Q1 2025: Continued Growth and Innovation

- Focus on further expansion, integration and innovation based on project needs and market trends.

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Glossary

6. Glossary

1. **Isolated LRTs:** These tokens are designed to represent staked assets in a way that isolates them from the broader market dynamics and specific risks associated with other assets or strategies. By being isolated, these LRTs aim to provide a more secure and stable option for users engaging in liquid restaking, focusing on individual assets or specific staking strategies without being affected by external factors in the wider DeFi landscape.
2. **Cryptoeconomic security:** A security model that uses economic incentives and cryptography to ensure the proper functioning and security of a network.
3. **Service Modules, Services, or Actively Validated Services (AVS):** Any system that requires its own distributed validation semantics for verification, such as sidechains, data availability layers, new virtual machines, keeper networks, oracle networks, bridges, threshold cryptography schemes, and trusted execution environments.
4. **Pooled security via restaking:** Pooled security is when multiple parties combine their resources to provide greater security for a system. In EigenLayer, Ethereum stakers can “restake” their ETH or Liquid Staking Tokens (LST) by opting into new services built on EigenLayer.
5. **Free-market governance:** EigenLayer provides an open market mechanism that allows stakers to choose which services to opt into, based on their own risk and reward analysis.
6. **Liquid Staking:** A service that enables users to deposit their ETH into a staking pool and receive a liquid staking token. This token represents a claim on their ETH and its staking yield. Liquid staking tokens can be traded in the DeFi ecosystem and redeemed for their underlying ETH value after a waiting period.
7. **Native Restaking:** A method where Ethereum stakers restake their staked ETH natively by pointing their withdrawal credentials to the EigenLayer contracts.
8. **LST Restaking:** A method where LST holders restake their Liquid Staking Tokens (LSTs) by transferring them into the EigenLayer smart contracts (support of LSTs is a planned feature of InceptionLRT).
9. **Delegation in EigenLayer:** A feature that allows restakers holding ETH or LSTs to delegate their assets to other entities who will operate off-chain software containers of service modules built on EigenLayer, rather than operating the software themselves.
10. **On-chain slashing contract:** A smart contract deployed by service modules on EigenLayer that enforces slashing, specifying and penalizing any misbehavior.
11. **EigenPod:** A contract that is deployed on a per-user basis that facilitates native restaking.
12. **Liquid Restaked Tokens (LRTs):** such as inrETH, operate as synthetic tokens layered atop your restaked assets. This function enables simultaneous, straightforward access to both restaking and decentralized finance.