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**The Bhokaal** team passionately recognizes a pivotal challenge in today's DeFi landscape: the untapped pressure of onchain liquidity. Despite the emergence of innovative liquidity solutions in recent years, such as lending, staking, and various yield-generating strategies, we now face a bottleneck.

Our meticulous analysis of the current liquidity models has unveiled several critical insights:

- 1. \*\*Significant Onchain Liquidity Remains Untapped\*\*: A considerable portion of onchain liquidity is lying dormant. For instance, at Compound, only about 60% of Ethereum is actively utilized. Similarly, on other platforms, a vast majority of assets remain largely underused, indicating a substantial reservoir of idle capital.
- 2. \*\*Security Concerns Deter Asset Movement\*\*: Users often exhibit reluctance in transferring their assets across different apps or blockchains. This hesitation predominantly stems from concerns regarding the security of their assets during such transfers, reflecting a trust deficit in the cross-platform asset movement.
- **3.** \*\*Prohibitive Gas Fees\*\*: The cost of moving assets, whether it's between platforms or engaging in diverse investment strategies, is exacerbated by high gas fees. This financial barrier further discourages users from optimizing their asset allocation, thereby contributing to the liquidity crunch.

In light of these observations, the Bhokaal team is committed to innovating and implementing solutions that not only unlock this dormant liquidity but also address the underlying issues of security concerns and high transaction costs, reshaping the DeFi space into a more fluid and accessible financial ecosystem.

## **Solutions**

[Idea] Bhokal is set to revolutionize the DeFi space by harnessing the capabilities of the ERC standard through an innovative wrapped plugin. In our hack, the team is excited to unveil a series of groundbreaking implementations, each designed to significantly enhance the dynamics of digital asset management:

- 1. \*\*Onchain Hyperbole Shared Liquidity (HSL) Model\*\*:
- 2. \*\*Leveraging BTC Liquidity with the Power of DeFi via Zetachain\*\*:
- 3. \*\*Empowering Tokens Without Physical Transfer via Wrapped Plugin\*\*:

We're committed to pushing the boundaries of what's possible, leveraging technology to create a more inclusive, efficient, and secure financial ecosystem.

1. The Onchain Hyperbole Shared Liquidity (HSL) model introduces a novel approach to token utilization across multiple pools, decentralized applications (dApps), and blockchain networks. This model allows for the same quantity of tokens to be concurrently allocated across different platforms. Presently, about 60% of Ethereum tokens are utilized solely in Compound, while the usage in other DeFi protocols is significantly lower.

Consider this scenario: User A deposits 1,000 USDT into a DeFi protocol. On an average day, only about 25% of these tokens are actively used, leaving the remaining 75% idle. The HSL model capitalizes on this underutilization. It enables the same 1,000 USDT to be effectively allocated to three additional platforms (making it four in total), assuming each dApp has a similar utilization rate of around 25%.

In situations where there is simultaneous demand for 1,000 USDT from all four applications, the user's order will be fulfilled by the provider offering the best price. This system allows the user to leverage the full demand and supply potential of the 1,000 USDT with just a 25% actual contribution. If applied across four different applications, this means that with an initial provision of 1,000 USDT, a user can effectively offer liquidity equivalent to 4,000 USDT. However, when it comes to actual transactions, only the original 1,000 USDT is utilized, as these are the real assets.

This innovative feature is facilitated through a wrapped plugin for ERC-20 tokens, enhancing the efficiency and utility of token assets in the DeFi ecosystem.

2. BTC liquidity are leveraged via the power of DeFi via Zetachain: The Bhokal dApp harnesses the power of DeFi through Zetachain to maximize the utility of BTC liquidity. This approach is designed specifically for BTC users, allowing them to deposit their BTC directly from their wallets. Utilizing Zetachain, an omnichain solution, the Bhokal platform converts the deposited BTC into ZRC format. This conversion enables users to further engage their assets in various DeFi activities, such as staking or lending, across different platforms.

A key advantage of this system is the flexibility it offers. Users can withdraw their funds at any time, with the withdrawal being processed directly back into their BTC wallets in the form of BTC. This means there is no fixed lock-in period for the BTC, providing users with both liquidity and freedom.

For more detailed information about the process of wrapping and how these assets interact with other elements of the DeFi ecosystem, please refer to section 3. This section elaborates on the intricacies of the wrapping process and the seamless connectivity with other DeFi platforms, ensuring a comprehensive understanding of the entire operation.

3. Risk free investment: Delegate the power of token without actual transfer of token via wrapped plugin.

Empower your tokens without physically transferring them, using a wrapped plugin.

This innovative wrapper or plugin enables users to engage in lending or staking activities across various DeFi platforms without the need to directly transfer their assets. The initial step involves wrapping the assets, which then take the form of ERC20 tokens. These ERC20 wrapped assets can be utilized across different pools for lending or staking purposes, all without the actual transfer of the underlying asset to those pools.

An additional advantage of this method is its security aspect. In the unfortunate event of a security breach or hack at any of the pools where the assets are engaged, users have the ability to promptly withdraw their original assets with ease. This feature adds an extra layer of safety, ensuring user assets remain secure even in adverse scenarios.

## How does it works internally?

Whenever the balance of a linked account is altered, the token contract promptly informs all the plugins to which the account is subscribed. Each plugin is equipped with an \_updateBalances function, triggered during minting, burning, or

transferring of tokens. This function carries details of the changes, including the source and destination addresses and the transaction amount. Consequently, a plugin can take appropriate actions based on its unique logic to enhance the fundamental functionalities of the base token.

It's important to note that the processing activities of the plugin incur additional gas costs. Therefore, transactions that modify an account's balance will require more gas. To mitigate the impact on gas consumption, the library sets a cap on the gas expenditure for each plugin. Additionally, an account holder has the discretion to select the specific plugins to which their account will subscribe.



