

MAXELABS

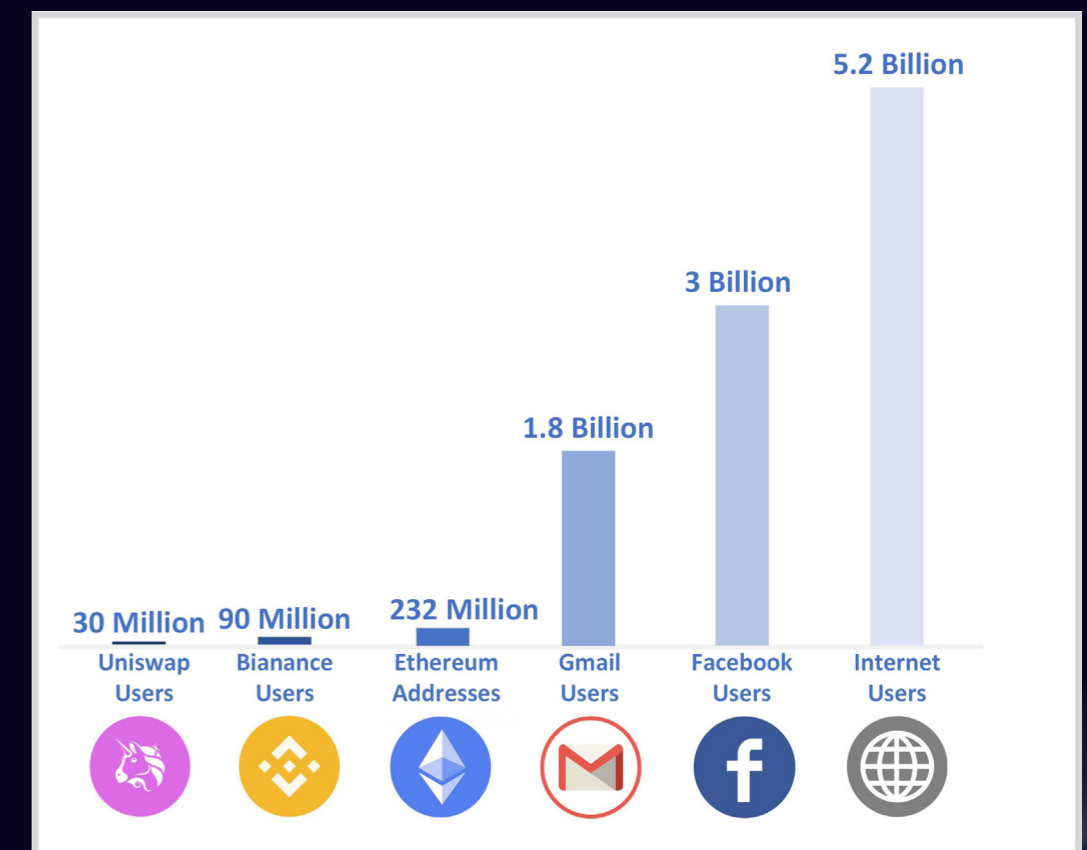
Maxe Account Service Network

— One Person One Account (1P1A) for Web 3.0 —



SLOW ADOPTION RATE OF WEB 3.0

- Web 3.0 is potentially a game changer with many advantages: self-sovereignty, decentralization, security, and personalization.
- But, the user adoption of Web 3.0 has been slow. A number of “must-haves” are missing.



MISSING MUST-HAVES FOR WEB 3.0

CREDIBLE ANONYMITY:

- An essential requirement for achieving convergence between the interests of users and businesses, protecting privacy while promoting trust among all parties.

HUMAN ACCOUNTS, NOT AI ACCOUNTS:

- A technology that effectively differentiates between human and AI accounts to prevent AI accounts from overpowering and sabotaging human activities on Web 3.0.

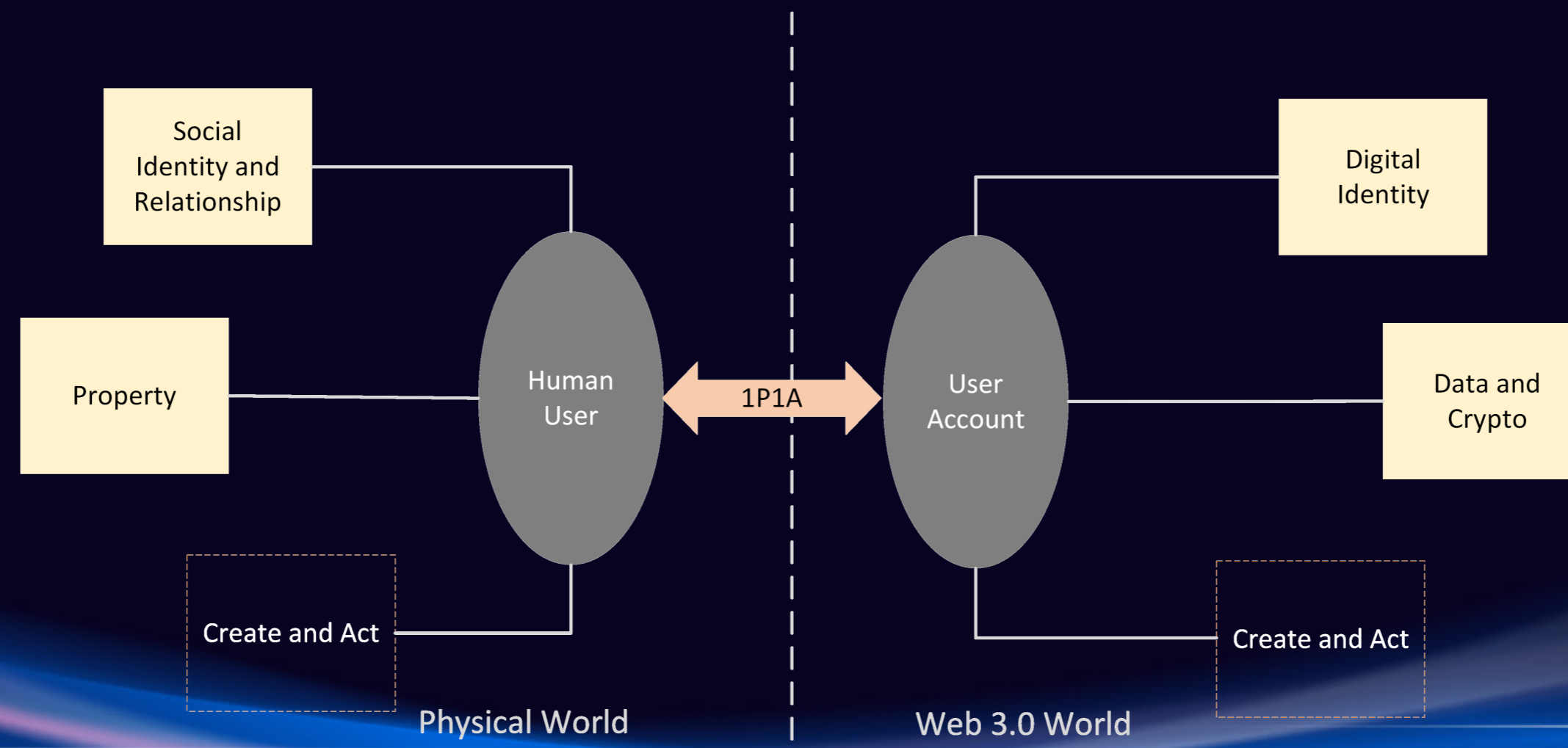
Unified Decentralized Web 3.0 Portal:

- A user-friendly and secure decentralized platform that allows both tech-savvy and non-tech-savvy users to easily access and manage a variety of Web 3.0 and Web 2.0 applications.



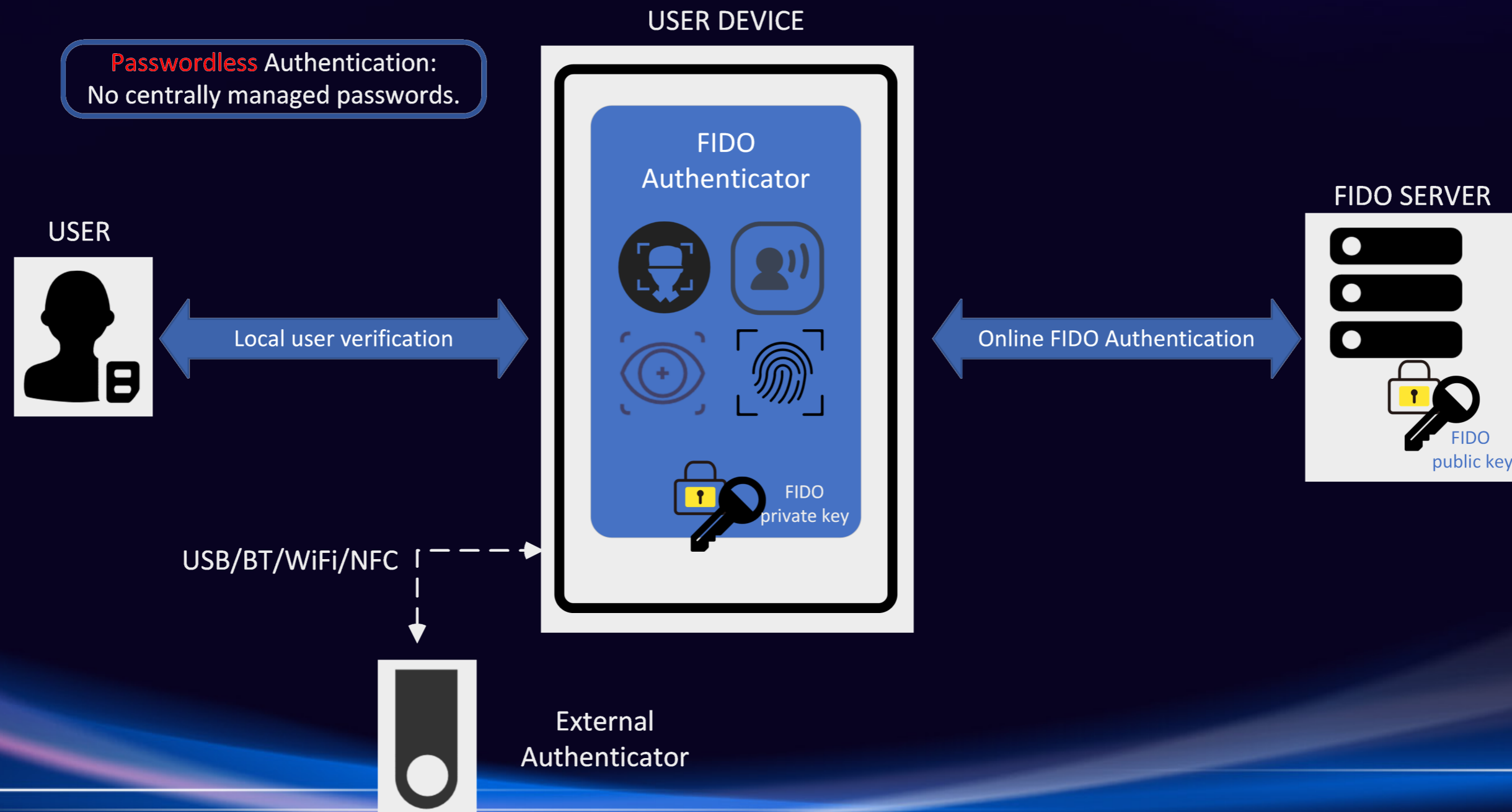
MAXE ASN: UNLOCKING THE FULL POTENTIAL OF WEB 3.0 WITH ONE-PERSON-ONE-ACCOUNT (1P1A)

- Maxe Account Service Network (ASN) is a One-Person-One-Account (1P1A) solution that ensures each human user can only have one certified account in the world of Web 3.0.
- With 1P1A, each human user account can establish its own credit in digital worlds, preventing fraudulent accounts and impersonation.
- With 1P1A, users autonomously access WEB2.0 and WEB3.0 applications, easily control their own digital identity, credibility, data, and assets.



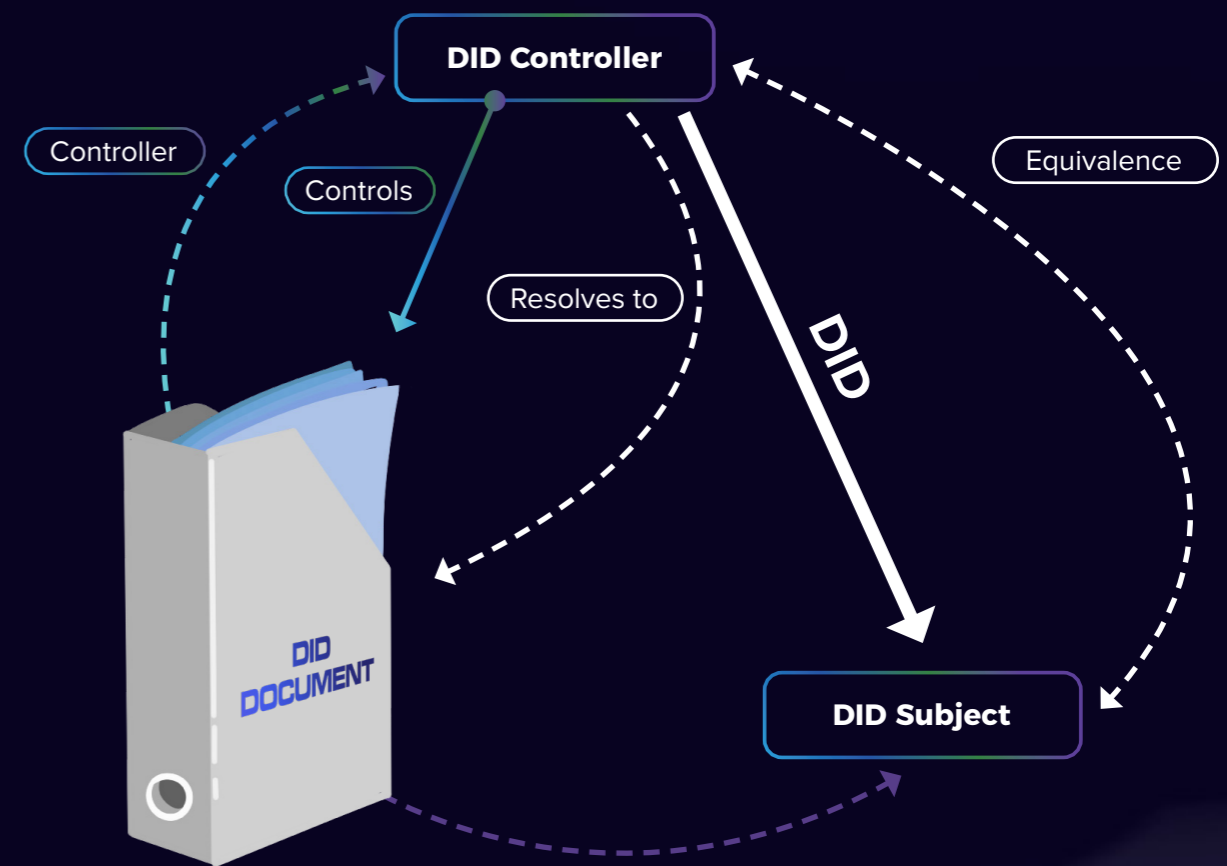
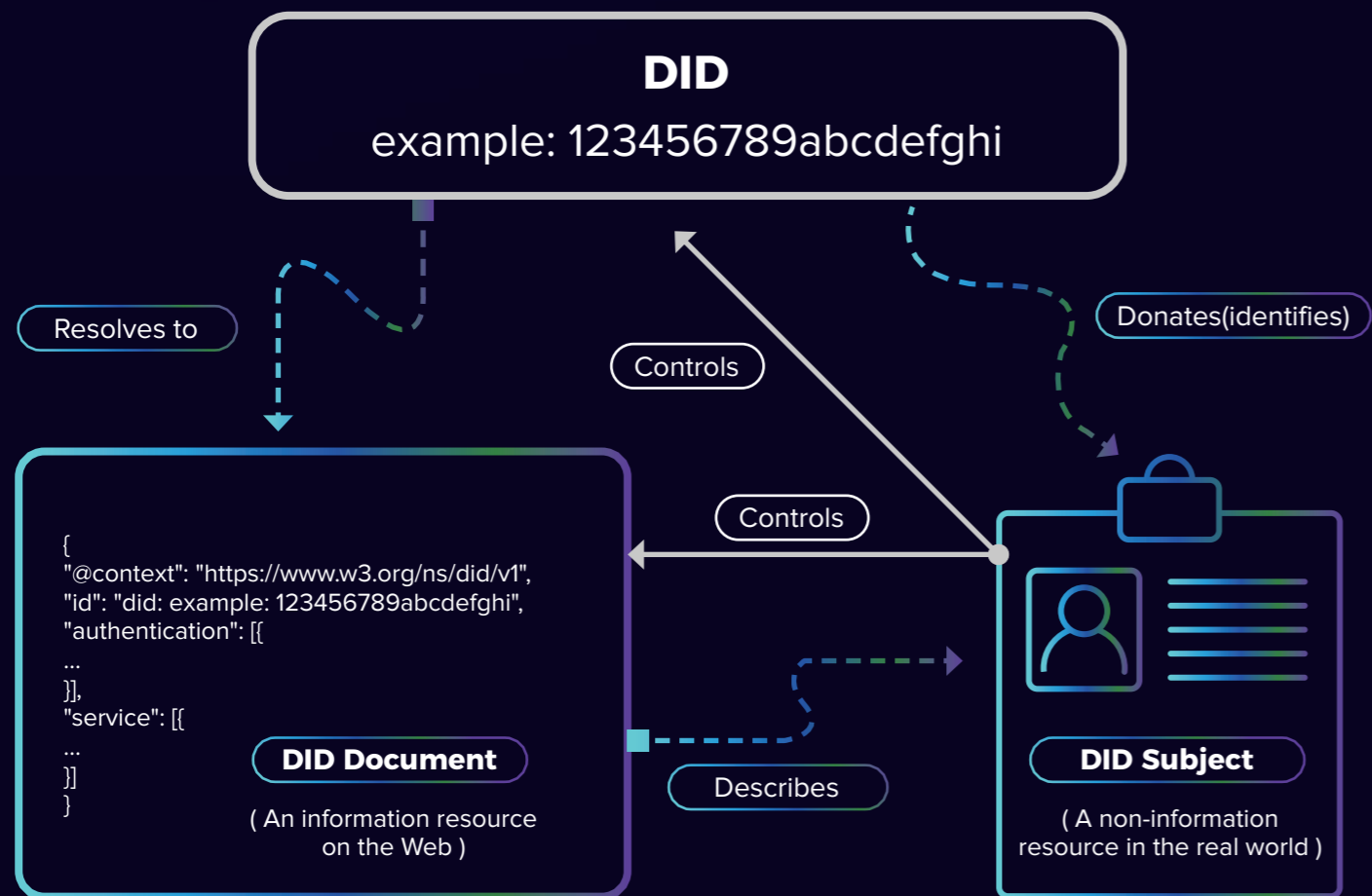
FIDO PASSWORDLESS LOGIN

- FIDO alliance provides standards for decentralized biometric authentication and passwordless login.
- FIDO ties the biometric information of authenticated users to their public/private key pairs.



DECENTRALIZED IDENTIFIERS (DIDs)

- Decentralized identifiers (DIDs) are a type of identifier that enables verifiable, decentralized digital identity (W3C Recommendation).
- DID allows data (applications) to be encrypted and verified, and can be provided to users as needed, with well defined standards.
- DID is not specially designed for the sign-on of Web 2.0/Web 3.0 applications. (static, non-programmable).



BLCOKCHAIN ACCOUNT

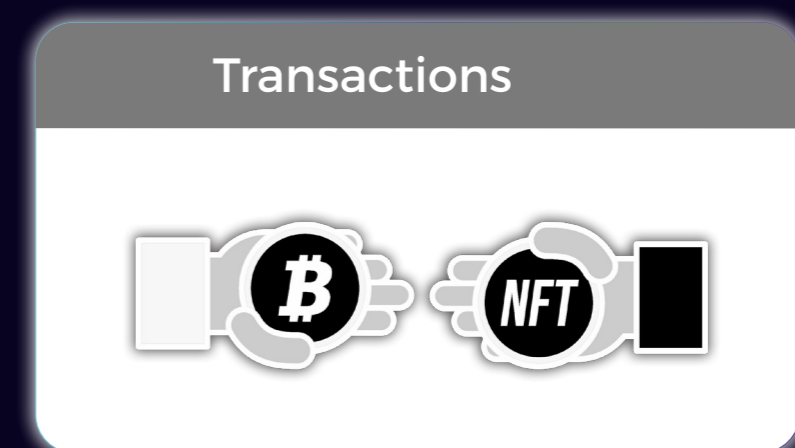
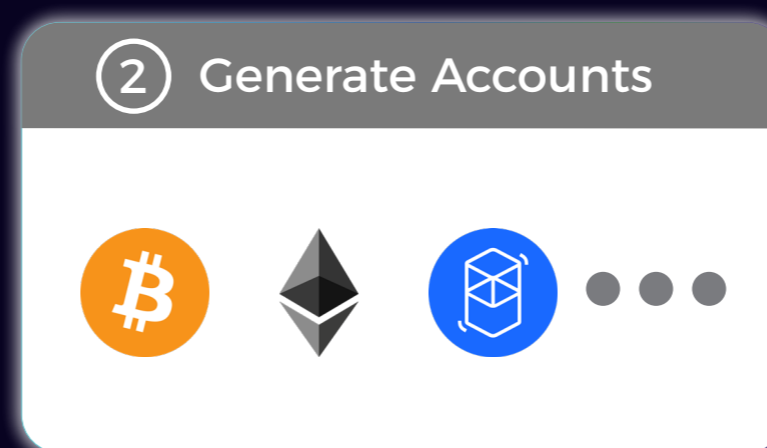
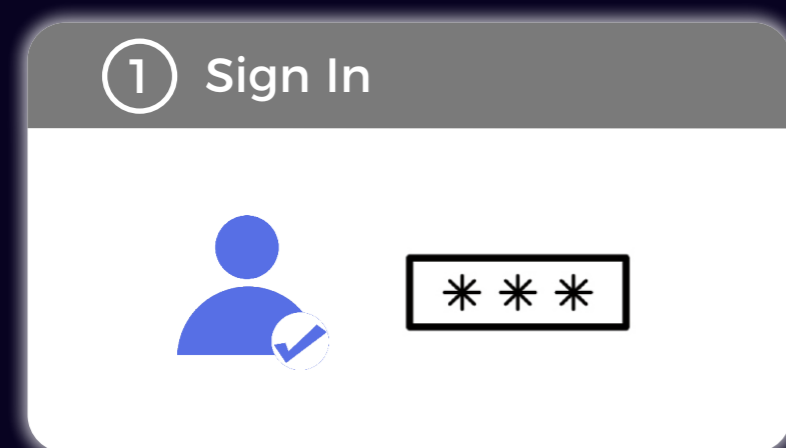
- An account address (public key) is a digital identifier on its associated blockchain to claim ownership of crypto.
- Thanks to its design geared toward decentralization, blockchain accounts can be used to log into Web 3.0 Dapps to manage data and activities.
- However, blockchain accounts have some drawbacks:
 - Trust among blockchain accounts are weak because of anonymity.
 - Management of private keys of blockchain accounts are burdensome for users.
 - Personal information for users is not maintained.
 - One account is only valid for a particular blockchain.



BLOCKCHAIN WALLET

- Wallets are software that help users manage blockchain accounts and initiate transactions and activities.
- User-friendliness and security are unavoidable tradeoffs for Wallet Designs:
 - Centralized wallets have Web 2.0-like user-friendliness but poor security.
 - Decentralized wallets have good security but users struggle with retrieval of lost private keys.
- Designed for management of blockchain accounts, not for sign-on in Web3 applications.

Wallet Application



RECENT SOLUTION

Multiple-party computation (MPC) Wallets

- Pros: easy and safe management of private keys; low operating cost
- Cons: trusted third parties indispensable, thus not completely decentralized and secured if the third parties violate the trust.

Smart Contract (SC) Wallets and ERC 4337

- Pros: easy and safe management of private keys; user-defined wallet logics
- Cons: high operating cost

Hardware Wallet

A hardware wallet is a special type of bitcoin wallet which stores the user's private keys in a secure hardware device.



EOA Wallet

Externally owned accounts (EOAs) are accounts that are controlled by private keys, typically generated using a seed phrase. Unlike smart contracts, externally owned accounts are accounts without any code associated with them.



Smart Contract Wallet

A smart contract wallet is a device or application that lets users customize the way they would prefer to manage their digital assets. Account abstraction is how developers make smart contract wallets possible.



MPC Wallet

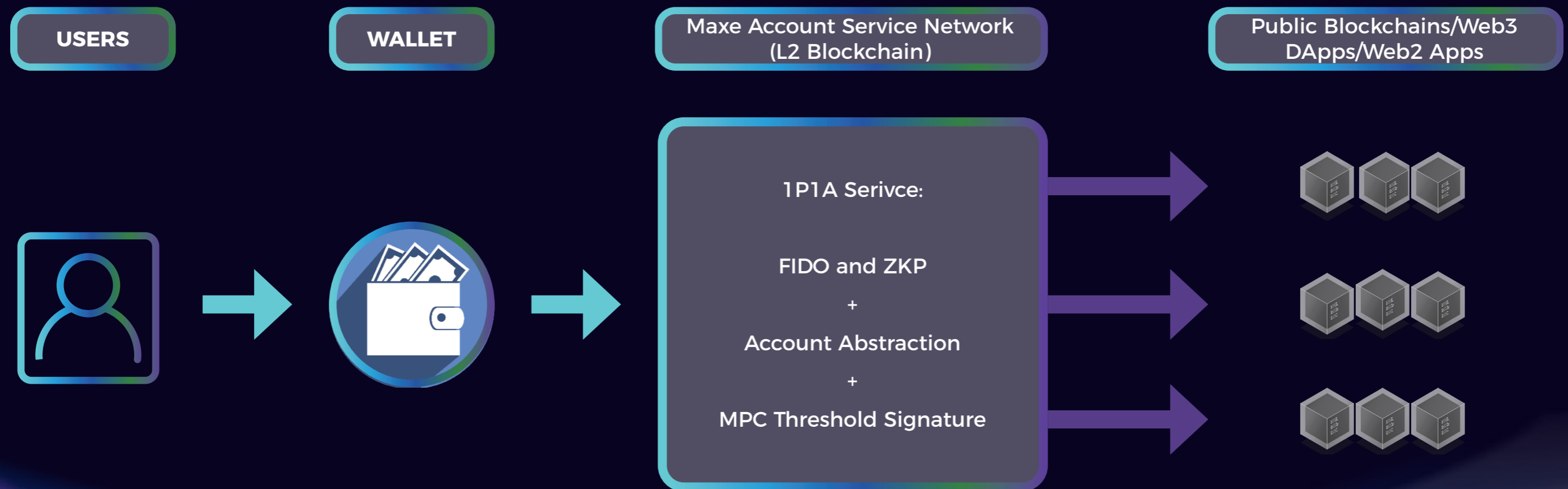
MPC wallets is a cryptographic tool that employs cryptographic data from multiple parties owning multiple devices to perform calculations using their combined data points without revealing their individual input.



OUR SOLUTION: MAXE ACCOUNT SERVICE NETWORK (ASN)

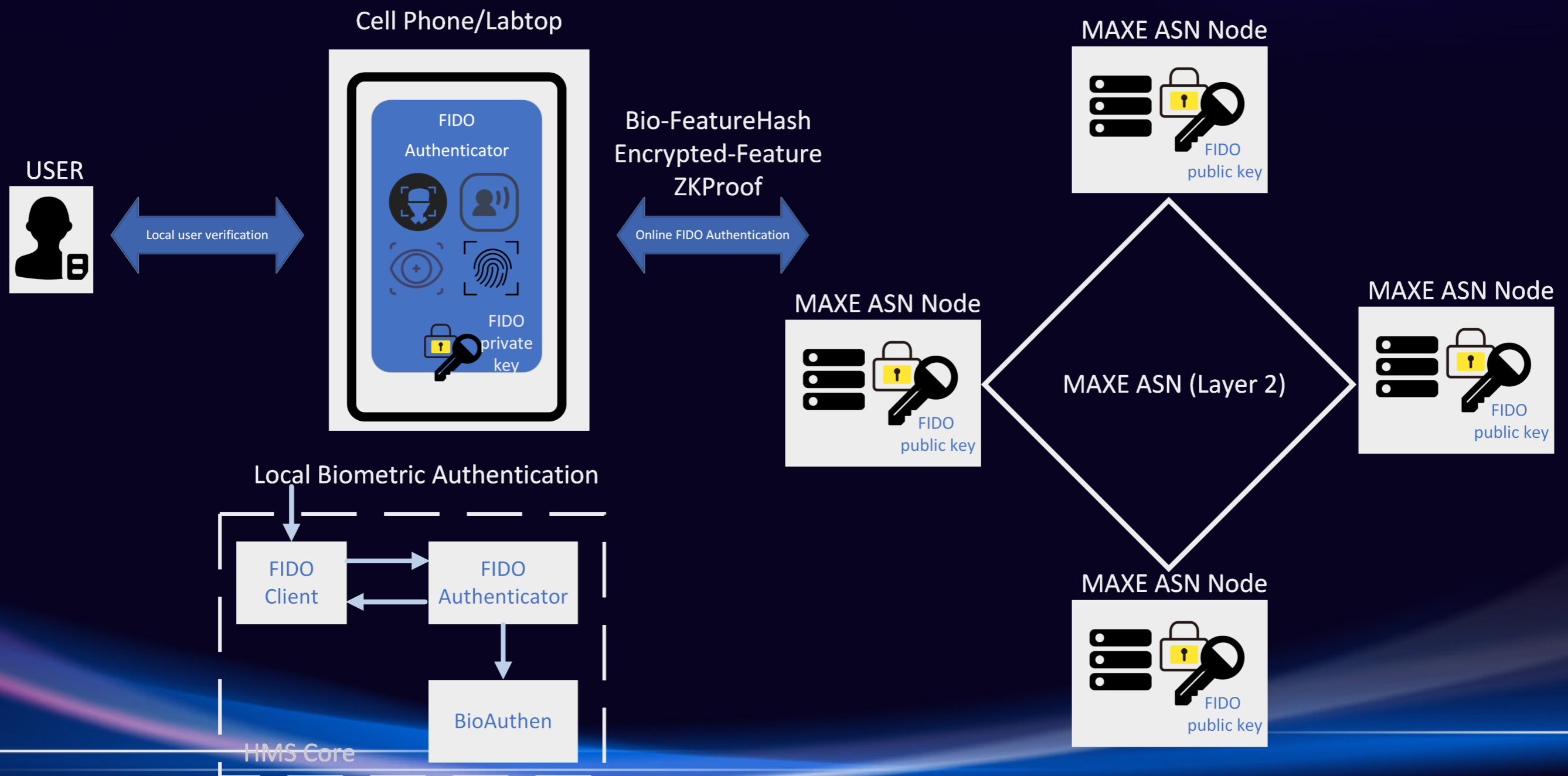
A Layer 2 infrastructure tailored for 1P1A in Web 3.0

- 1P1A is achieved by the combination of FIDO and zero-knowledge proof
- User-friendliness close to Web 2.0 provided by FIDO and account abstraction
- Decentralization and security are guaranteed by MPC-based TSS on L2 blockchain
- Application-friendliness realized by our account service with open APIs



OUR SOLUTION: FIDO + ZKP FOR 1P1A

- FIDO based Maxe Wallet => User-Friendly sign-on to Decentralized Maxe ASN => Access to all Web 3.0/Web 2.0 Apps
- FIDO Biometric Authentication + ZKP => Credible Anonymous Human Accounts
 - Account Registration: ZKP for Biometric Authentication, Feature Hash
 - Account Login: Local FIDO Biometric Extraction/Authentication



MAXE ACCOUNT SERVICE NETWORK—FEATURES



Security

- Decentralised Layer 2 blockchain
- Decentralized MPC platform
- Keys are distributed across multiple nodes
- Uses MPC Threshold Signing Scheme (TSS)
- One user one account (1P1A)
- Protected user private information



User-friendly:

- Standardized and Open authentication and authorization with FIDO, OpenID DID, etc.
- Passwords and mnemonics not needed, accounts retrievable
- Accounts are self-programmable and self-manageable
- One account for all applications: Single Sign-on (SSO)



Developer-friendly:

- A decentralized infrastructure open to all MAXE contributors
- Standard and open APIs provided to wallet developers and application developers
- User logics can be programmed into MAXE Account Service Network
- Support account services for multiple blockchains
- High performance and ever-improving



MAXE: ACCOUNT STRUCTURE

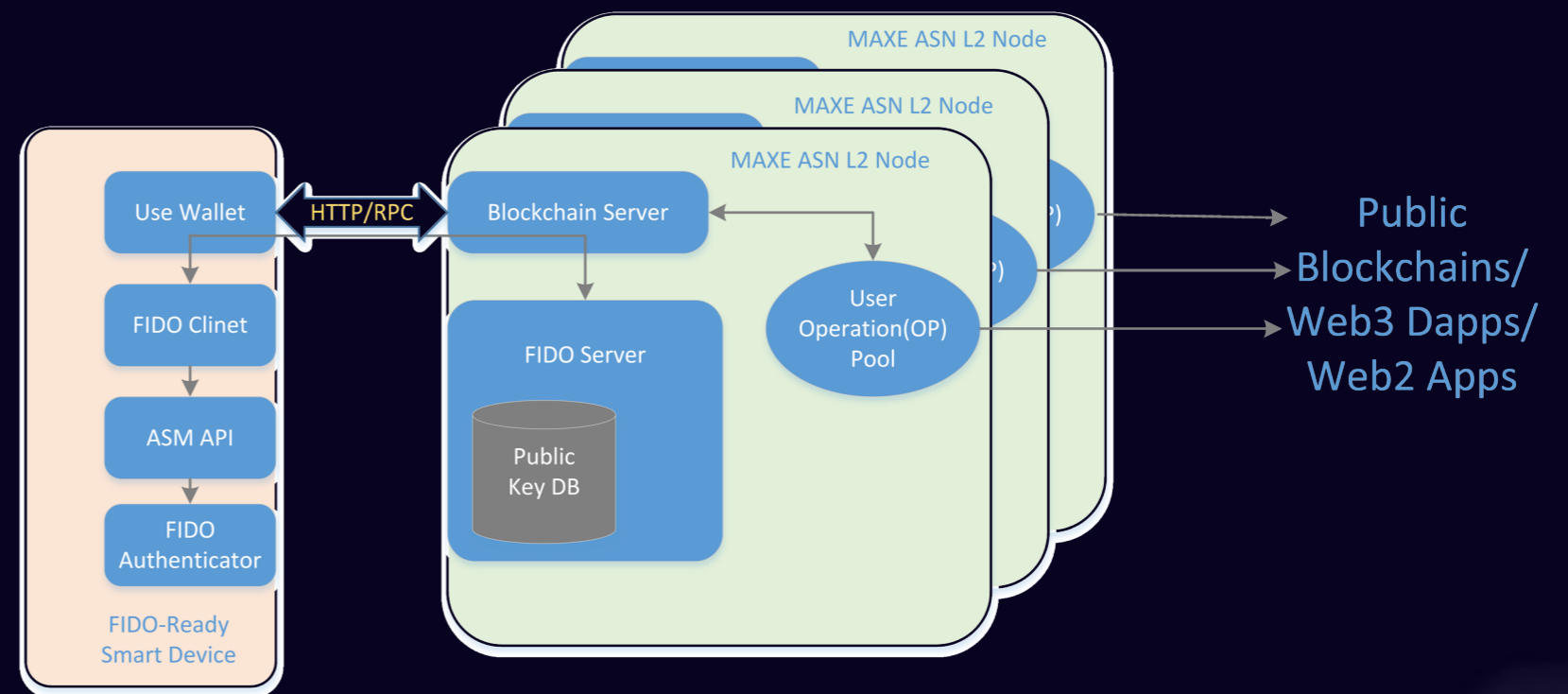
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  },
  "personalInformation":{
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    "didVCaddress":"<string>"
  },
  "blockchainAccountInformation":{
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    "address":"<address>",
    "coin":"<uint64>",
    "nonce":"<uint64>",
    "security":"<string>"
  }
}

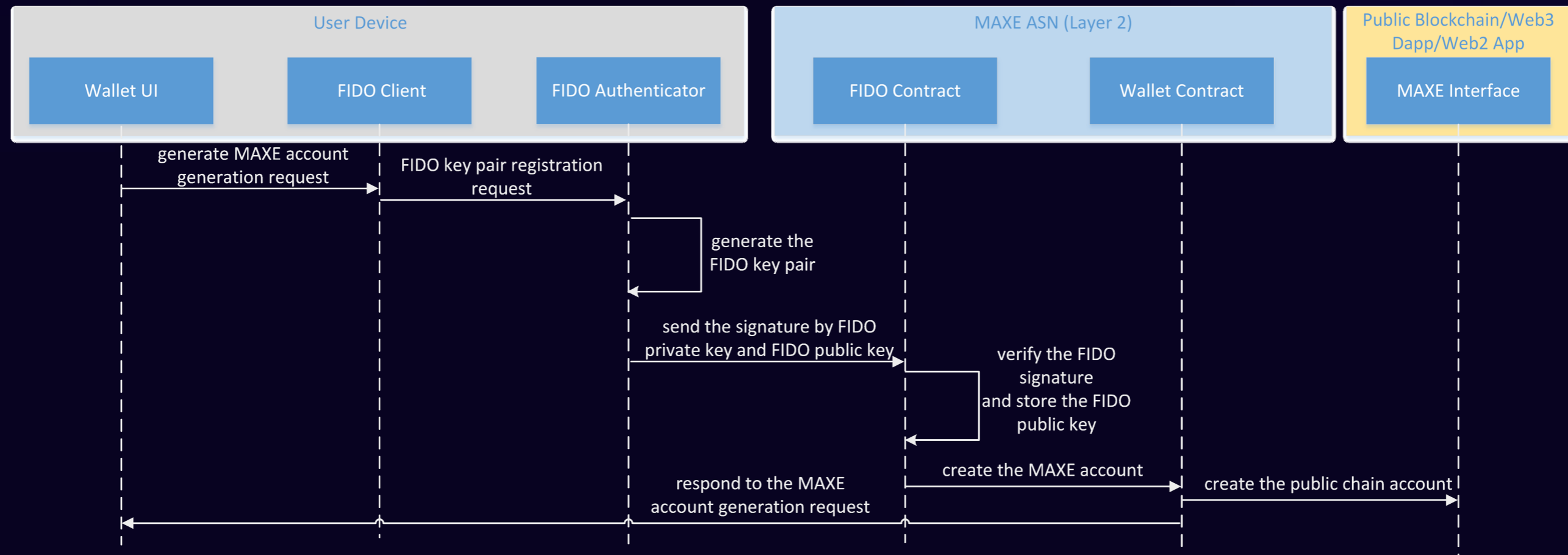
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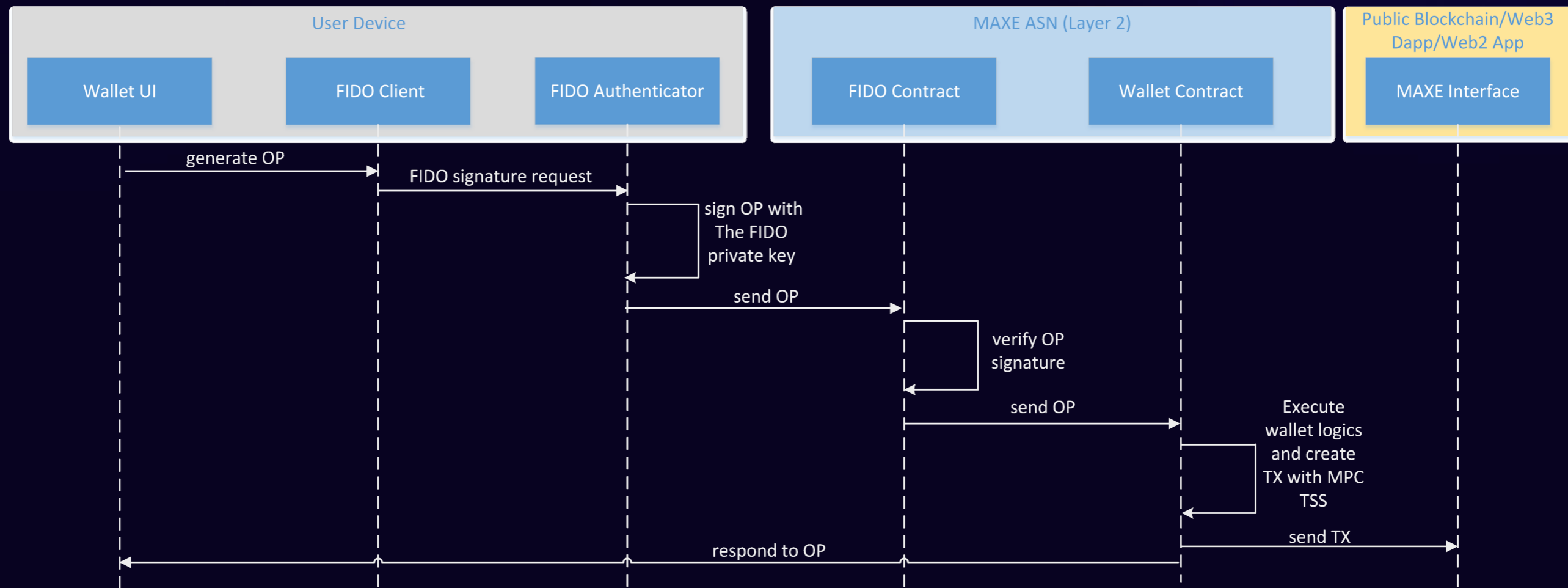
MAXE: SYSTEM ARCHITECTURE



MAXE: Operational Flows - Registration



MAXE: Operational Flows - Transaction





Dr. Shengli ZHANG

- CO-FOUNDER
- Blockchain scientist
 - 7+ years of blockchain R&D experience
 - World's Top 2% Scientists
 - Leading the R&D of a running public chain
 - Ph.D graduated from CUHK



Dr. Taotao WANG

- CO-FOUNDER
- Blockchain scientist
 - 6+ years of blockchain R&D experience
 - Two blockchain best paper awards
 - Ph.D graduated from CUHK



Prof. Soung-Chang LIEW

- CO-FOUNDER
- Blockchain scientist
 - Senior network scientist
 - Professor at CUHK
 - FIEEE, FIEE, FHKIE, FHKEng
 - BS, MS, PhD graduated from MIT



Dr. Qing YANG

- CO-FOUNDER
- Blockchain developer
 - 6+ years of blockchain R&D experience
 - Deep understanding of the Ethereum system and its code
 - Ph.D graduated from CUHK



Mr. Weike ZHANG

- CO-FOUNDER
- BD and project manager
 - 5+ years of experience in Web3 operations
 - Deep understanding of the blockchain ecosystem and incubating various web3 projects

TEAMS





Mr. Yuanji XUAN

PROJECT MANAGER

- 10+ years of international project management experience in IT, Telecom and Finance
- 3 years of project management and operations experience in crypto industry



Mr. Huazheng CHENG

BLOCKCHAIN DEVELOPER

- 6+ years of code development experience
- Ethereum enthusiast, early Ethereum participants and users



Mr. Zhibin LIN

SMART CONTRACT DEVELOPER

- 2+ years of code development experience
- Advocate of Ethereum, deeply passionate about the decentralized movement



Mr. Guanning SU

SMART CONTRACT DEVELOPER

- 2+ years of code development experience
- Believer in decentralized thought, advocate of web3



Mr. Sining CHEN

WALLET DEVELOPER

- 3+ years of code development experience
- Dedicated to web3 development

TEAMS



ORIGINS AND DEVELOPMENT OF MAXE ASN

MIRROR IDENTITY

Proposed and implemented the technique of Mirror Identity in USECHAIN.

Jul. 2018

PERMISSIONED PUBLIC CHAIN

Developed the software and published the WhitePaper of Permissioned Public Blockchain.

Jun. 2020

ZKBID

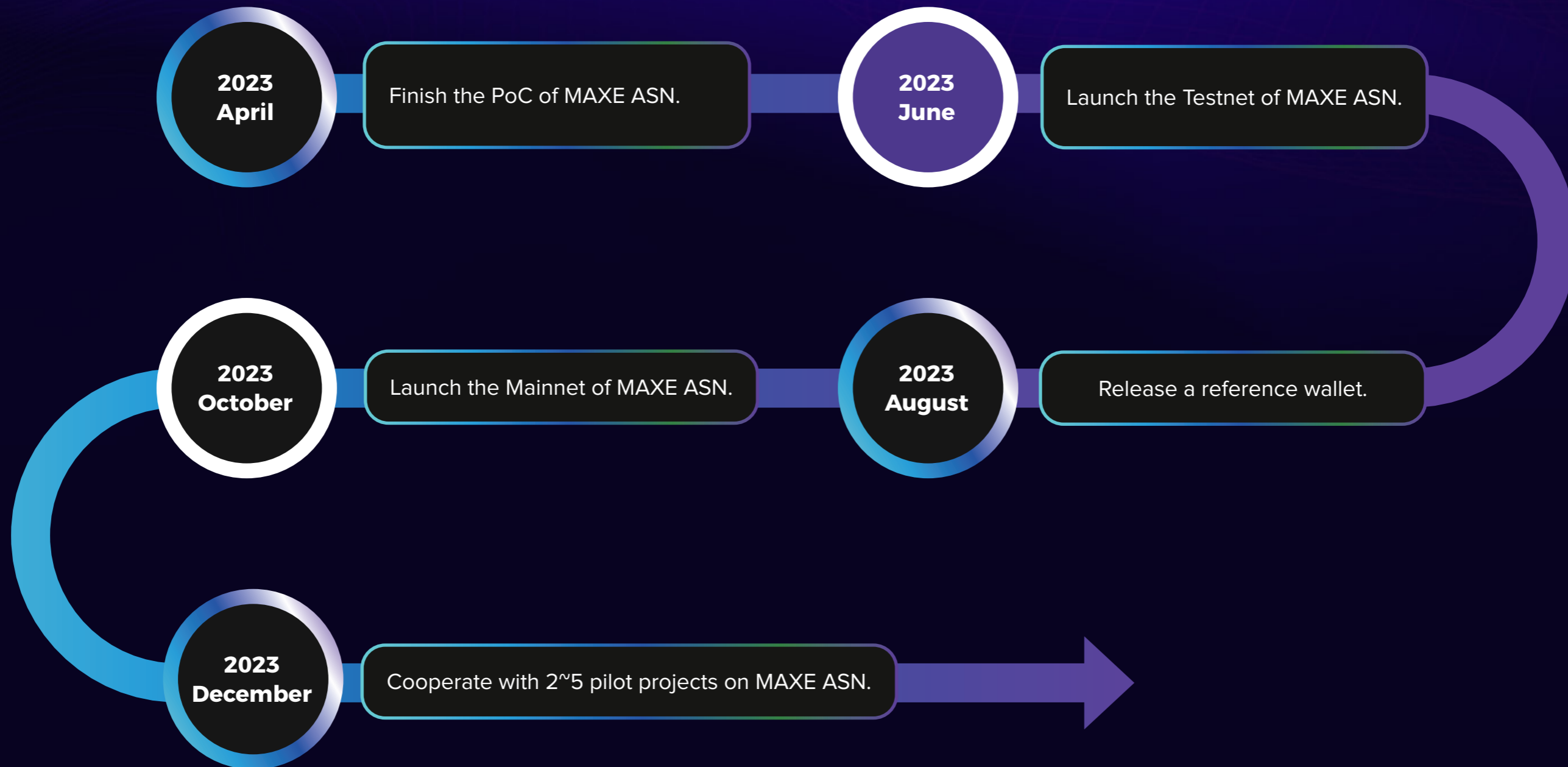
Design and develop ZKBID, a scheme improved from Mirror Identity using ZKP.

Dec. 2022

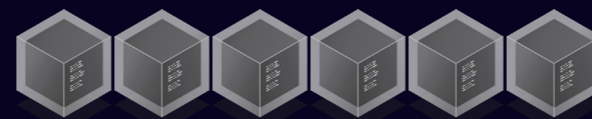
MAXE ASN

Established MAXELABS and focus on the research and development of ASN

Apr. 2023



PATHWAY TO SUCCESS



JOIN US ON THIS EXCITING JOURNEY

MAXELABS

 support@maxe.network

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 <https://www.maxe.network/>