Chainlink

Consensus 2021

Chainlink 2.0 Whitepaper and Roadmap

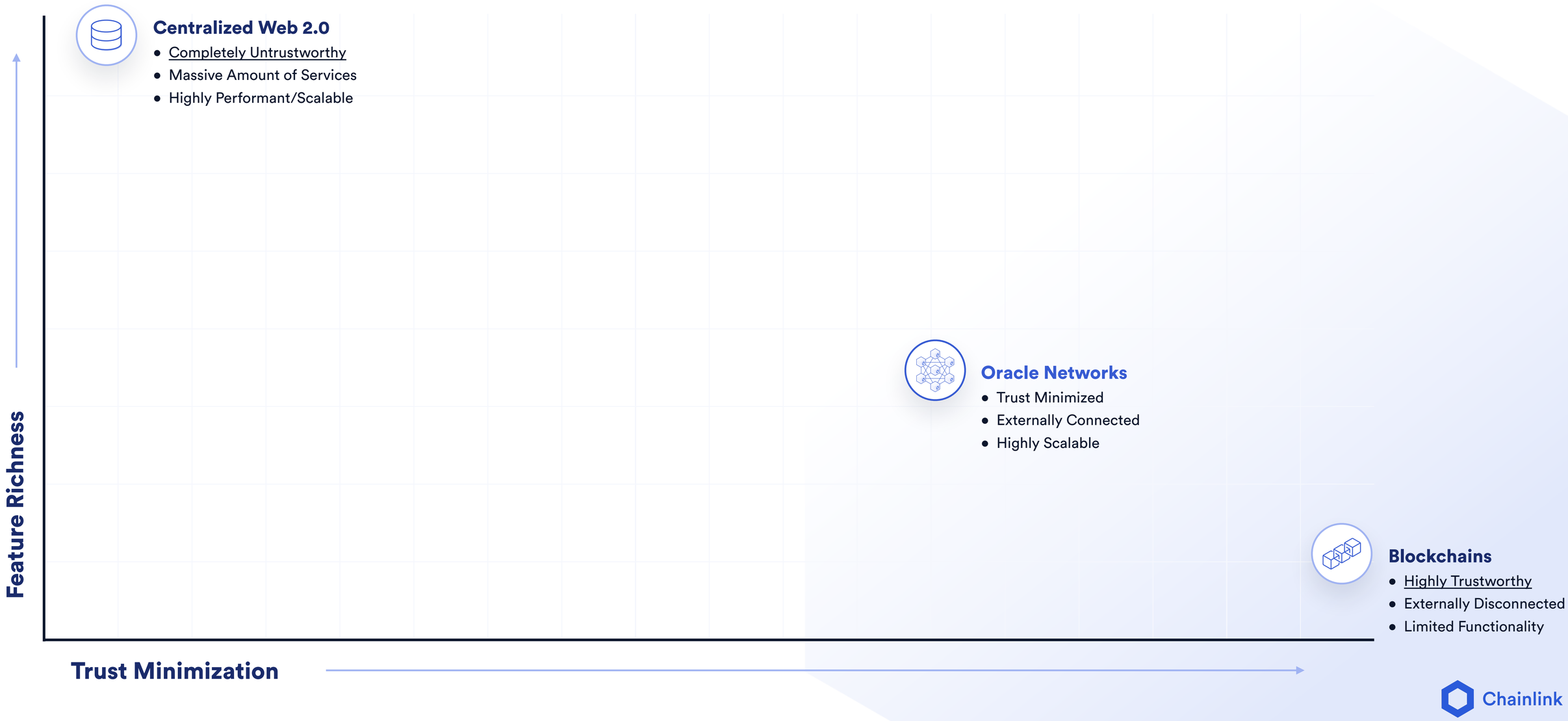
Chainlink 2.0: Next Steps in the Evolution of Decentralized Oracle Networks

Lorenz Breidenbach[1] Christian Cachin[2] Benedict Chan[1]
Alex Coventry[1] Steve Ellis[1] Ari Juels[3] Farinaz Koushanfar[4]
Andrew Miller[5] Brendan Magauran[1] Daniel Moroz[6]
Sergey Nazarov[1] Alexandru Topliceanu[1] Florian Tramèr[7]
Fan Zhang[8]

15 April 2021
v1.0

[1]Chainlink Labs
[2]The author is a faculty member at University of Bern. He co-authored this work in his separate capacity as an advisor to Chainlink Labs.
[3]The author is a faculty member at Cornell Tech. He co-authored this work in his separate capacity as Chief Scientist at Chainlink Labs.
[4]The author is a faculty member at University of California, San Diego. She co-authored this work in her separate capacity as an advisor to Chainlink Labs.
[5]The author is a faculty member at University of Illinois Urbana-Champaign. He co-authored this

The Decentralized Infrastructure Continuum/Trade Off



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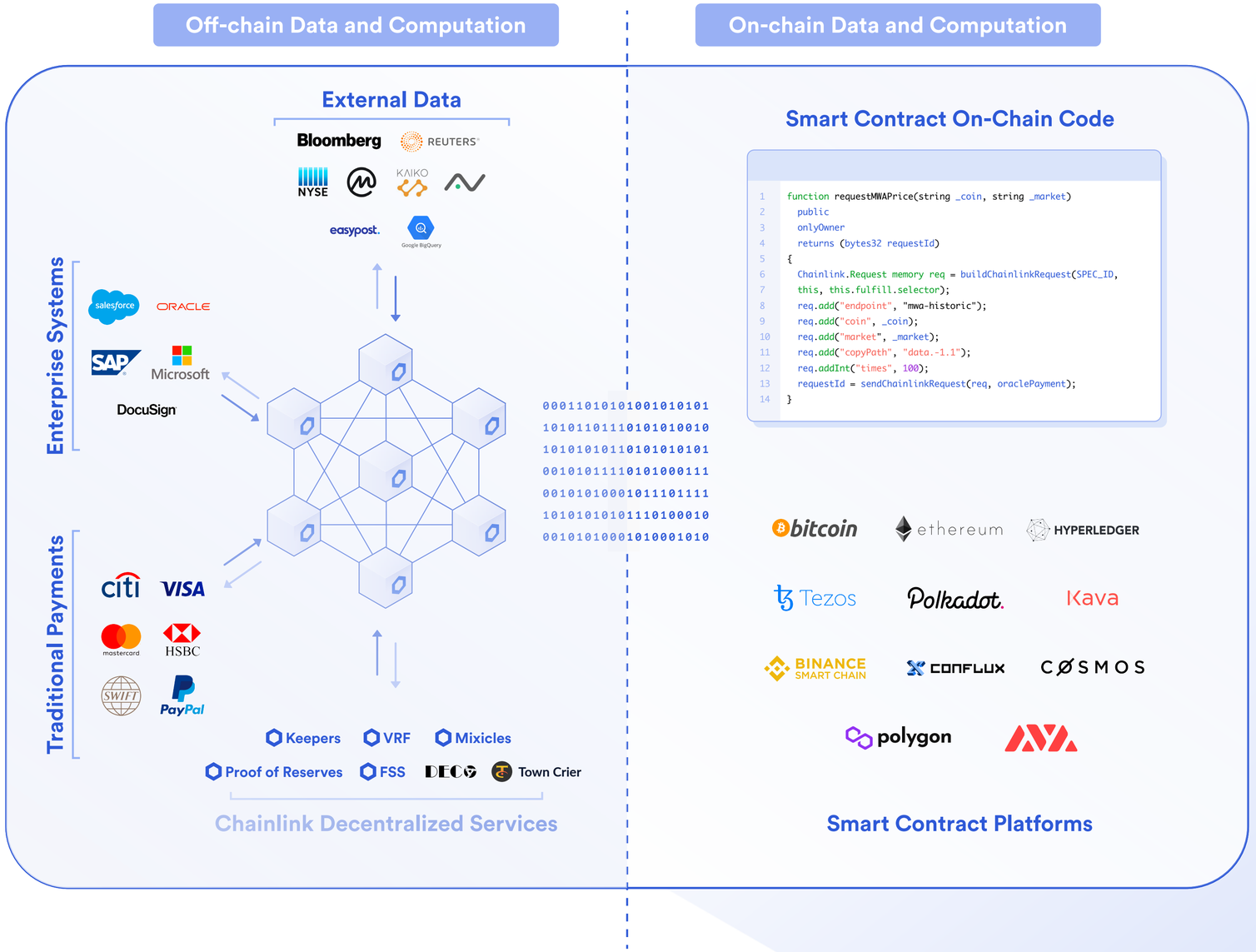
Combining On-chain & Off-chain Systems Securely/Reliably



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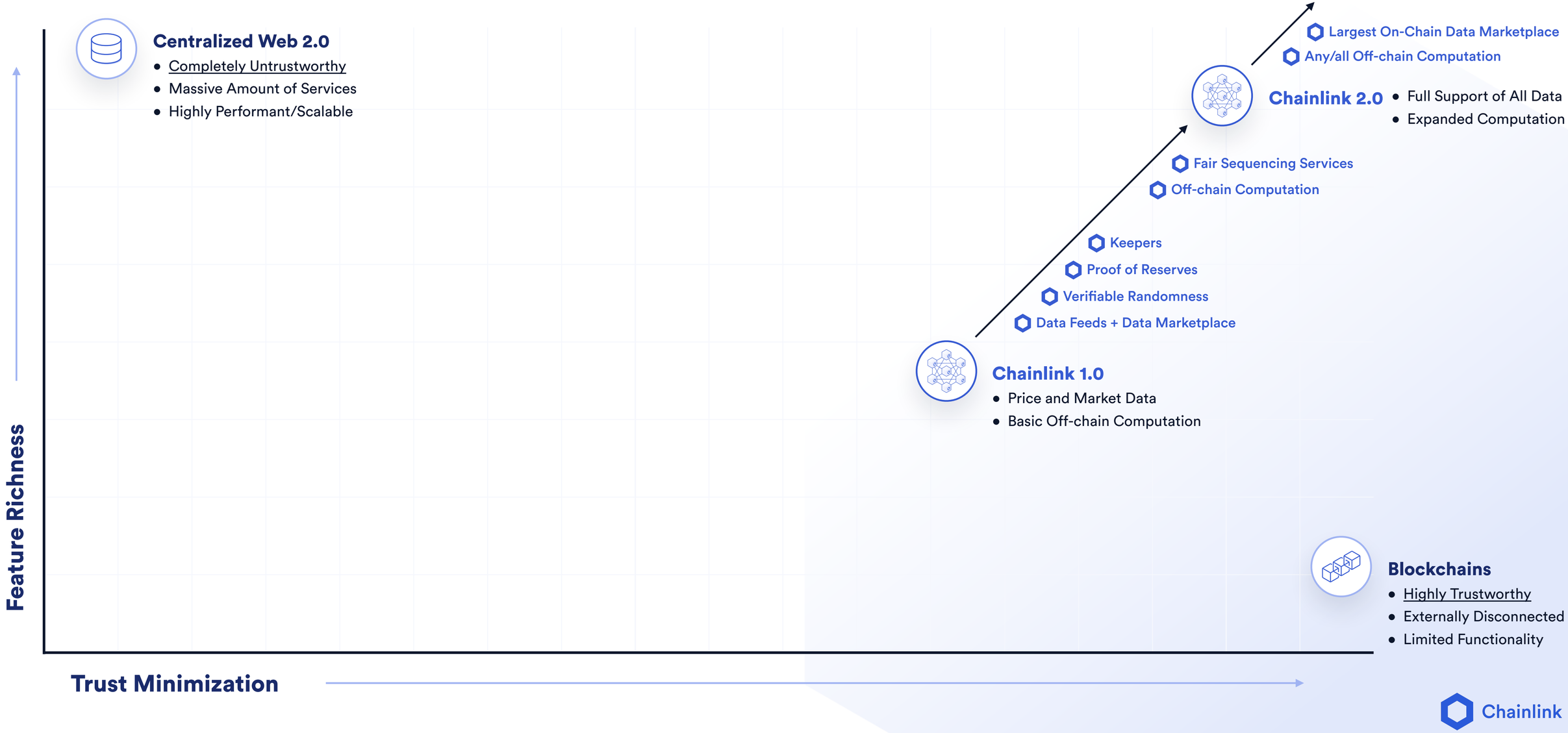
Decentralized Oracle Networks Create Key Functionality



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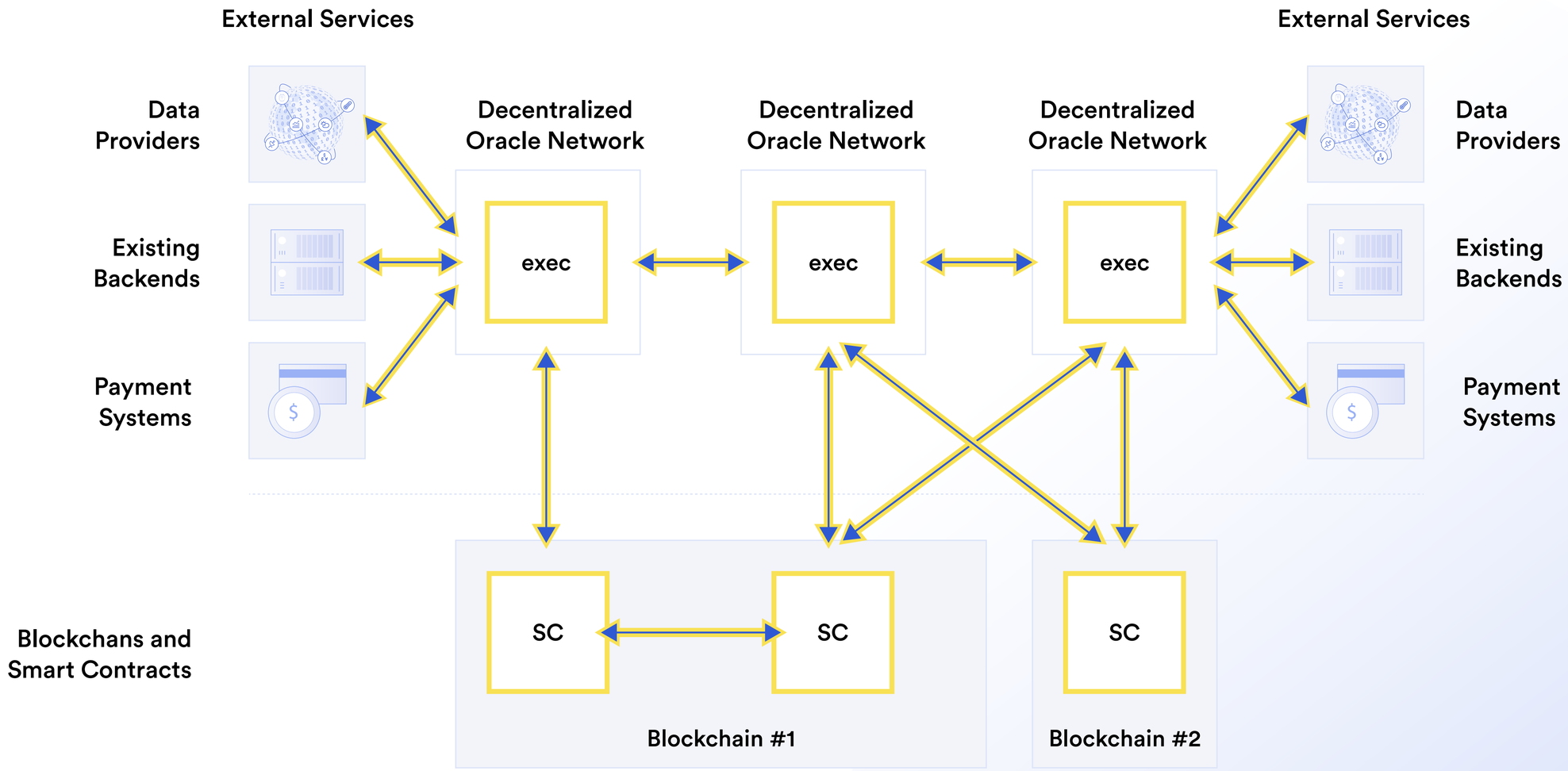
Hybrid Smart Contracts Will Be Continually More Advanced



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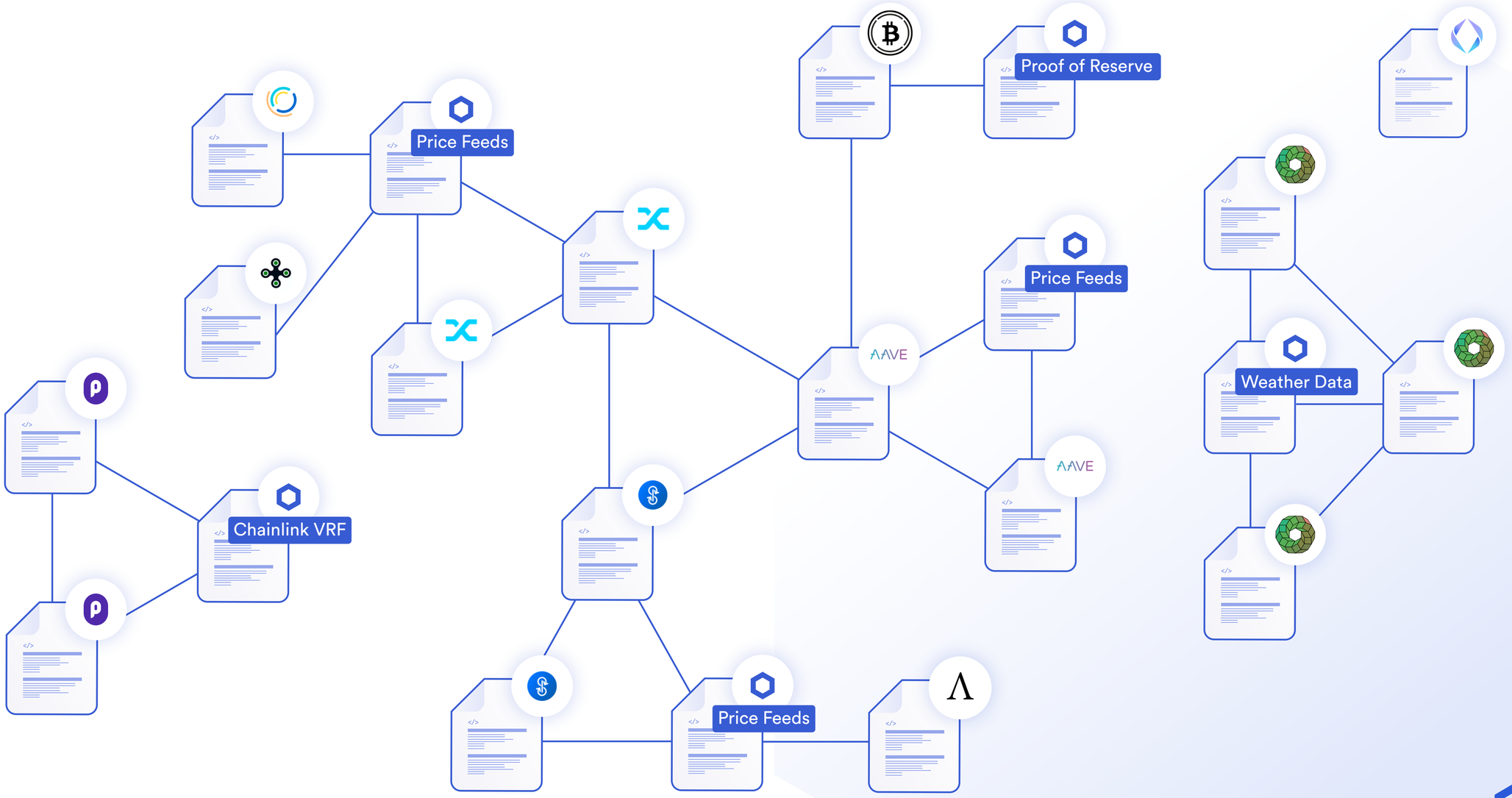
Hybrid Smart Contracts Already Happening as DeFi



Chainlink

Over $30 Billion in DeFi is Using or Integrating Chainlink

"With partnerships across DeFi and traditional markets, the ground the Chainlink team has covered in a short time is nothing short of breathtaking."

Forbes

"Chainlink has taken a commanding lead among DeFi oracles, a perch that's been strengthened with frequent announcements of new partnerships and node operators."

coindesk

"Chainlink's price oracles are quickly emerging as the industry-standard data source for the DeFi sector"

COINTELEGRAPH

Chainlink

Chainlink is Expanding into New Data and Computation

Highly Validated Data

Price and Market Data

CoinGecko · CoinMarketCap · BNC bravenewcoin.com · KAIKO · amberdata.io · CRYPTO COMPARE · ALPHA VANTAGE · BINANCE

Chainlink Network

DeFi Contracts + CeFi

SYNTHETIX · AAVE · Set Protocol · Ampleforth · LOOPRING · δY/δX · COMPOUND · Nexus Mutual · OPENLAW · easyfi · bZx · HAVEN · 1inch · LinkPool · opium.exchange · Aztec Network · orchid · tornado · DigiTix · wom · gelato · BULLIONIX · Bancor · Bamboo Relay · GAMERHASH · sandbank · PLASM

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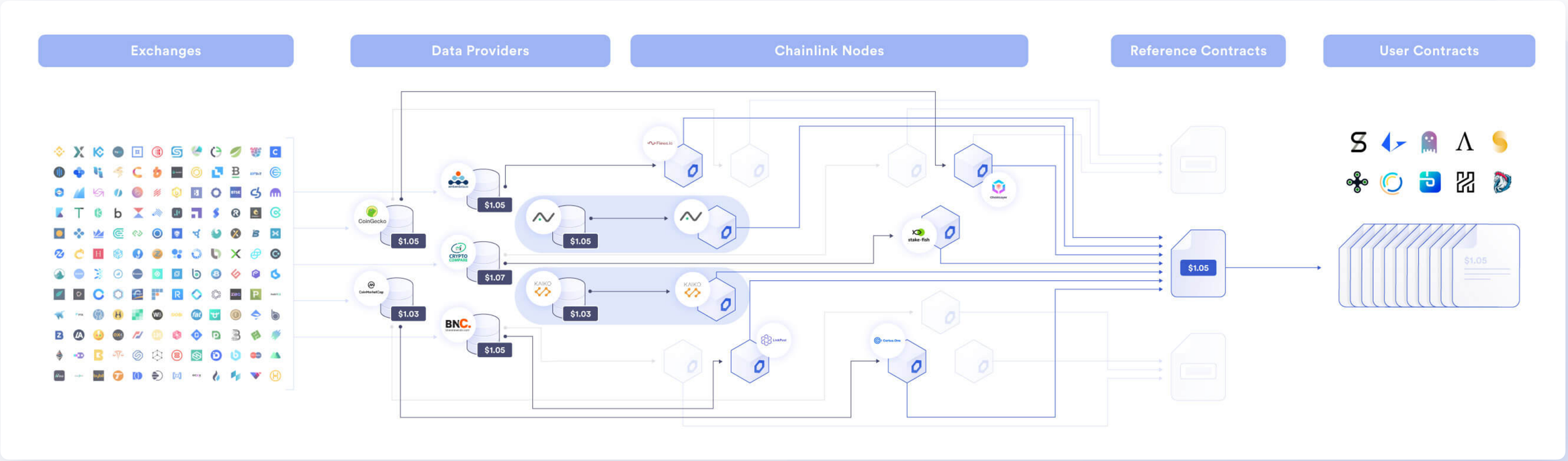
Global Finance Industry

Price Data Enables DeFi to Reinvent the Financial System



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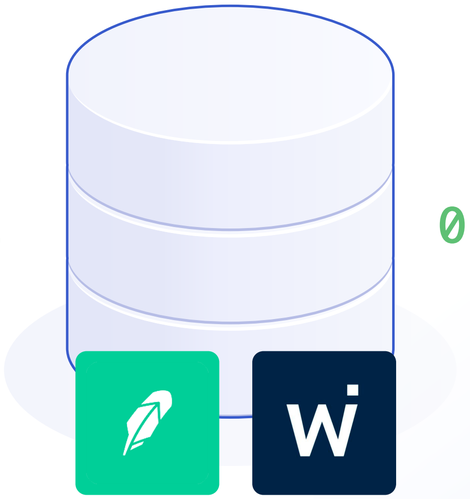
CeFi Financial Products Work Well in Predictable Conditions

Average Users

0 1 0 1 1 0 1 1

Centralized Finance



0 1 0 1 1 0 1 1

Global Financial Markets

MarketWatch

Robinhood day traders are squeezing the hedge funds — here's why it may continue

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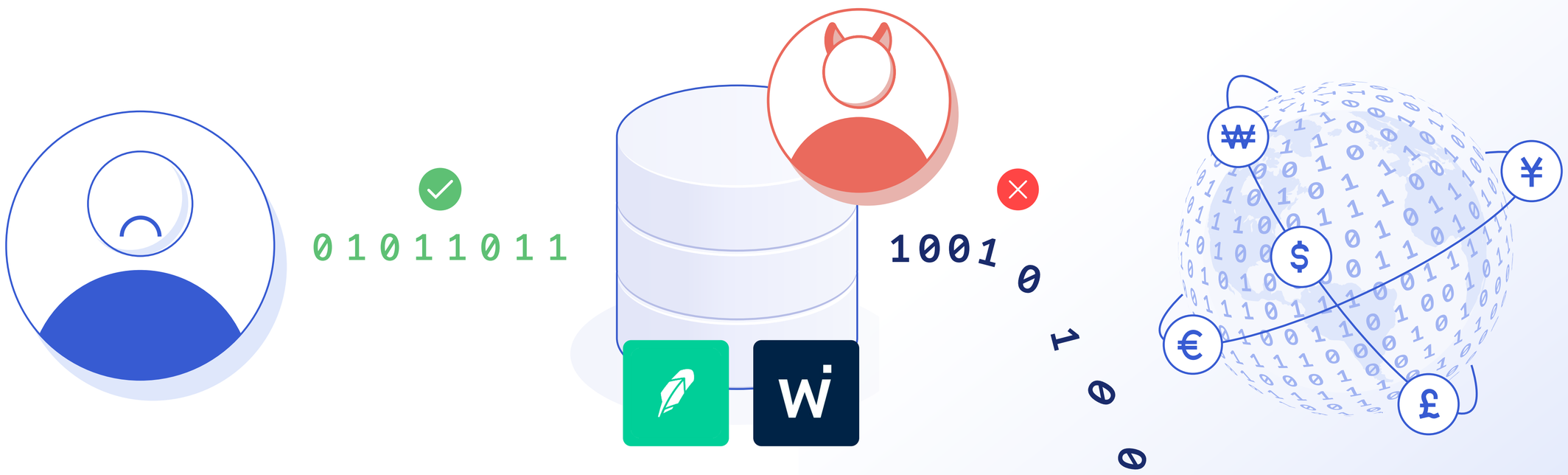
CeFi Financial Products Will Not Support the Average User

Average Users

Centralized Finance

Global Financial Markets



VICE

Robinhood Stops Users From Trading GameStop Stocks, Other Reddit YOLO Picks

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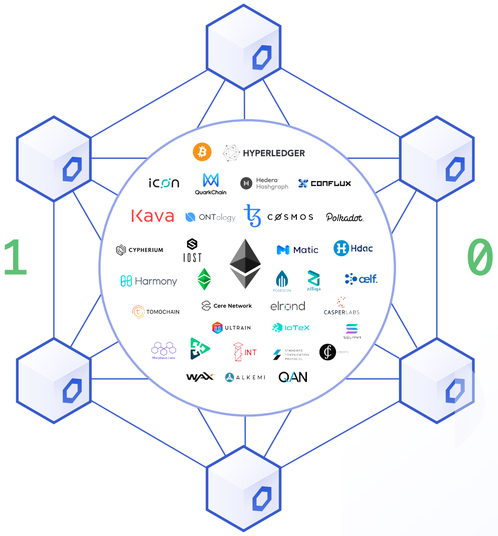
DeFi Completely Redefines a User's Relationship to Markets

Average Users

0 1 0 1 1 0 1 1

Decentralized Finance



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Global Financial Markets

Nasdaq

DeFi Trend: The Solution — and Huge Opportunity — to the Robinhood Fiasco

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Global Markets will Interoperate Through DeFi Protocols

Decentralized Finance

Derivatives

Capital Markets

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0 1 0 1 1 1 0 0 1 0

0 1 0 1 1 1 0 0 1 0

Carbon Credits

Global Insurance

Chainlink

Access to Off-chain Resources Enables More Contracts

Highly Validated Data

Price and Market Data

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Insurance and Climate Data

Chainlink Network

DeFi Contracts + CeFi

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Insurance Contracts

ARBOL · ETHERISC · Nexus Mutual

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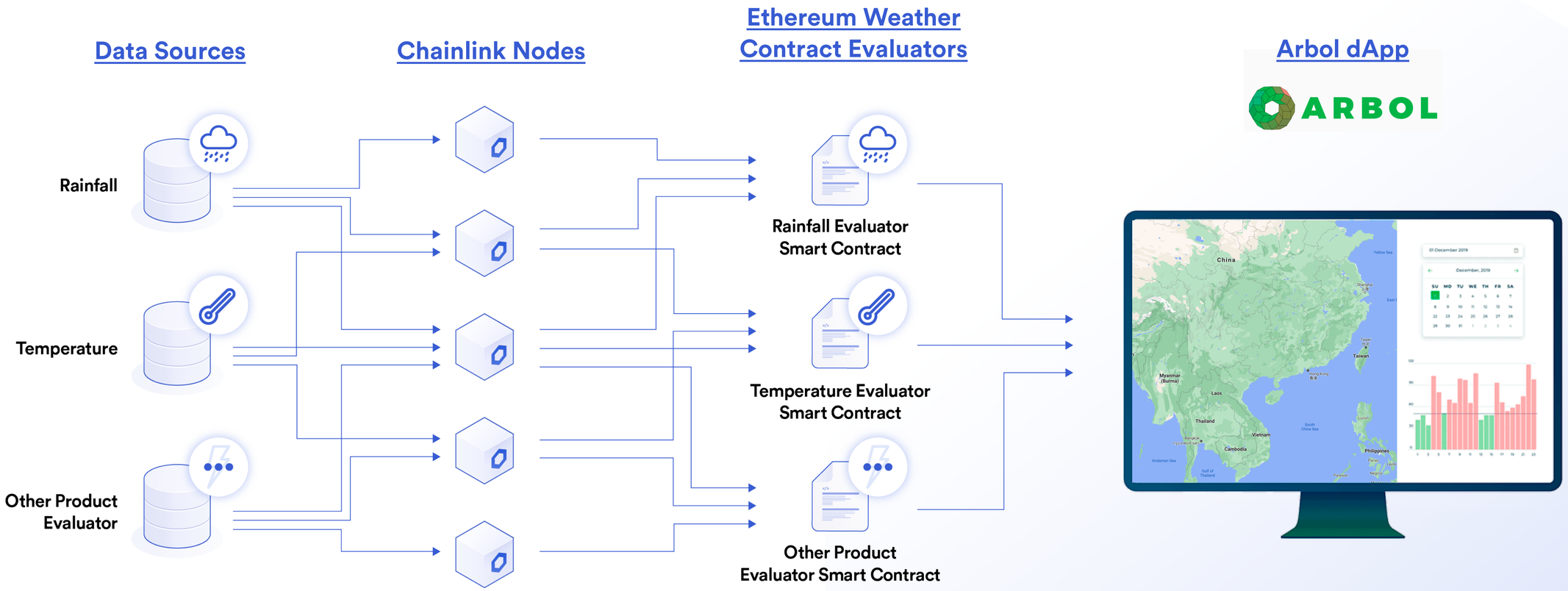
Global Finance Industry

Global Insurance Industry

Weather Data Creates Smart Contract Crop Insurance



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Reforestation and Automated Carbon Tax Credit Systems

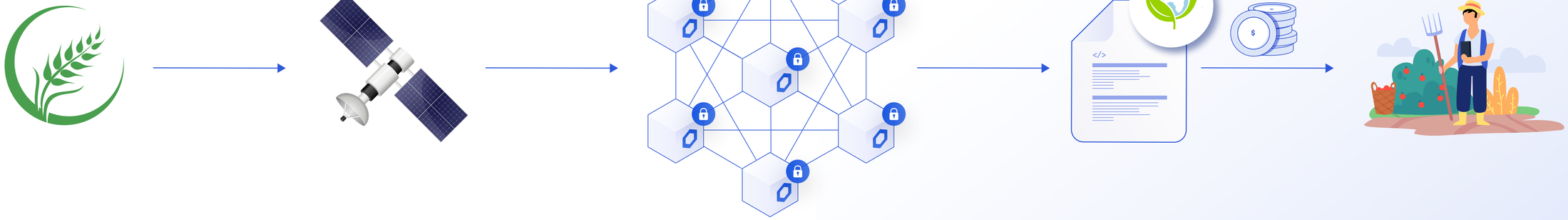
Reforestation Initiatives

Satellite Imagery & Other Data

Chainlink Network

Reforestation Hybrid Smart Contract

Reforestation and Carbon Sequestration Initiatives



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A Global Market for Carbon Sequestration and Reforestation

Decentralized Finance

Derivatives

Capital Markets

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Carbon Credits

Global Insurance

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Access to Off-chain Resources Enables More Contracts

Highly Validated Data

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Insurance and Climate Data

Proof of Reserve Audits

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DeFi Contracts + CeFi

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Insurance Contracts

ARBOL · ETHERISC · Nexus Mutual

Wrapped Assets

WBTC · PAXOS · Ren Liquidity Unchained

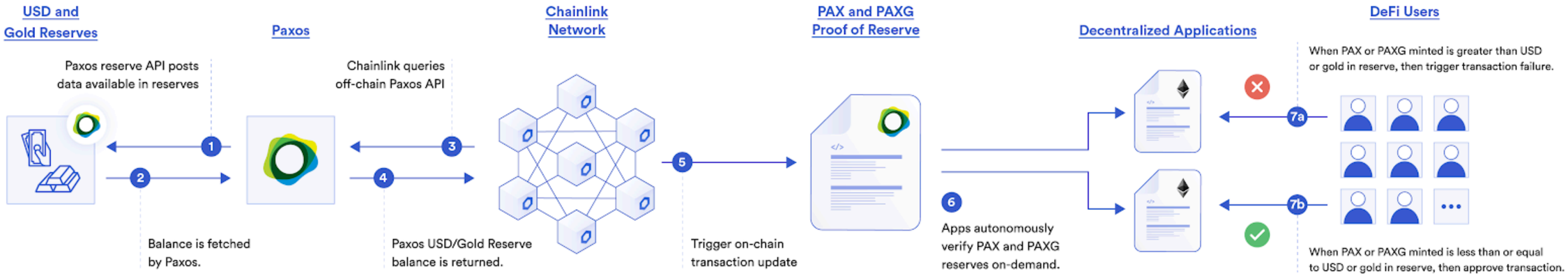
Ethereum · Polkadot · Tezos · Bitcoin · Kava · Hdac · CYPHERIUM · CONFLUX · elrond · Hedera Hashgraph · IOST · Harmony · Morpheus Labs · WAX · STANDARD TOKENIZATION PROTOCOL · celf. · CASPERLABS · QAN · Matic · BINANCE SMART CHAIN · HYPERLEDGER · COSMOS · zilliqa · icon · Cere Network · QuarkChain · ONTology · TOMOCHAIN · Ethereum · SOLANA · ALKEMI · CREDITS · POSEIDON · INT

Global Finance Industry

Global Insurance Industry

Global Asset Management

Proof of Reserve Creates Automated and Reliable Audits



BitGo® Ren TrueUSD® PAXOS

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Existing Audits Can Benefit from Hybrid Smart Contracts

FINANCIAL TIMES

EY fraud expert: 'incomprehensible' that Wirecard 'red flags' were ignored

"[...] had dismissed "red flags" pointing to accounting manipulations at the disgraced payments group."

https://www.ft.com/content/0288d7b1-1e52-4a3d-a9e1-6850afae0d26

Chainlink

Access to Off-chain Resources Enables More Contracts

Highly Validated Data

Price and Market Data

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Insurance and Climate Data

Proof of Reserve Audits

On-chain Data Marketplace

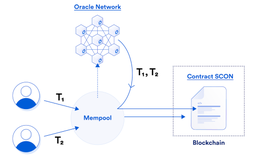
Google Big Query · AP

Off-Chain Computation

Verifiable Randomness

Keepers / Maintenance Bots

Expanded Computation



Chainlink Network

T-Systems · LinkPool · Validation Capital · Fiews.io · SIMPLY VC · ZTAKE · SNZ · ChainLayer · Certus.One

DeFi Contracts + CeFi

Insurance Contracts

ARBOL · ETHERISC · Nexus Mutual

Wrapped Assets

WBTC · PAXOS · Ren Liquidity Unchained

New Smart Contracts

Millions of new smart contracts

Gaming Contracts

DeFi Contracts

DeFi Contracts

Ethereum · Polkadot · Tezos · Bitcoin · Kava · Hdac · CYPHERIUM · CONFLUX · elrond · Hedera Hashgraph · IOST · Harmony · Morpheus Labs · WAX · STANDARD TOKENIZATION PROTOCOL · celf. · CASPERLABS · QAN · Matic · BINANCE SMART CHAIN · HYPERLEDGER · COSMOS · zilliqa · icon · Cere Network · QuarkChain · ONTology · TOMOCHAIN · SOLANA · ALKEMI · CREDITS · POSEIDON · INT

Global Finance Industry

Global Insurance Industry

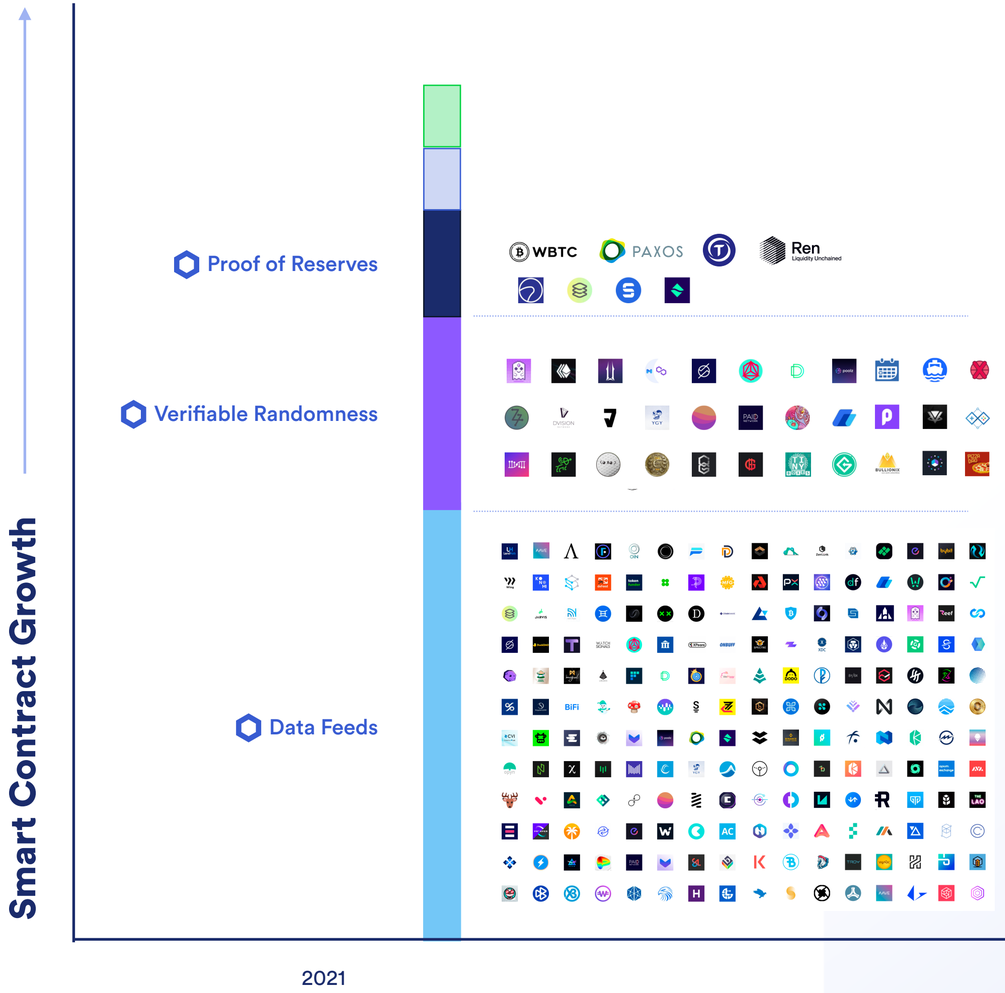
Global Asset Management

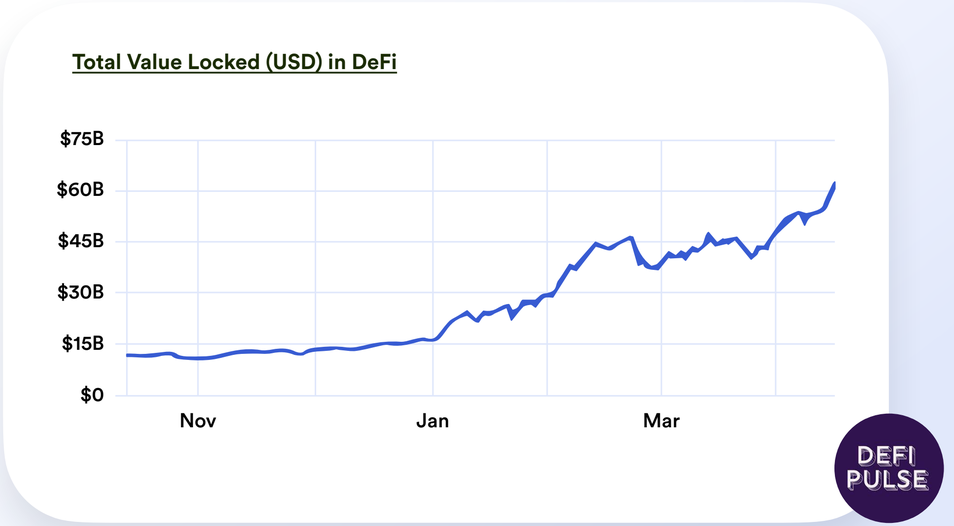
Thousands of Additional Use Cases

Global Demand for Off-Chain Computation

More Hybrid Smart Contracts Need More DON Services

- Off-chain Computation
- Keepers
- Proof of Reserves
- Verifiable Randomness
- Data Feeds





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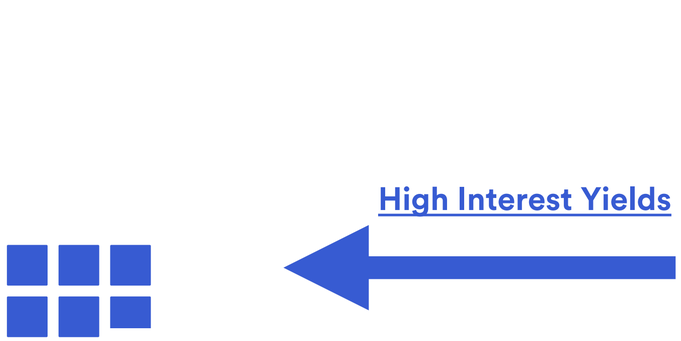
DeFi is Still Only ~3.6% of All Value in Cryptocurrency

DeFi

Cryptocurrency



$58 billion

$1.6 trillion

$10 Billion

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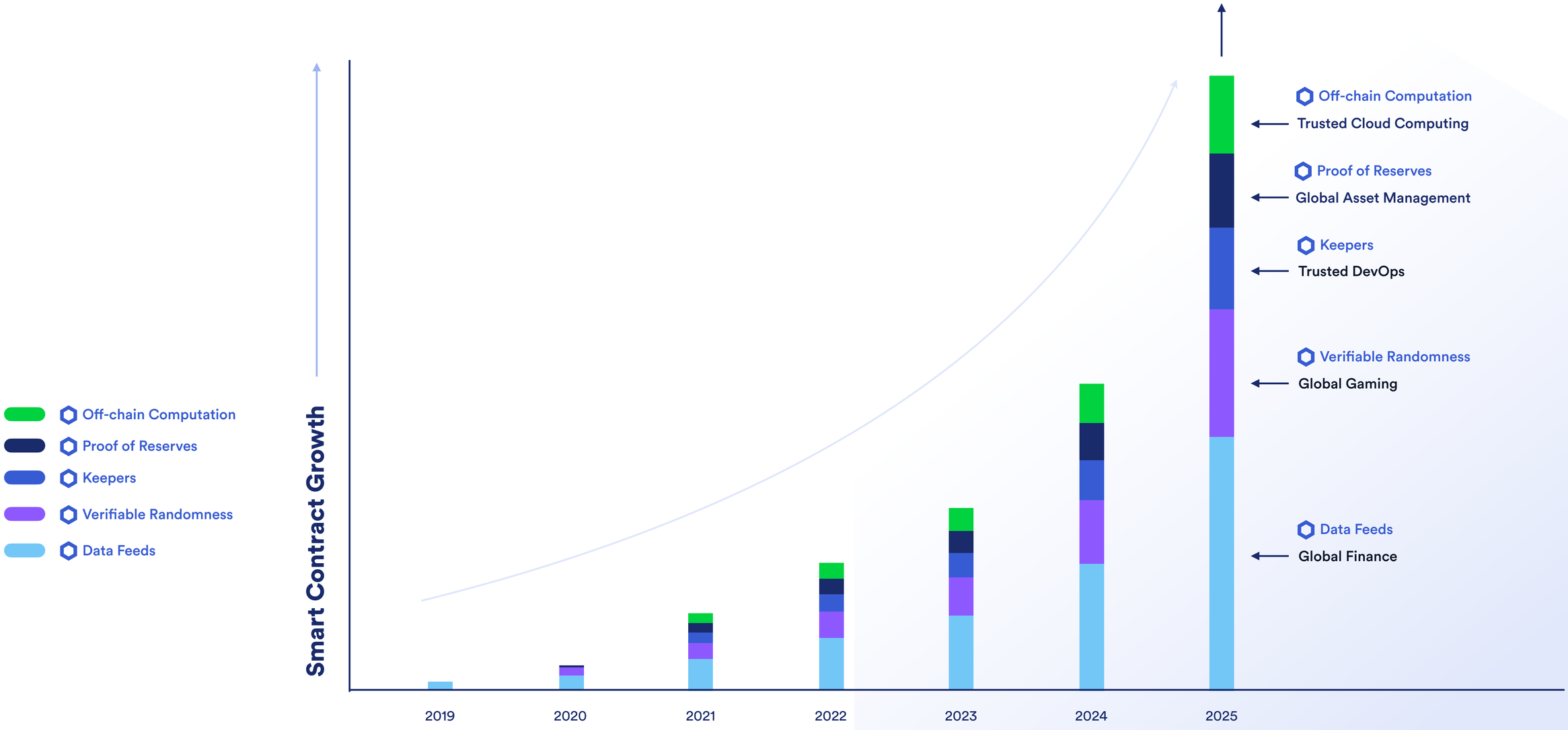
More Hybrid Smart Contracts Need More DON Services



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The Remaining Market For Smart Contracts is Trillions

DeFi

$58 billion

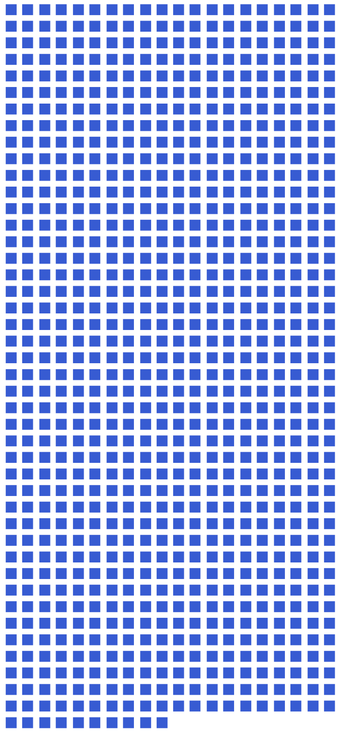
Cryptocurrency

$1.6 trillion

Gold

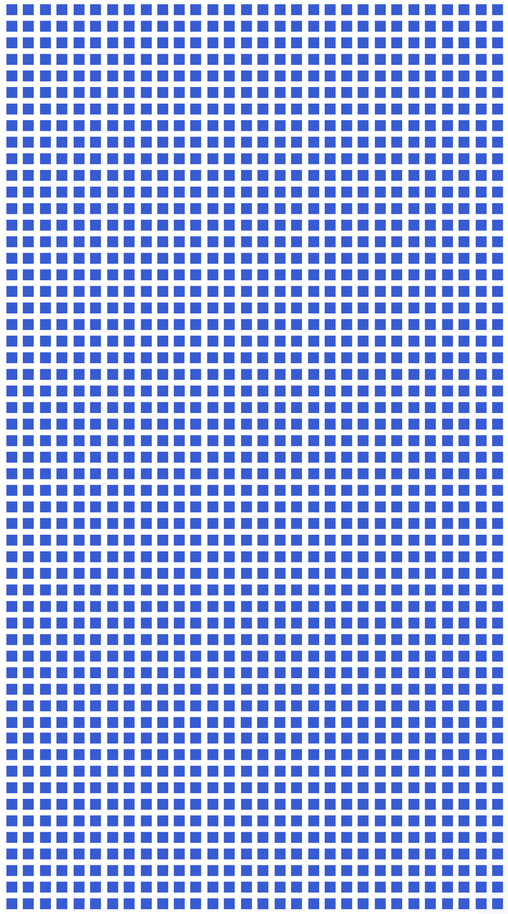
$10.9 trillion

Stock Market



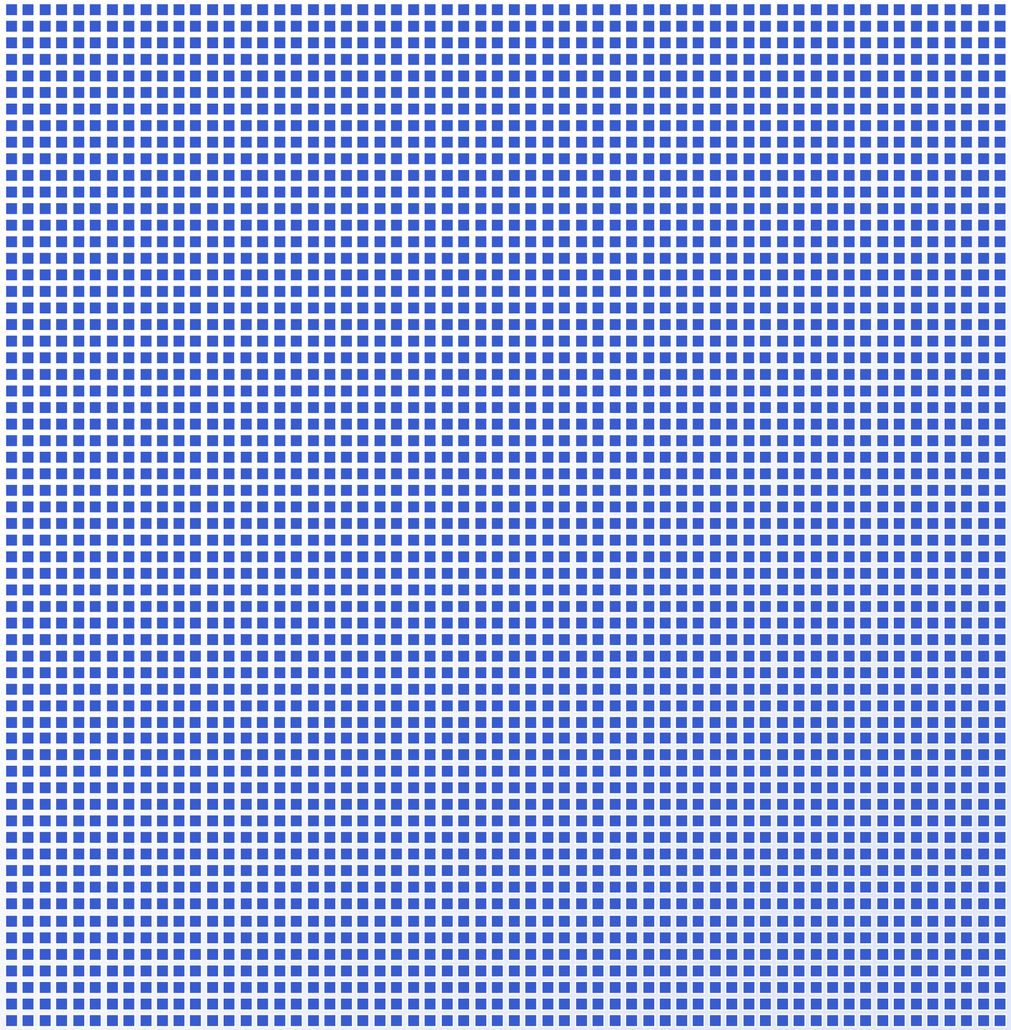
$89.5 trillion

Global Real Estate



$280.6 trillion

Derivatives

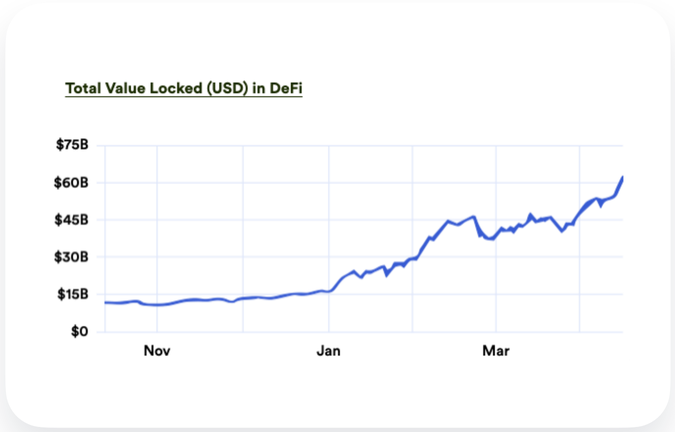


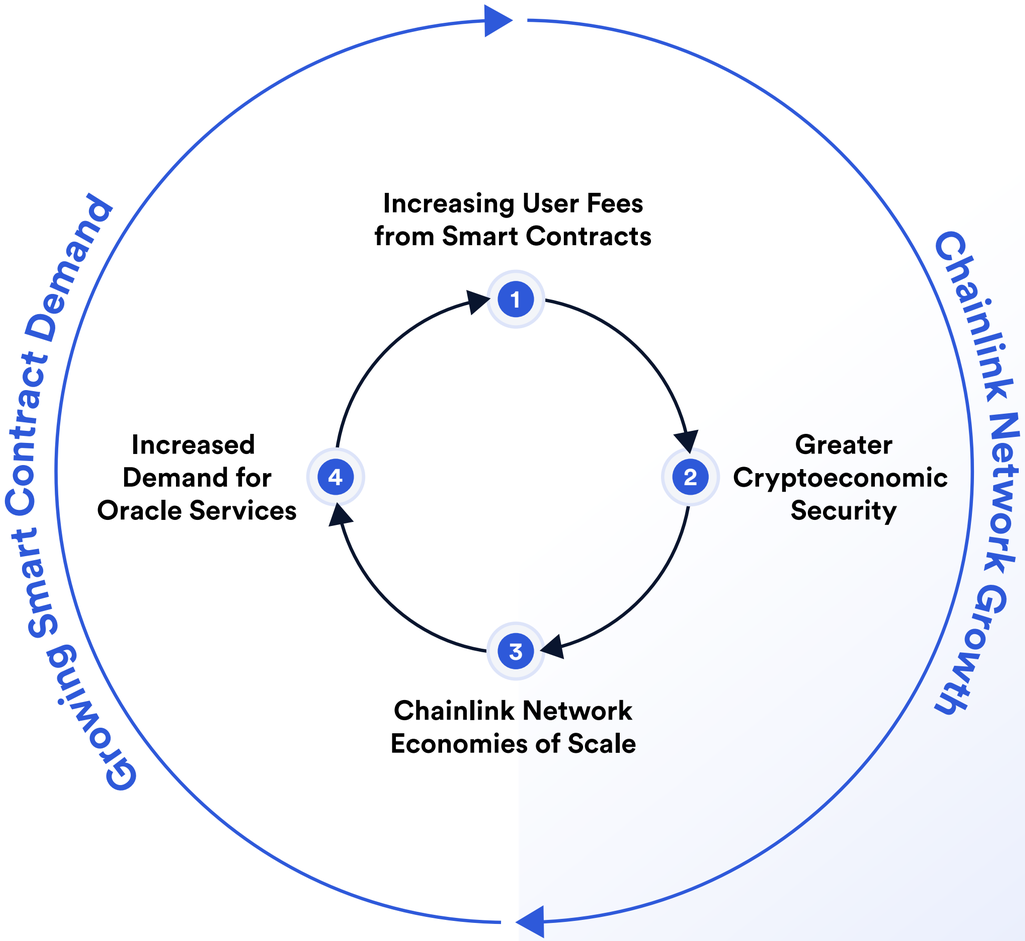
$1 quadrillion

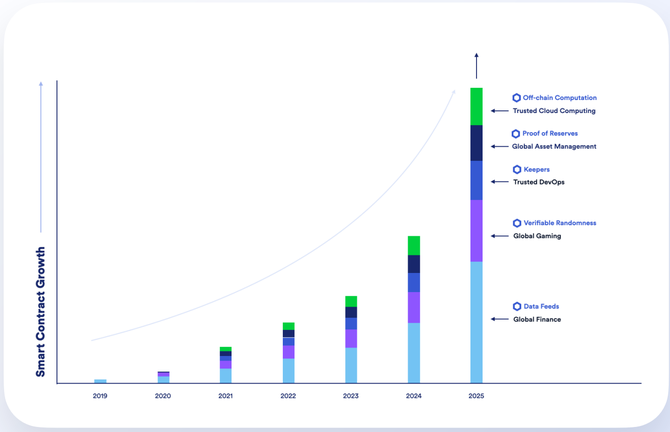
■ $100 Billion

https://www.visualcapitalist.com/all-of-the-worlds-money-and-markets-in-one-visualization-2020/

Greater Cryptoeconomic Security from More Network Users







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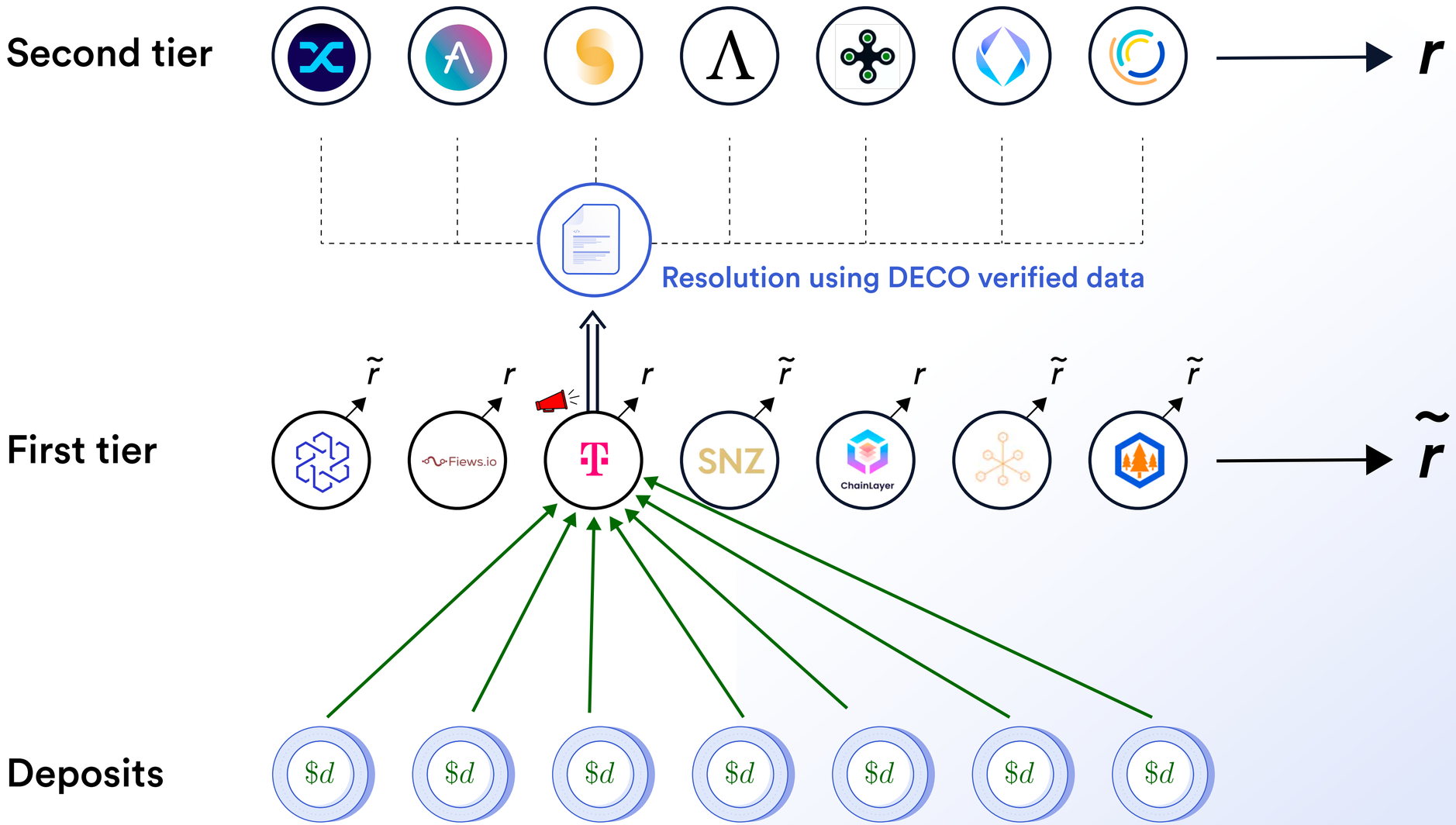
A Large Ecosystem of Alerters and Second Tier Adjudicators



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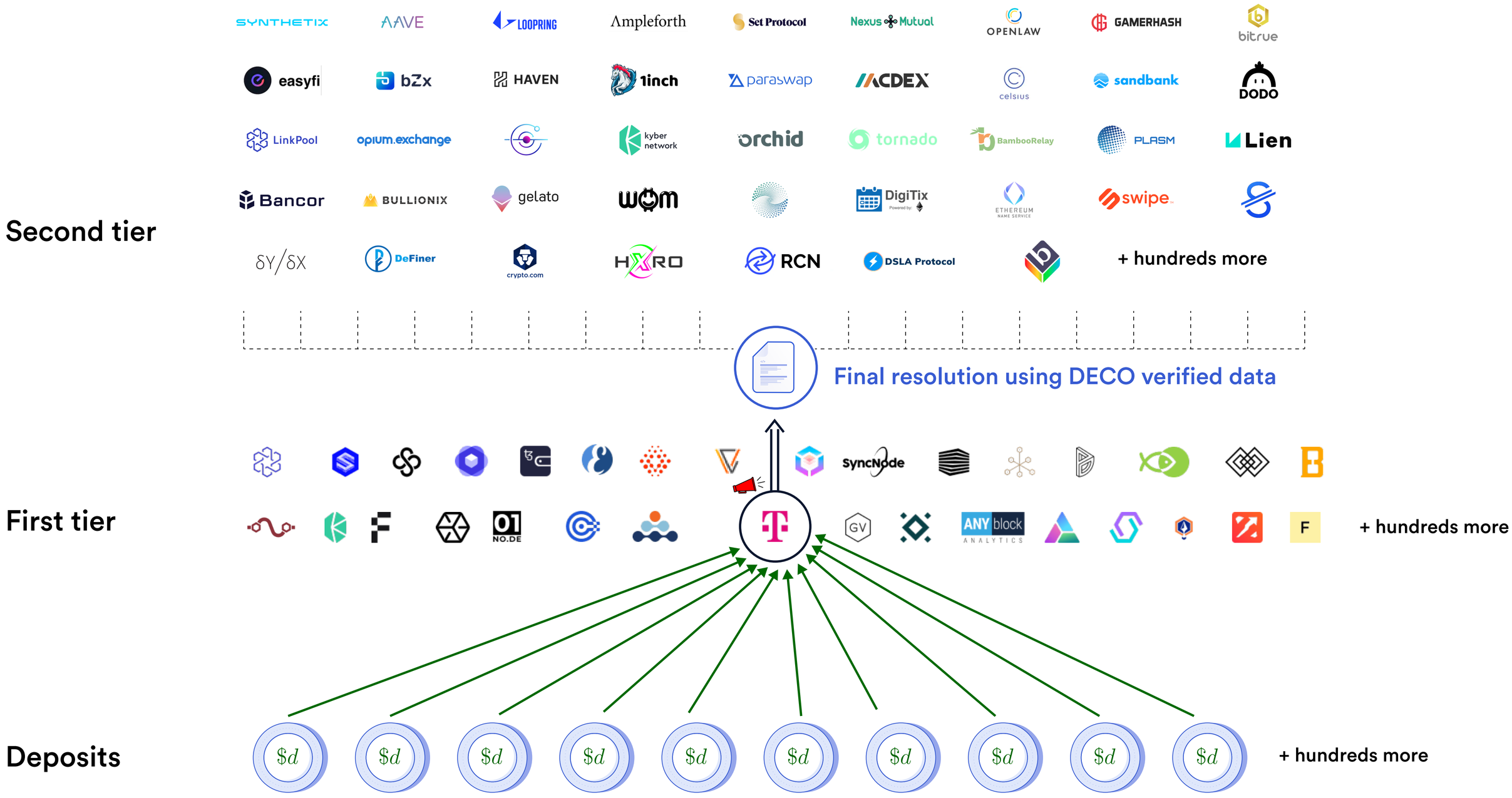
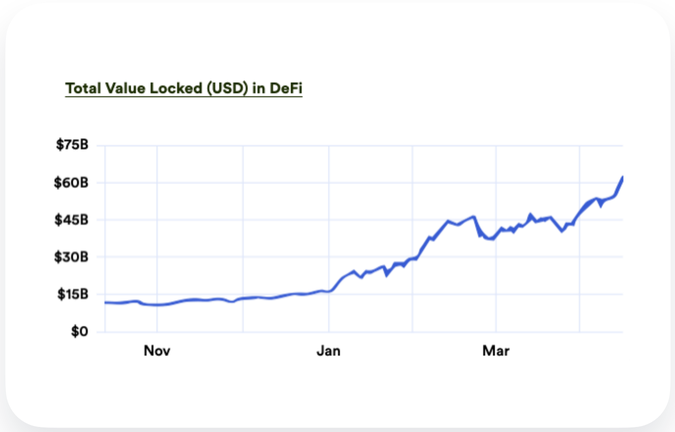
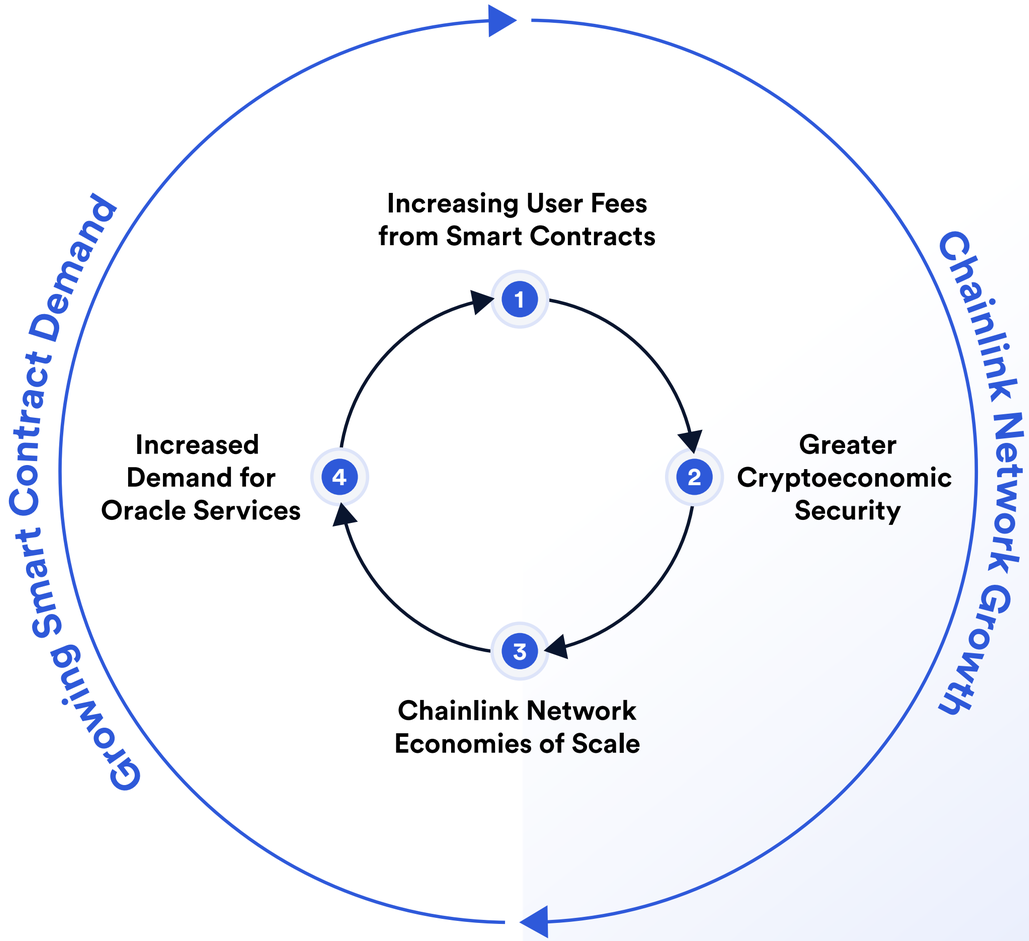
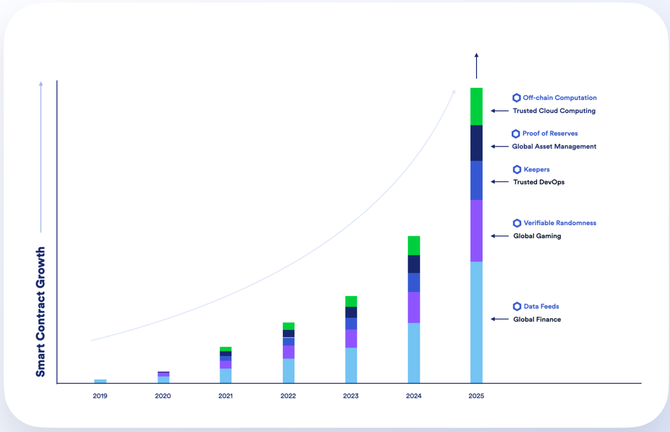

Second tier
SYNTHETIX
AAVE
LOOPRING
Ampleforth
Set Protocol
Nexus Mutual
OPENLAW
GAMERHASH
bitrue
easyfi
bZx
HAVEN
1inch
paraswap
ACDEX
celsius
sandbank
DODO
LinkPool
opium.exchange
kyber network
orchid
tornado
BambooRelay
PLASM
Lien
Bancor
BULLIONIX
gelato
WOM
DigiTix
ETHEREUM NAME SERVICE
swipe
δY/δX
DeFiner
crypto.com
HXRO
RCN
DSLA Protocol
+ hundreds more
Final resolution using DECO verified data
First tier
SyncNode
NO.DE
GV
ANY block ANALYTICS
F
+ hundreds more
Deposits
$d
+ hundreds more

Cryptoeconomic Security Driven By Large Network Effects







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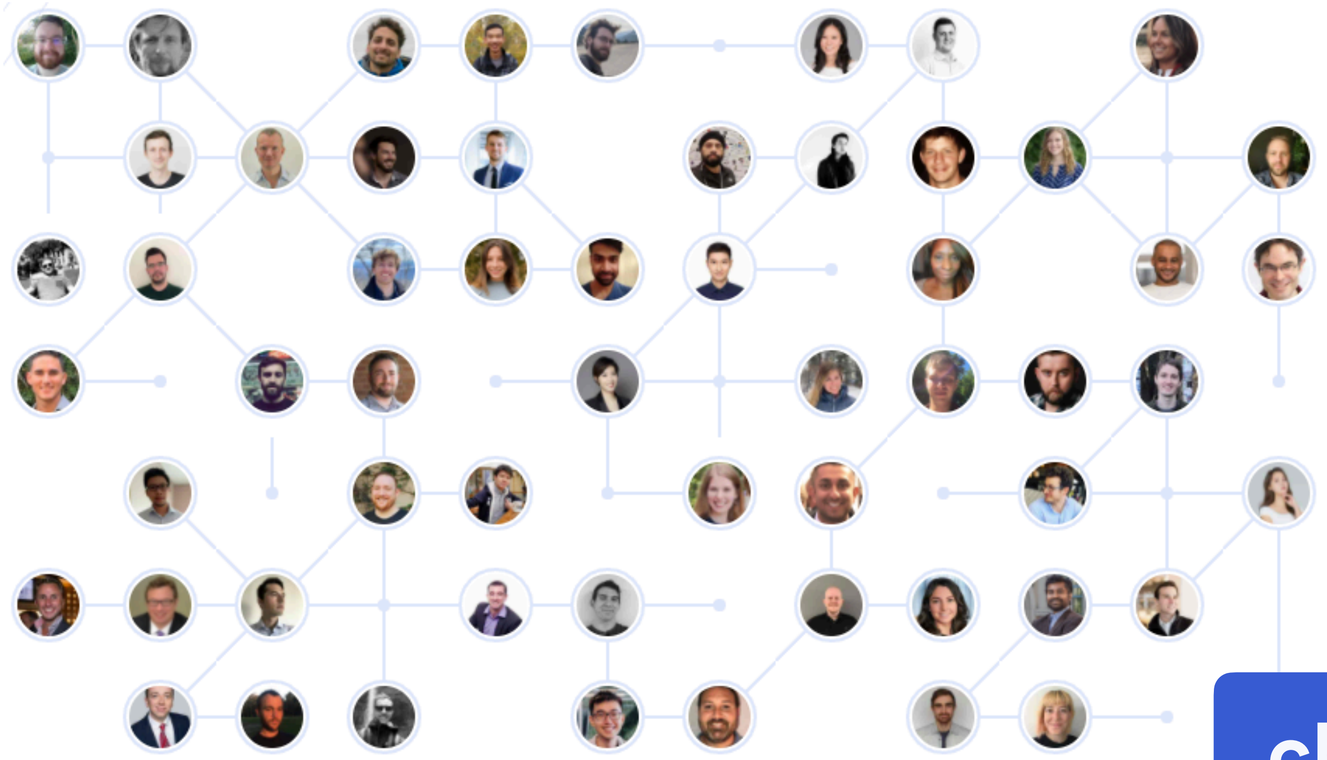
Help Build the Future of Hybrid Smart Contracts



Build great open source software that enables the next generation of DeFi and many other smart contract types.

We're an idea meritocracy where the best ideas win.

We're a remote team working with great people all over the world.

chainlinklabs.com/careers

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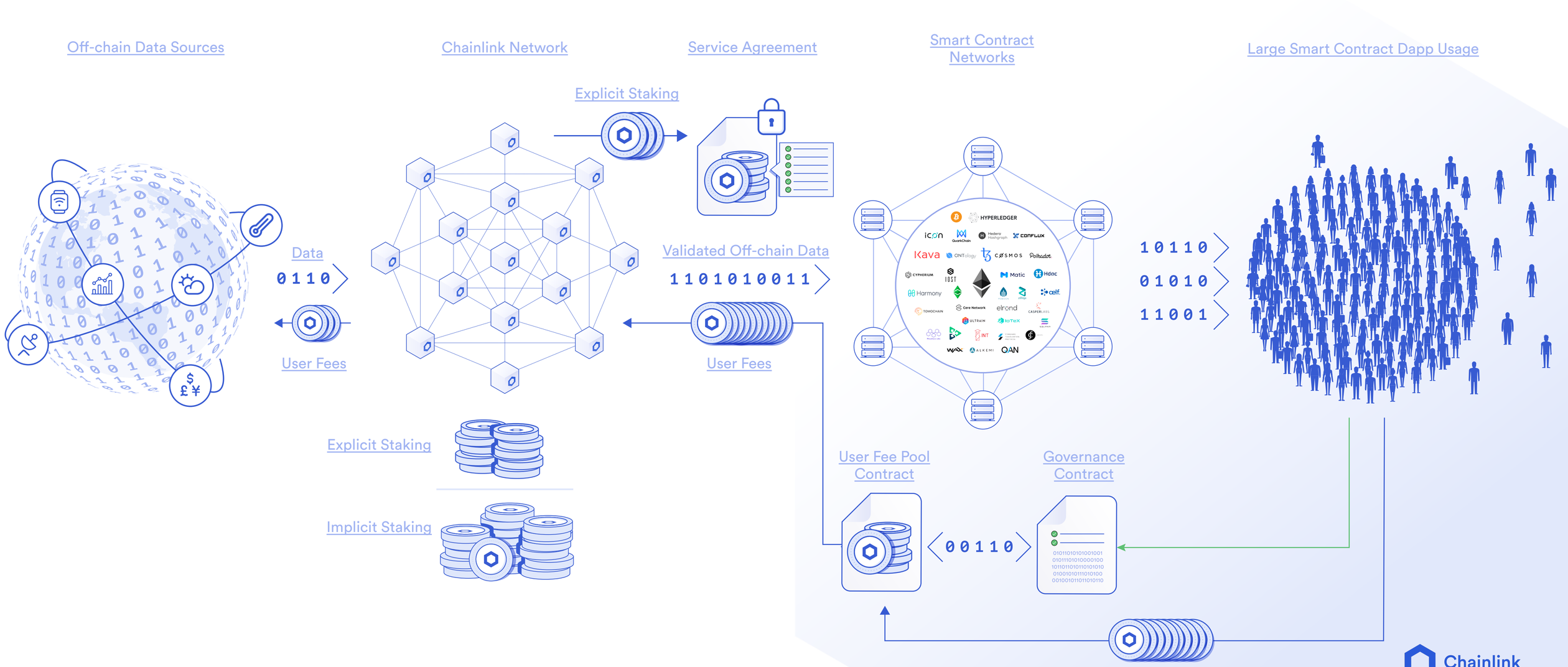
Fees and Staking Grow With Smart Contract Usage



Thank You

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