



Hedera™

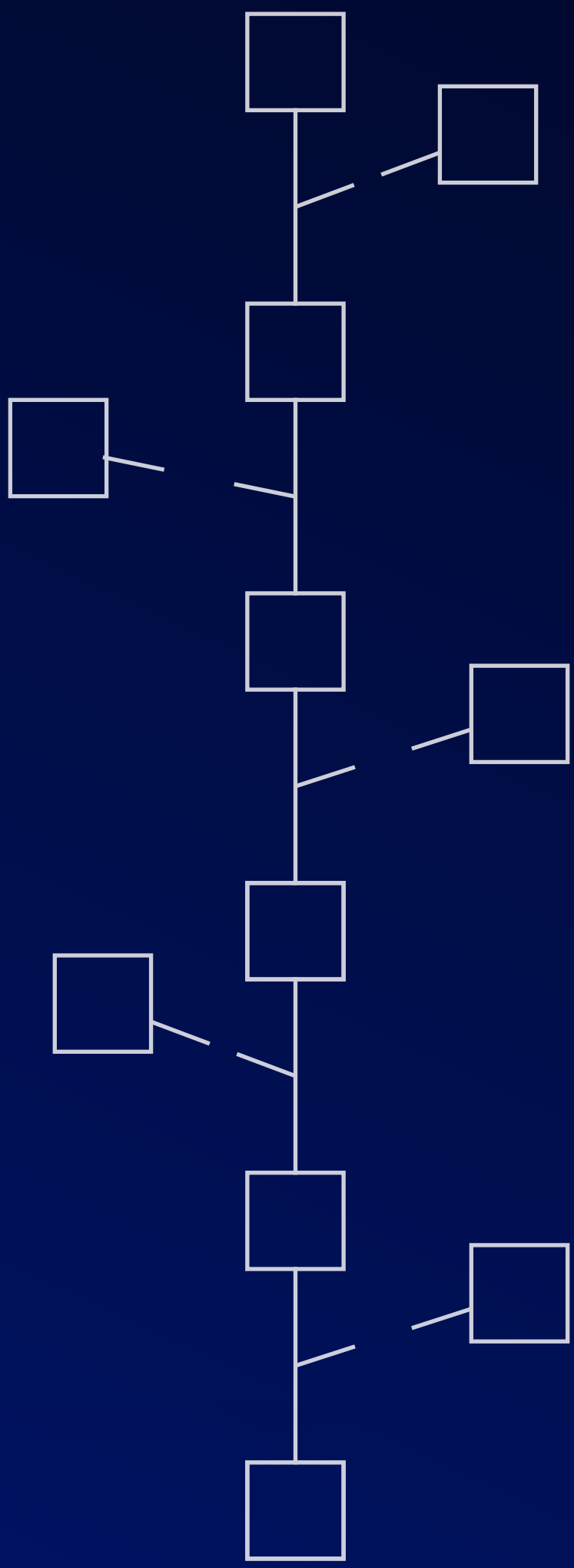
Quick Start

Start your journey with
the open source, public
Hedera network.

hedera.com

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Blockchain vs. Hashgraph



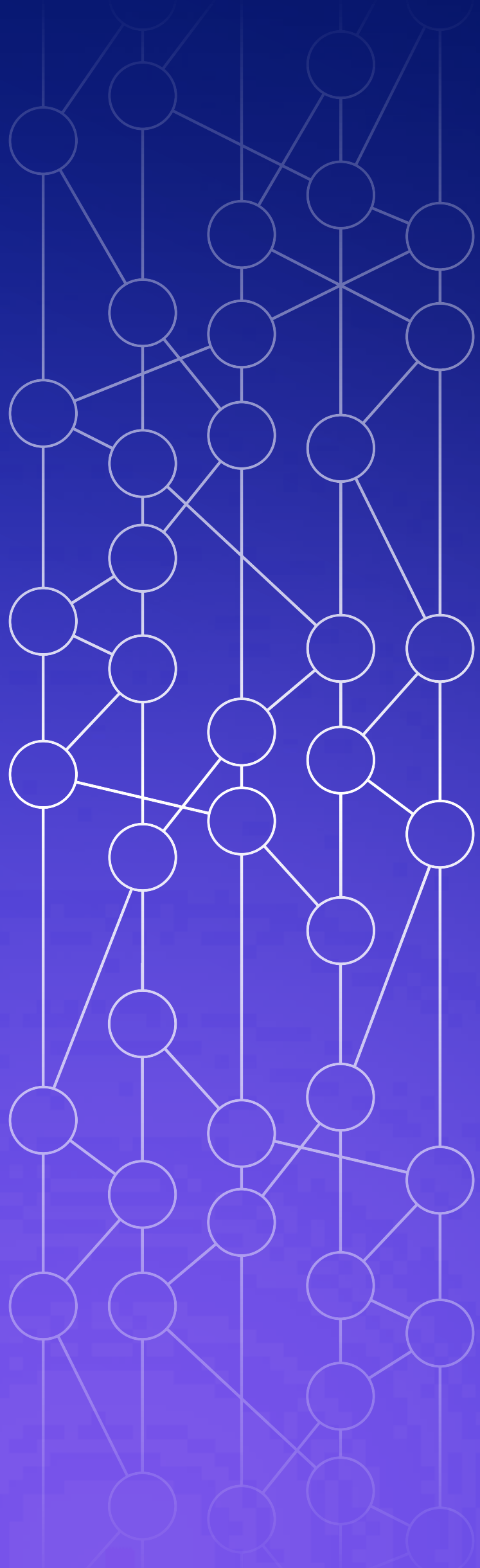
Blockchain

Designed to be slow, as a security measure.

Proof-of-work puzzle adjusts to keep the system at a specific speed, as time is needed to determine which block of transactions to add to the chain.

Efforts to speed up blockchain all make security sacrifices.

Requires heavy electricity usage.



Hashgraph

A distributed ledger, but not a blockchain.

Combines a gossip protocol with virtual voting algorithm to efficiently and quickly achieve network consensus on transactions.

Asynchronous Byzantine fault tolerant (highest level of security for distributed networks).

Does not require heavy electricity usage.

The Hedera network

The Hedera network is ready to scale and made for developers, offering three primary network services:

3rd PARTY APPLICATIONS



CONSENSUS SERVICE

Stream immutable, verifiable, and fairly ordered events to Hedera at 10,000 TPS and \$0.0001 USD per message.



TOKEN SERVICE

Mint and manage native fungible tokens and NFTs mapping to ERC-20, 721, and 1155 standards. Integrate with Smart Contracts for full programmability.



SMART CONTRACTS

Build EVM-based smart contracts, written in Solidity and Vyper, for enterprise and permissionless applications and protocols.

HASHGRAPH CONSENSUS





HBAR

The native cryptocurrency of Hedera

HBAR is the native, energy-efficient cryptocurrency of the Hedera public network. HBARs are used to power decentralized applications and to protect the proof-of-stake network.



NETWORK FUEL

Developers use HBARs to pay for network services, such as transferring HBARs, managing fungible and non-fungible tokens, and logging data. For each transaction submitted to the network, HBARs are used to compensate network nodes for bandwidth, compute, and storage.



STAKED CONSENSUS

Hedera's proof-of-stake public network uses HBARs staked to network nodes to weight votes on transactions when reaching consensus.

Weighted voting with HBARs makes it difficult and expensive for a bad actor to maliciously affect consensus—it would require them to own and stake over one-third of the network's total supply.

Hedera dapp ecosystem, custody,
& hardware wallets:

hedera.com/wallets



Low, predictable fees

Fees on Hedera are fixed and won't fluctuate based on network usage. They're set by the Hedera Governing Council, always based in USD, and paid in HBAR.

AVERAGE TRANSACTION FEE

\$0.001 USD

Estimate the operational costs of your application at hedera.com/fees.



Blazing-fast transactions with finality

Fees on Hedera are fixed and won't fluctuate based on network usage. They're set by the Hedera Governing Council, always based in USD, and paid in HBAR.

10,000+

TRANSACTIONS PER SECOND

3-5 Sec

CONFIRMATION TO FINALITY

15 Million

GAS PER SECOND



Governed by global organizations

The Hedera Governing Council is a fully decentralized governing body of global organizations consisting of web3 applications, enterprises, and universities.



Learn more about the
Hedera Governing Council:
hedera.org



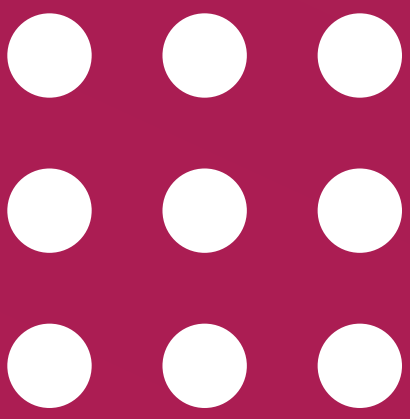
Advancing open-source decentralization

The Hiero Foundation, an LF Decentralized Trust Project, is an open-source initiative that powers the Hedera network and beyond, fostering innovation in decentralized technology.



FIRST PUBLIC BLOCKCHAIN CODE DONATION

Hedera has donated its entire codebase to an independent open-source foundation.



VENDOR-NEUTRAL GOVERNANCE

Governed by the Linux Foundation Decentralized Trust (LFDT), ensuring openness and global collaboration.



INCLUSIVE DEVELOPMENT

Open to developers, enterprises, and innovators worldwide, shaping the future of decentralized applications.

Learn more about the Hiero Foundation at:
hiero.org

Web3 applications

Participate in DeFi protocols, staking, NFT marketplaces, creator economy, and more.



View more permissionless applications:
hedera.com/ecosystem

Hedera use cases

Hedera network services offer developers a foundation for building game-changing decentralized applications.



REAL WORLD ASSET (RWA) TOKENIZATION AND THE DIGITAL ECONOMY

Seamless asset tokenization, enabling stablecoin issuance, real-world asset markets, and lending protocols—delivering unmatched security, compliance, and scalability.



CONSUMER ENGAGEMENT AND LOYALTY

Issue NFT membership and reward tokens, track engagement, and cultivate a trustworthy, decentralized ecosystem.



AI AND DATA LOYALTY

Tamper-proof data storage, transparent governance, and automated compliance using Hedera's secure, scalable DLT—empowering enterprises to build trustworthy AI systems.



SUSTAINABILITY

Build, deploy, or access sustainability solutions that take full advantage of Hedera's low energy network.

Learn more about the use cases and applications built on the open source, public Hedera network:

hedera.com

Tooling suited for enterprises and developers



HIGHLY SCALABLE EVM BASED SMART CONTRACTS

Using the most popular languages, including Solidity and Vyper, Hedera can process up to 15 million gas per second, 6x the amount of Ethereum.



INTEGRATE EFFORTLESSLY WITH HEDERA

Build with ease using Hedera's SDKs, enabling seamless integration with Hedera Consensus Service, Smart Contract Service, and Token Service.



ACCELERATE DEVELOPMENT WITH HEDERA'S OPEN SOURCE TOOLKITS

Asset Tokenization Studio for digital asset issuance, Stablecoin Studio for stablecoin management, and The Guardian for ESG tokenization and policy enforcement.

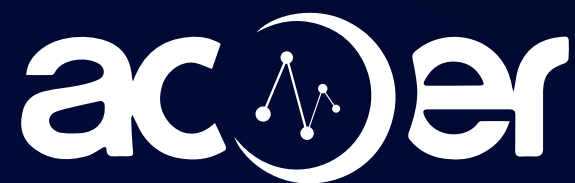
Step-by-step tutorial

Create a simple smart contract on Hedera using the Solidity programming language:

hedera.com/smart-contract-tutorial

Enterprise applications

Enterprise applications using Hedera to improve business processes and procedures.



View more enterprise application on Hedera:
hedera.com/enterprise-applications

An open-source network

Built by the community,
supported by Web3

The Hedera codebase and standards are open source - changes are proposed by the community through Hedera Improvement Proposals (HIPs).

AXELAR

BANXA

BLADE
WALLET

buidler
LABS

 Citadel Wallet

 DaVinciGraph

DOVU

 ENVISSION
BLOCKCHAIN

 Hashgraph

 HashPack

hashpart

 Hedera
Foundation

 Hgraph

10Builders

 Joget®

 **kabila**

 KiloScribe

 LayerZero.

 LimeChain

**Meta
Mask**

 PYTH

 **SUPRA**

 **The Graph**


Turtle Moon

 Validation Cloud

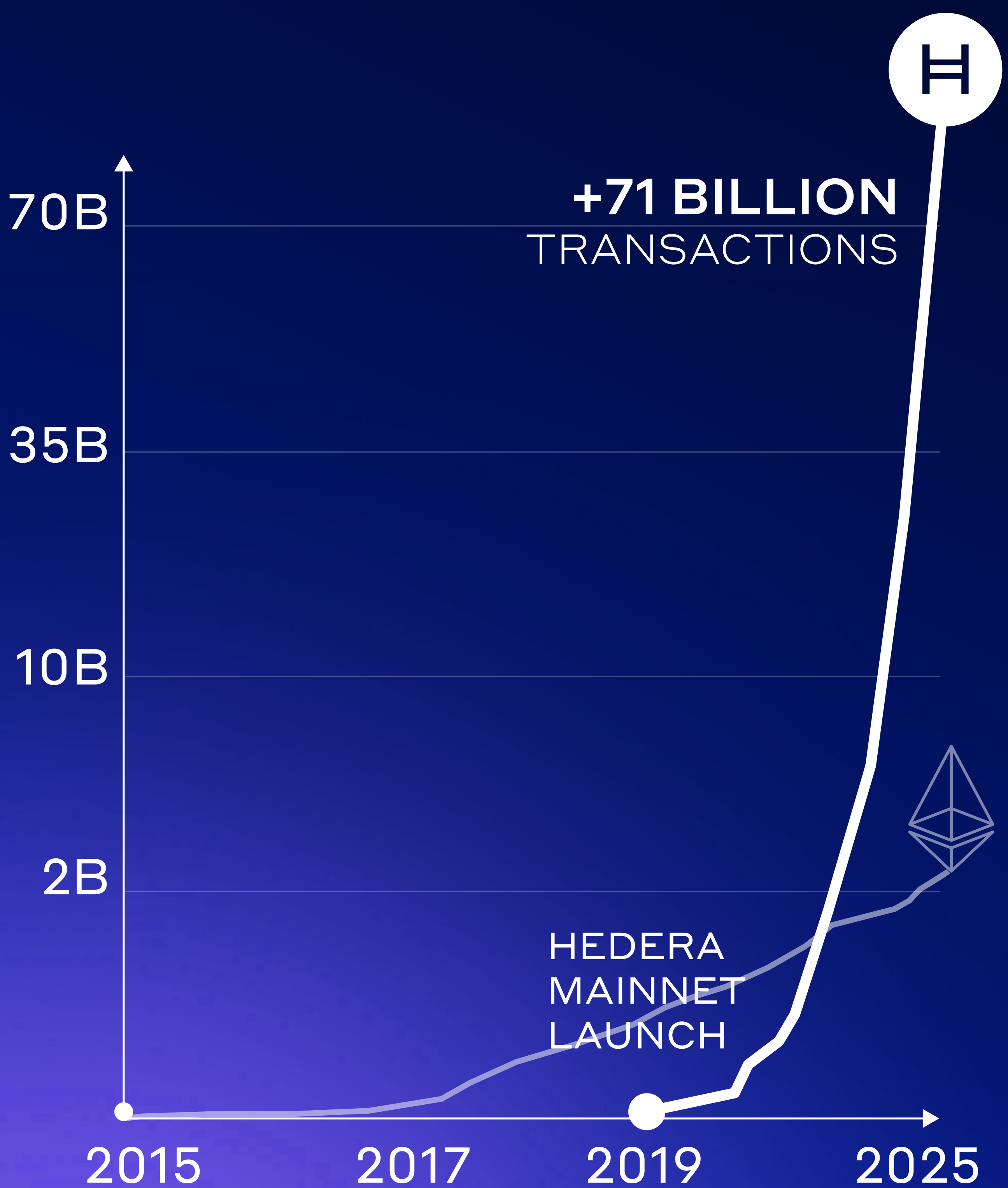
 **venly**

 WalletConnect

View all HIPs and start contributing:
hips.hedera.com

Application driven transactions on Hedera

Hedera is the most used public network by total transaction count. Applications utilizing Hedera's network services have driven over **71 billion real-world application transactions** on the Hedera mainnet, far surpassing Ethereum's total transaction count.



Network dashboard and metrics:
hedera.com/dashboard



Asset Tokenization Studio

HBAR is the native, energy-efficient cryptocurrency of the Hedera public network. HBARs are used to power decentralized applications and to protect the proof-of-stake network.

End-to-end toolkit for the compliant issuance and management of tokenized bonds and equities.

Built-in compliance tools for investor verification and whitelisting, supporting U.S. SEC securities regulations.

On-chain management of critical asset metadata, extending ERC-1400 standard and enabling customizable asset types.

Open Source SDK and audited smart contracts for seamless and rapid developer and enterprise onboarding.



Stablecoin Studio

Open-source SDK that makes it easy for web3 stablecoin platforms, institutional issuers, enterprise, and payment providers to build stablecoin applications on the Hedera network.

PROOF-OF-RESERVE FOR TREASURY

Built-in proof-of-reserve functionality that delivers provability in treasury management.

ROBUST ADMINISTRATION

Includes Hedera-native token administration functionalities, enabling issuers to burn, mint, freeze, wipe and pause.

EASY-TO-USE DEVELOPMENT KIT

The Open-Source TypeScript SDK and Management CLI streamline smart contract interactions, easing operations without specialized expertise.



AI Studio

Hedera's AI Studio is a modular, open-source toolkit for building intelligent, agent-based applications on Hedera.

PLUG-AND-PLAY AI INTEGRATION

Easily connect AI agents to the Hedera network through familiar frameworks like LangChain.

LOW-CODE, DEVELOPER- FRIENDLY TOOLS

Build with simple function calls or natural language using Javascript, ElizaOS, HCS-10, and MCP Servers.

HEDERA CONSENSUS SERVICE

Create tamper-proof, timestamped logs to verify actions and support regulatory compliance.

HEDERA TOKEN SERVICE

Leverage standardized, low-cost tokenization to enable AI agents to exchange value, track reputation, and enforce controls.



Getting started

Developers

Build the next big web3 protocol or improve enterprise business processes and procedures.

QUICKSTART

Join the testnet and set up your development environment.

hedera.com/quickstart

TUTORIALS

Tokenize an asset, deploy a smart solidity smart contract, launch an NFT project.

hedera.com/tutorials

COMMUNITY

Join the Discord community for development support.

hedera.com/discord



Getting started

HBAR enthusiasts & dApp users

Set up a wallet, view supported exchanges, and connect to permissionless applications on Hedera.

WALLETS

Create an account manage your assets, connect to dapps.

hedera.com/wallets

EXCHANGES

Find exchanges that support HBAR trading pairs.

hedera.com/exchanges

DAPPS

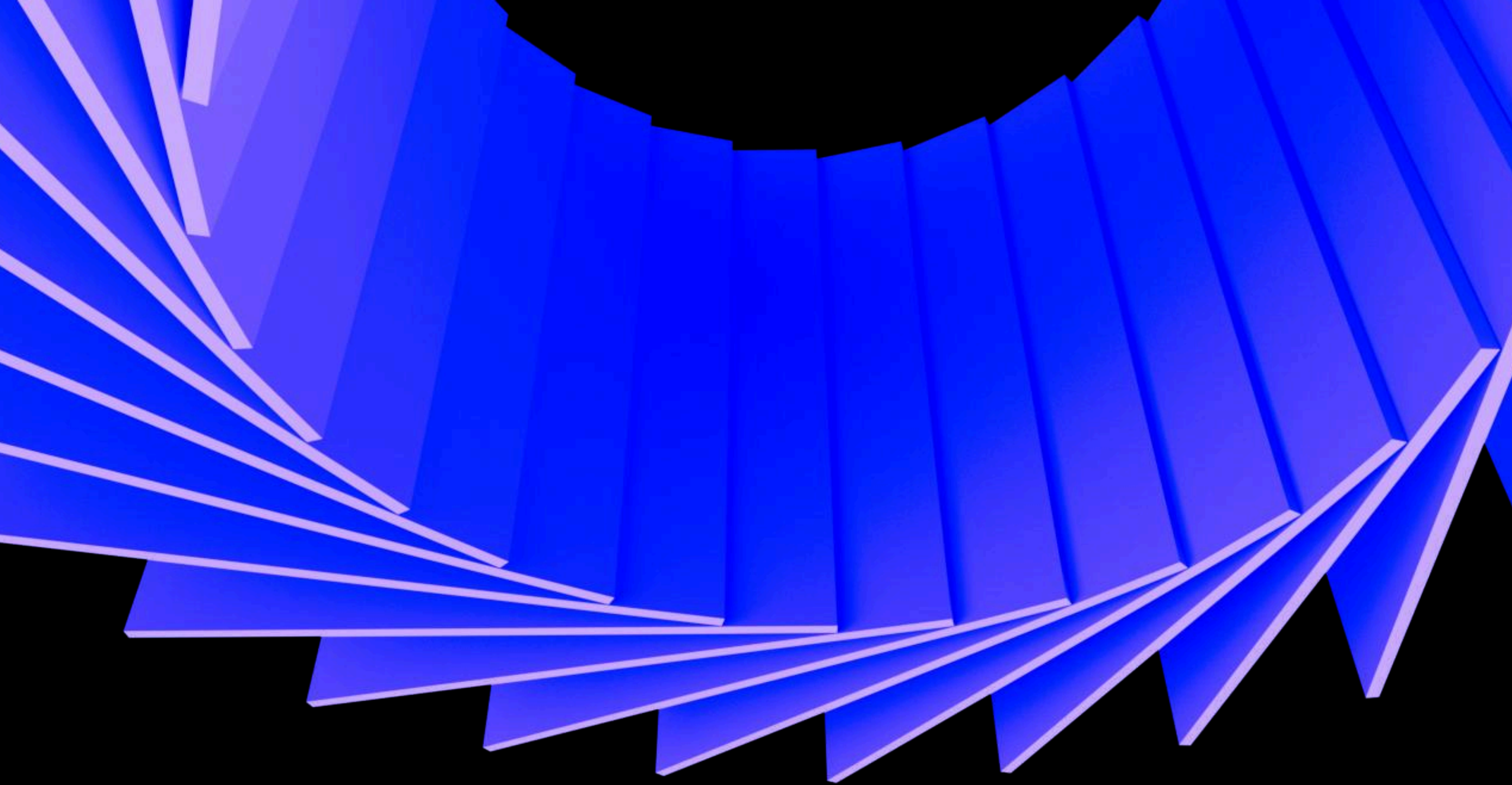
Connect with dApps for DeFi, digital assets and more.

hedera.com/dapps

Development grant

The Hedera ecosystem offers supportive grant programs and accelerators:

hedera.com/grants



hedera.com

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