

## Open Access: price discovery will play out alongside ecosystem growth More important to judge mainnet launch by its first year than its first week

**Hedera Hashgraph (HH)** launched its Mainnet beta, or “Open Access” on September 16<sup>th</sup>. This is a key milestone in the evolution of Hedera. Open Access means three things primarily: (1) The platform has matured enough to allow 3<sup>rd</sup> party developers to start building decentralized applications (dapps) on the network without direct onboarding from Hedera; (2) the milestone triggers public market liquidity, with the start of the 15-year Hedera HBAR token release schedule ([Slide 7](#)); (3) the newly released tokens are tradeable through 14 confirmed organizations, with more to follow. While price discovery is playing out with newly released and growing liquidity, the success of the platform will take much longer to play out.

- **Mainnet beta open access to 3<sup>rd</sup> party developers is a major milestone.** “Open Access” refers to the full accessibility of the platform to 3<sup>rd</sup> party developers. Previously, Hedera directly approved and onboarded developers / projects that wanted to build on its testnet. There were 26 applications live on launch across a variety of industries and use cases. One of the largest applications is [AdsDax](#) which has been running 200k+ transactions per day on Hedera’s mainnet since Hedera onboarded them to the platform in early September prior to Open Access ([Slide 5](#)). This represents ~30% of the Ethereum transaction volume.
- **14 confirmed organizations will support HBAR trading, with more expected.** OKEx is the only exchange currently supporting HBARS that is in top 10 cryptocurrency exchanges by volume. This leaves room for significantly more liquidity over time (top 10 = ~\$313B daily volume ex. BitMEX). The organizations either currently supporting or soon to be supporting HBAR trading in the coming weeks: AlgoZ, BitOoda, Bering Waters, Bittrex, Carbon, Galaxy Digital, Galois, GSR, Liquid, OkCoin, OKEx, OSL, Upbit, xFutures. Cumulative trading volume over the past week since OA is ~\$117mm, or 80% more than current circulating market cap (\$65mm).
- **Start of 15-year HBAR distribution creates liquidity for the first time.** HBARS will begin unlocking for employees, partners and participants in its SAFT (the company raised \$124mm in 2018 at a \$6B token valuation). There is now ~4% of total supply in circulation with total supply in circulation reaching ~60% by end of 2025 ([Slide 7](#)). The ongoing inflation of circulating supply in the first few days and further doubling of supply from now to year end affects price discovery, while evidence of adoption will be slower to emerge.
- **Open source mirror node code improves transparency:** anyone can run a mirror node. Mirror nodes cannot participate in consensus but can access all consensus decisions and state of the ledger. Once the network moves from beta to version 1.0, Hedera will open its source code for public review, which is akin to “read only”. The source code will not be open sourced and there is a patent on the code to prevent forking.
- **Hedera expects its consensus service to launch in 1Q20, joining the other three operational network services.** The consensus service validates and orders events and transactions without requiring persistent history. IBM is planning to use the consensus service to validate transaction ordering on custom Hyperledger Fabric networks.
- **Risks to project:** Price competition could lead to more savings being passed on to customers and lower fee capture for Hedera. A regulatory determination that HBARS are security tokens could adversely impact the network’s utility. Finally, it is early to estimate the size of the addressable market, and our approach may prove to be inaccurate.

**Bottom line: Strong dapp and partnership traction validates Hedera’s go-to-market strategy; we will continue to look for signs of increasing developer and user activity, and council membership growth.**

### PROJECT RESEARCH

Digital Asset Research

**Alex Kern** <sup>AC</sup>  
212-293-7133  
alex.kern@fundstrat.com

**Sam Doctor**  
cryptoresearch@fundstrat.com



### Hedera TL;DR

- DLT for decentralized apps
- 10k TPS for payments (throttled); 10 TPS for smart contracts (throttled)
- Staked nodes receive yield
- HBARS publicly available in secondary after Open Access
- Est. \$1.9B of value flowing through network by '24

#### Key Statistics as of 9/19/19

Price	\$0.033
Price Range	\$0.026 / \$0.325
Market Cap	\$54.4
Market Cap Range	\$46.8 / \$516.8
Circulating Supply	1,829
Total Supply	50,000
Volume	\$13

\$ and units in mm, except price

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# Introduction to Hedera

**Hedera Hashgraph (HH)** is a public Distributed Ledger Technology (DLT) project which supports decentralized applications (dApps), primarily for enterprise usage. Hedera intends to be regulatory-compliant across jurisdictions and includes tools that allow dApps to do KYC / AML checks and identity verification.

## Key features:

- High transaction speeds and low fees at scale.
- Interoperability layer between existing and emerging enterprise deployments.
- Visa-style governance council with 39 term-limited members (8 announced so far include IBM, Deutsche Telekom and Nomura).

## Services:

- **Consensus service** - transparent, reliable timestamps and transaction ordering to facilitate transactions between parties.
- **File service** - verifiable storage, rights management with controlled mutability.
- **Cryptocurrency service** - reliable, quick and cost efficient .
- **Smart Contract service** - asset tracking, chain of custody, trade finance, legal and illiquid asset investing applications.

## Value Proposition:

- Up to 75% cost savings on existing payments and other business processes.
- New business model creation such as micropayments.
- Enhance supply chain efficiencies and access to trade finance.

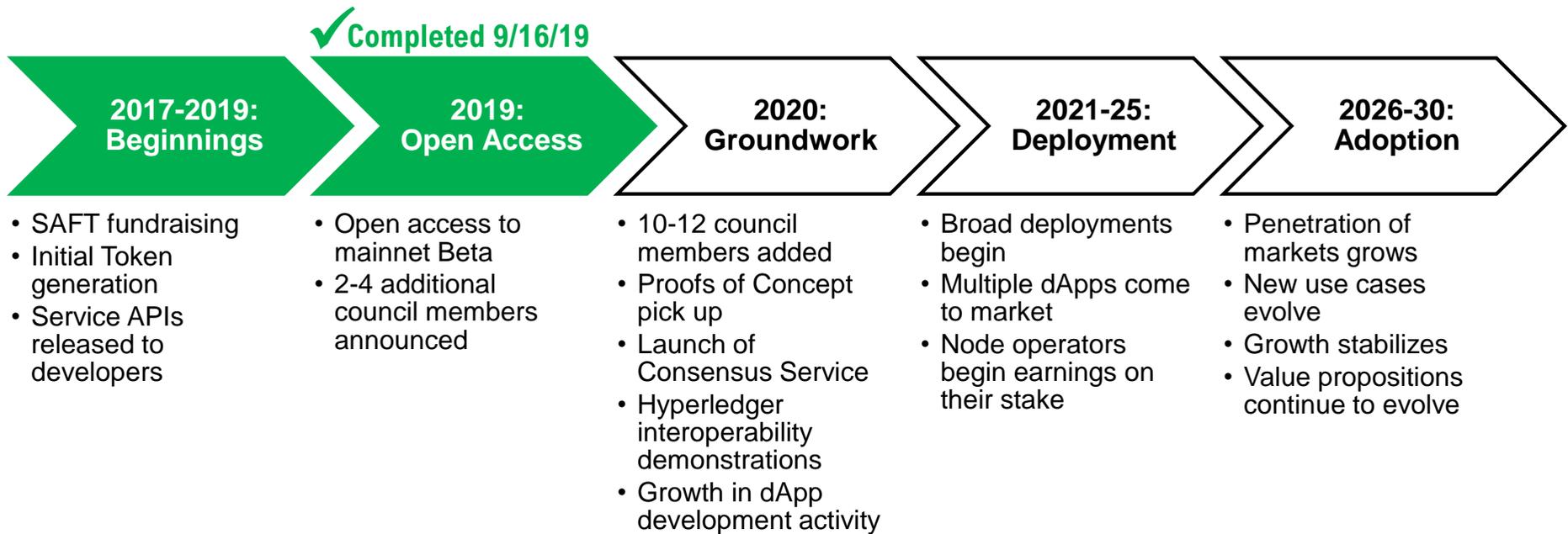
**If Hedera succeeds, network fees could grow to as much as \$1.9 billion by 2024.**

**Upcoming catalyst:** Hedera's fourth product, Consensus Services v1, is expected to go live in 1Q20.

Source: Fundstrat

## Watching 2019/20 milestones to track multiyear adoption process

- We believe 2019 - 2020 will deliver crucial evidence of adoption – specific milestones to watch for include:
  - Council member announcements: 2-4 more by end of 2019, 10-12 during 2020
  - Launch of Consensus Service and Hyperledger interoperability
  - Growth in proofs of concept and dApp development activity
- Over the next 4-5 years, full deployments and dApps hitting the market are key evidence of successful traction
- We view delays or failure to meet these metrics as evidence of rising risk



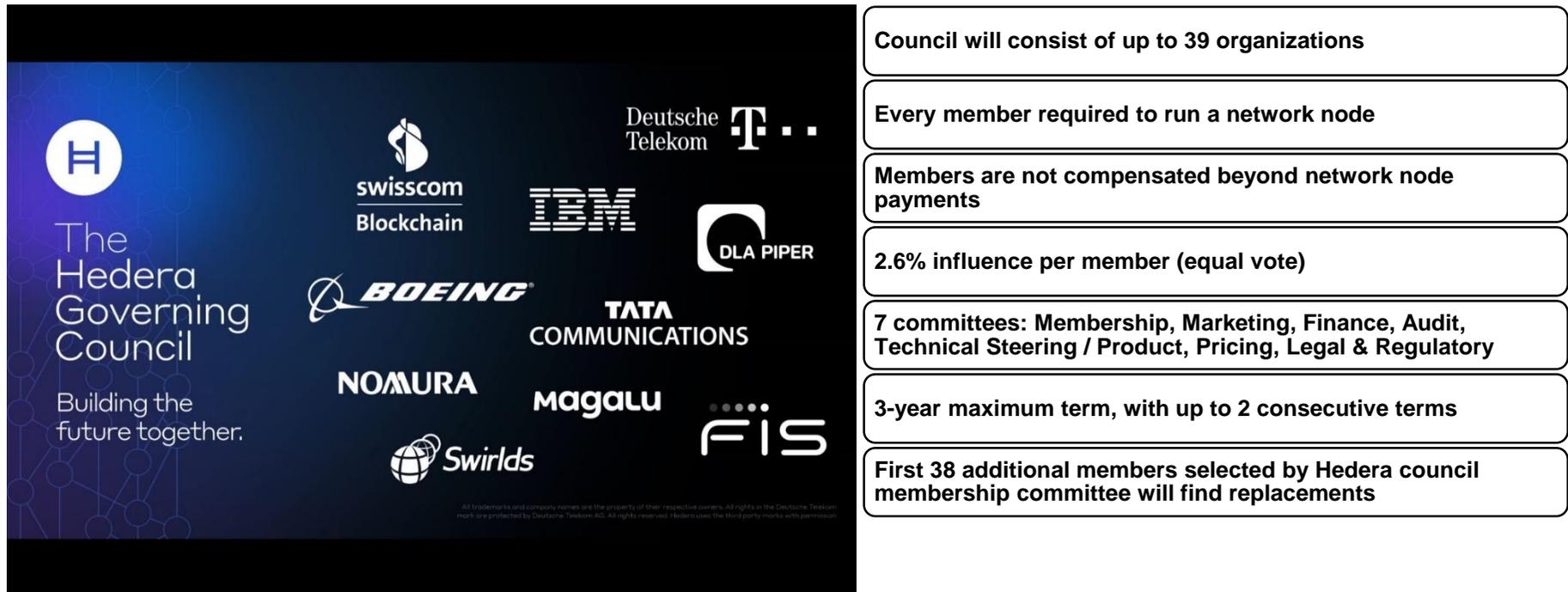
Source: Fundstrat

## Addition of Boeing takes Governing Council to 10 members (39 total is goal)

The council is responsible for all major decisions across the network with the most important being the overall direction of the codebase. All members so far have been large, global organizations, reflecting the projects focus on enterprise adoption.

- **Hedera based its Governing Council on Visa's governance model, where the architecture of the project is centralized but decision making is decentralized across a diverse group of companies by industry and geography, and product.**
- **Every member must run a node so that they are part of the network and is compensated with node payments, which should align incentives in council committee decision-making.**

Figure: Hedera Governing Council has reached 10 out of 39 members with Boeing as newest addition



Council will consist of up to 39 organizations

Every member required to run a network node

Members are not compensated beyond network node payments

2.6% influence per member (equal vote)

7 committees: Membership, Marketing, Finance, Audit, Technical Steering / Product, Pricing, Legal & Regulatory

3-year maximum term, with up to 2 consecutive terms

First 38 additional members selected by Hedera council membership committee will find replacements

Source: Fundstrat

## 26 applications on launch help validate Hedera's go-to-market strategy

Hedera's go-to-market strategy is led by enterprise technology professionals with deep relationships and experience executing projects at a global scale. They are focused on penetration into corporates to jointly brainstorm on applicable DLT use cases.

- **One example is Hedera's Chief Product Officer, Lionel Chocron, who previously co-launched Cisco's IoT business and was vice-president for AI, IoT, and Blockchain at Oracle.**
- **Projects on the network represent multiple industries and use cases. See the full list of projects here.**

### Advertising



- Blockchain-enabled marketplace to create, verify, optimize, buy and sell advertising with cryptocurrency.
- Aims to be the first DLT platform that can be used by anyone to create advertising content embedded with a smart contract for more transparent engagement tracking.
- Payments are made to publishers who provided the ad space and to consumers who engaged with the ad.

### Agriculture



- Otrafy is an organic food transparency platform.
- Uses DLT to prove products flow through organic supply chain vendors.
- Enables farmers to communicate the history of their products through the supply chain.
- Publicly accessible digital identity tracks the product from the farm and stores all the information about its transactions.

### Energy



- Peer-to-peer trading for renewable energy microgrids.
- Designed to improve the inefficiencies and mitigate risks of existing centralized power grids.

### Healthcare



- Drug development consultancy focused on model-informed drug discovery strategies, regulatory writing and submission services.
- New Certara DApp provides transaction insights on Hedera network and supports data provenance for supply chain uses cases, improving transparency and disclosure for healthcare clients

Source: Fundstrat, Hedera

## 3.2% of HBARs became available for secondary market purchase on 9/17

As of August 2019, about 54% of HBARs were owned by Treasury

- 17% were held by outside holders in prior private SAFT sales
- ~20% were held by “insiders” : Founders, the Hedera team, and Swirls
- ~1.6 were released on Open Access
- An additional 207 million tokens will be released during Day 2-7 following OA, and a further ~1.97 billion during the rest of 2019
- By the end of the year, the circulating supply is expected to be 3.7 billion or 7.5% of the total supply

**Figure: HBAR ownership and expected public availability in 2019**

In millions, as of August 2019

	HBAR ownership	Share	HBARs available in 2019	Share
Seed SAFTs	7,798.3	15.6%	1,046.3	27.8%
SAFT 3	926.3	1.9%	458.8	12.2%
Hedera Team *	7,761.7	15.5%	381.8	10.1%
Community **	1,208.3	2.4%	1,208.3	32.1%
Advisors, Vendors & Others	1,450.2	2.9%	150.2	4.0%
Market Development Funds	1,298.0	2.6%	7.3	0.2%
Swirls	2,500.0	5.0%	60.0	1.6%
Hedera Treasury	27,057.1	54.1%	450.0	12.0%
<b>Total</b>	<b>50,000.0</b>	<b>100.0%</b>	<b>3,762.8</b>	<b>100.0%</b>

\*Includes current team tokens + budget for hiring through 2022

\*\* 208.3mm HBARs are in the process of being distributed to the community as part of Hedera's community testing program, 1B is set aside for a committed earn program

Source: Fundstrat, Hedera

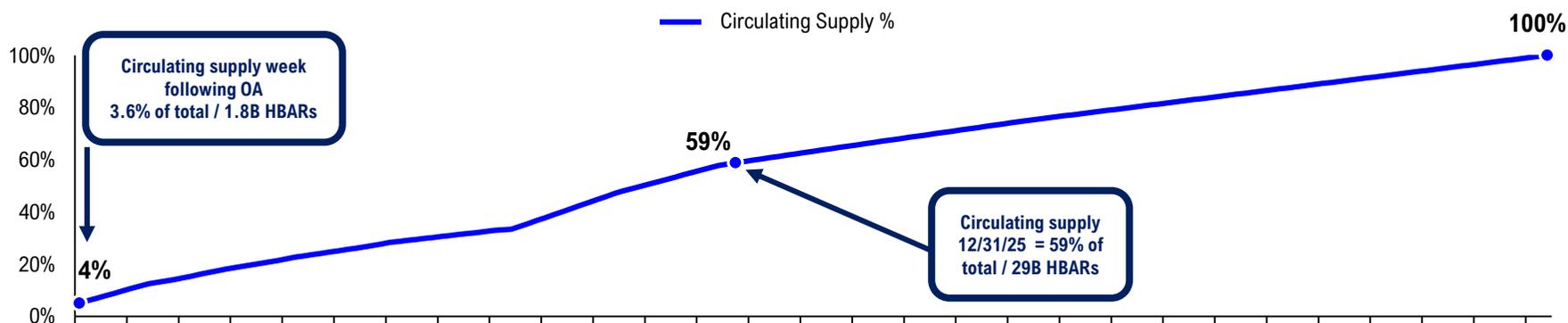


# Circulating supply to increase steadily to 30 billion over the next five years

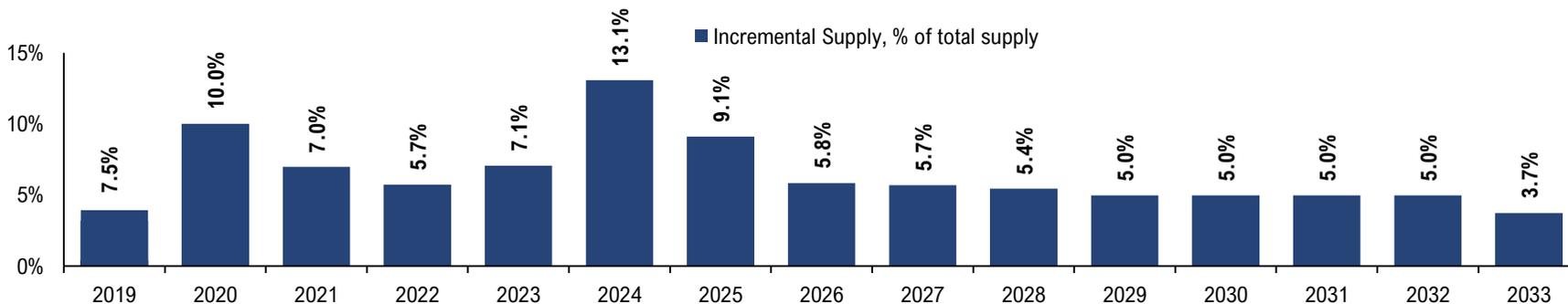
The HBAR tokens are now publicly available for the first time, following Open Access.

- The initial float will be just ~3.6% of the total supply in the first week, increasing over 6 years to 59%.

Figure: Expected token release schedule through 2025\*



Tokens in billions	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	+3.7	+5.1	+3.5	+2.9	+3.5	+6.5	+4.6	+2.9	+2.8	+2.7	+2.5	+2.5	+2.5	+2.5	+1.9



\*Actual token release schedule may change.

Source: Fundstrat, Hedera

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