



APRIL 08, 2022

ARWEAVE

Reinventing Data Storage



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Key Metrics and Market Data

Token Data

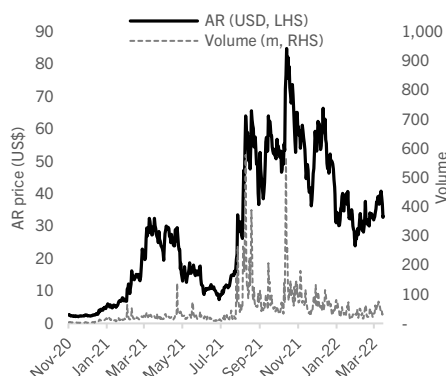
Name	Arweave
Symbol	AR
Last Price (US\$)	33.15
Market cap (\$ mn)	1,654
Fully diluted (\$mn)	2,179
Market cap rank	76
Total volume (m)	37

Price change

24h high	36.87
24h low	32.39
24h price chg (%)	-9.5%
ATH (US\$)	89.24
Price chg from ATH (%)	-62.8%

Supply

Circulating (m)	50.1
Max (m)	66.0



Source: Coingecko

Priced as of 7 Apr 2022

HIGHLIGHTS

- Arweave is a decentralized storage network (DSN) and management protocol that enables users to store data permanently, securely and with a single fee. The protocol connects users with extra hard drive space with those who need to store data long-term.
- AR is Arweave's ecosystem utility token which is used to incentivize miners for validating transactions on the network and to pay network transaction fees.
- Future project-specific drivers include partnerships for layer 0 overlap with key ecosystems, expanding DSN use cases (e.g. NFTs) and further listings and wallet support. Key industry driver is increasing decentralized storage network (DSN) demand.

PROFILE

The Arweave network connects users with extra storage space with those who require long-term data storage. The protocol provides users with unrivalled data permanence and protection, and financial incentives for those who store data, all without the involvement of an intermediary.

MOTTO

Pay once, store forever.
Store data, permanently.
A collectively owned hard drive that never forgets

SELECTED PARTNERS

Solana, Polygon, ColdStack

KEY INVESTORS

Andreessen Horowitz, Union Square Ventures, Coinbase Ventures, Multicoin Capital

MANAGEMENT TEAM

Sam Williams
CEO & Co-Founder
Jesper Noehr
CTO

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CORE TECHNOLOGY

Arweave is based on four fundamental technologies that work together to provide low-cost, high-throughput, long-term storage on a new blockchain:

BLOCKWEAVE

The core value proposition of Arweave's permaweb is "blockweave". Blockweave is a variant of blockchain technology that links each block to both the previous block, and a random older block.

Arweave users maintain a block hash list and a wallet list to enable nodes to participate in the network.

PROOF OF ACCESS

Arweave utilizes both Proof of Work and Proof of Access consensus mechanisms. Succinct Proofs of Random Access (SPoRA) lessens network energy consumption and incentivizes miners

WILDFIRE

Wildfire solves the problem of decentralized data sharing by making the rapid fulfilment of network data requests as an essential participation requirement.

BLOCKSHADOWS

Blockshadow enables high transaction throughput, which allows rapid block consensus and significantly reduces data wastage.

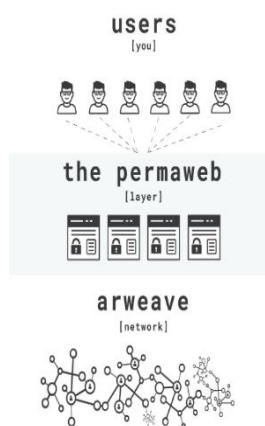
PERMAWEB

The permaweb sits on top of the basic Arweave data storage layer. The permaweb is a collection of interconnected documents and apps, similar to the internet, except that all data is permanent.

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VALUE PROPOSITIONS

Arweave resolves these pain points of current data storage systems through its technology
The permaweb design



Source: Arweave.org

Overcoming Storage Restrictions

- Existing pain point: Most blockchains have hefty transaction fees and slow transaction speeds due to data storage issues.
- Arweave integrates third-party blockchains to offer a decentralized, low-cost, scalable data storage platform.

Censorship Resistance

- Existing pain point: Centralized platforms store data in centralized servers which are exposed to hacking, copying, and loss.
- Arweave utilizes a distributed data storage architecture, with benefits, including increased security, privacy protection, and the elimination of single points of failure.

Greener Alternative

- Existing pain point: Mining is not environmentally friendly for some blockchains.
- Arweave represents a greener way to pay for the mining of tokens, and in the payment model

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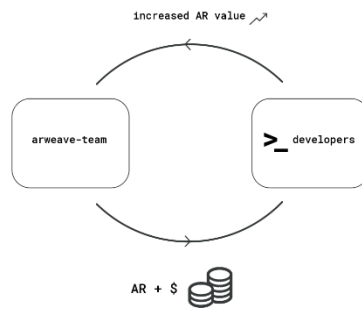
BUSINESS MODEL

AR is the native token of the Arweave ecosystem and is required for user interactions with Arweave permaweb applications. Users who wish to store data on the Arweave blockchain must purchase AR tokens as payment. The tokens are pooled and distributed to the network over time.

Profit Sharing Communities (PSCs) give creators, contributors, and consumers more authority, for example, members of PSCs can decide to mint **Profit-Sharing Tokens (PSTs)** as a reward for individuals who help the community.

Transactions on the Arweave network:

1. Users pay fees in exchange for mining benefits.
2. This pool will cover future payouts for miners over the longer term.



Source: Arweave.org

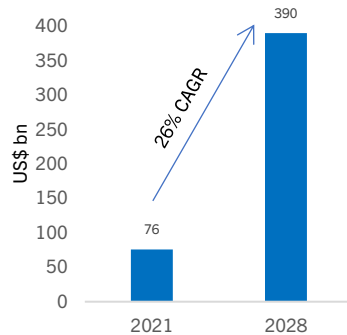
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GLOBAL DATA STORAGE INDUSTRY

Arweave is a decentralized data storage protocol set out to disrupt the global data storage industry, with a decentralized cloud storage system powered by Ardrive.

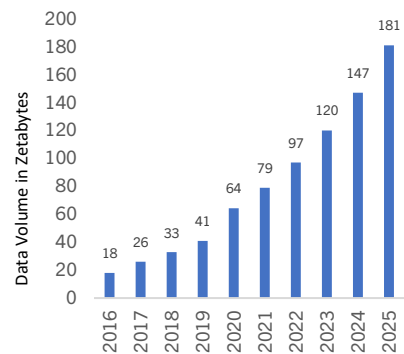
Industry drivers: The global data storage industry is poised for significant growth, driven by increasing demand for decentralized data storage platforms, expanding data storage use cases and more cost-effective solutions.

Global cloud storage market by revenue, 2021-28E



Source: Statista

Global data created by zettabyte, 2016-25E



Source: Statista

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SWOT ANALYSIS

STRENGTHS

Fully integrated data storage blockchain powered by blockweave;

High transaction speed with TPS up to 5,000;

Decentralized, censorship resistant and permanent data storage protocol.

WEAKNESSES

Less user traction than centralized storage peers given its higher price points and relatively niche community;

More complex to use;

Risk of 51% attack: Arweave's consensus parameters and number of nodes make it relatively susceptible.

OPPORTUNITIES

Strong partnerships: Arweave's partnership with Solana increases data storage use cases and user reach;

Increasing data storage demand to be safeguarded on a secure platform;

Lack of trust for centralized data storage platforms.

THREATS

Competition from cloud storage incumbents may lead to price wars;

Launch of similar projects in the nascent market;

Hacking risk

DATA STORAGE PEERS

Decentralized

Filecoin, Sia, IPFS, BitTorrent File System (BTFS), Storj.

Centralized

AWS, Dropbox, Google Drive, Microsoft OneDrive, iCloud.

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FUTURE DRIVERS

Layer-0 and cross-chain *Project specific*

Arweave's layer 0 has overlap with and archives the on-chain data of key ecosystems including Solana, Avalanche, Cosmos, Near etc.

Partnerships *Project specific*

Many top projects use Arweave as storage after the protocol's Solana integration in Sept 2021.

Further listings and wallet support *Project specific*

Exchange listings and support for new wallets will bring AR to more users. Trust Wallet proposed Arweave support at YE21.

Expanding use cases and Atomic NFTs *Project specific*

More NFT marketplaces integration and high-profile launch as Arweave solves the issue of centralized storage of NFTs.

Increasing decentralized data storage demand *Industry specific*

The demand for decentralized, permanent and decentralized data storage protocols will rise.

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USE CASES

Arweave is an immutable and decentralized data storage platform powered by the blockweave technology with primary use cases in:

Decentralized data storage	Near-instantaneous and immutable data availability at a single fee
Decentralized data sharing	Anonymous uploading and sharing of content, similar to a P2P torrent network
Decentralized data collaboration	Initiation of an immutable decentralized database and opens data to reviewers and collaborators
Decentralized data identity/protection	Decentralized proof of ownership for content including identity documents which are still centrally owned by regulators
Storage of NFT assets	Arweave is a preferred means of storage of NFTs given metadata permanence

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METRICS

Arweave's user and operating metrics indicate that the protocol is on a strong network usage and growth trajectory.

ARWEAVE	Dec 2021	Jan 2021	Change
Transaction volume	5,176,000	651,000	↑ 7x
Data usage	7.58 TB	188.42 TB	↑ 40x
Weave size	39.32 TB	4.15 TB	↑ 8.5x
User metrics (as of Mar 2022)			
Number of Arweave users		150,000 +	
Number of files		157 million +	
Number of nodes		1,000 +	
Social metrics (as of Mar 2022)			
Number of Twitter followers		60,000	
Number of Reddit members		4,300 +	
Google search index		30	

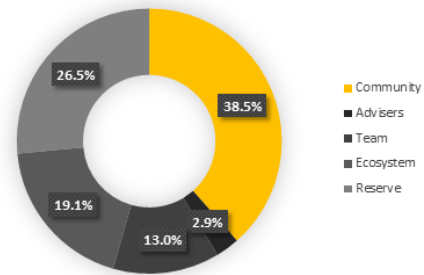
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AR TOKENOMICS

AR token supply: AR is the native token of the Arweave Network and has a circulating supply of over 50 mn tokens and a maximum supply of 66 mn tokens (CoinGecko, 2/4/22).

Planned use of proceeds: Funding the ordinary operating activities of the venture and ecosystem development.

AR Token Allocation



Source: coincu.com

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KEY PARTNERSHIPS

As one of the leading decentralized storage network (DSN), Arweave has entered into partnerships to increase adoption of its Permaweb and user reach.

Solana With this partnership, Solana intends to ensure the security and scalability of its blockchain data with storage on Arweave.

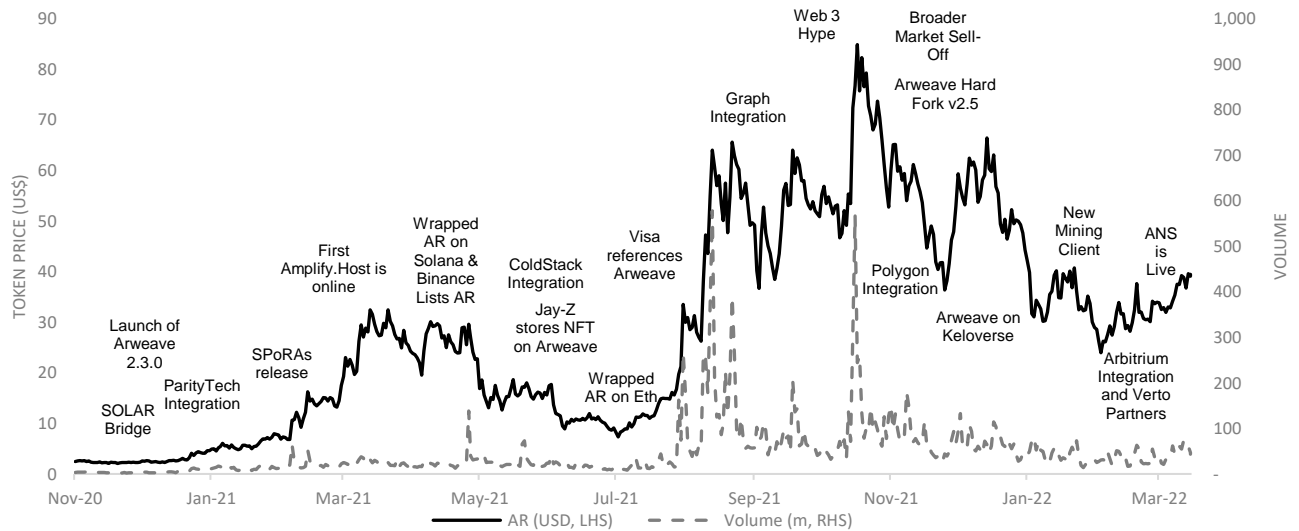
Polygon Arweave's partnership with Polygon will allow users to pay for data uploads with \$MATIC token.

ColdStack The partnership improves enterprises' accessibility to the Arweave network, thus, simplifying the migration to decentralized from centralized storage.

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HISTORICAL PRICE PERFORMANCE CHART

CATALYSTS



Source: Coingecko

Priced as of 7 Apr 2022

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WEB3 TOKENS

		Last Price	Market Cap	Total Volume		Price change (%)		Circulating Supply	Circulating supply/Total	Total Supply
			US\$m	US\$m	1d	From ATH	From ATL	mn	%	mn
Chainlink	LINK	15.39	7,186	734.4	(6.0)	(71)	10,288	467	47%	1,000
Filecoin	FIL	22.00	4,116	639.3	(10.4)	(91)	33	188	10%	1,970
Theta Network	THETA	3.40	3,395	258.9	(5.6)	(78)	8,325	1,000	100%	1,000
Helium	HNT	22.36	2,248	31.7	(4.6)	(59)	19,635	101	45%	223
BitTorrent	BTT	0.00	1,833	162.8	(4.6)	(42)	16	926,521,429	94%	990,000,000
The Graph	GRT	0.42	2,804	276.5	(6.3)	(85)	304	6,697	67%	10,000
Basic Attention Token	BAT	0.77	1,154	116.6	(4.2)	(60)	962	1,499	100%	1,500
Arweave	AR	33.20	1,664	38.2	(7.5)	(63)	11,009	50	78%	65
Render Token	RNDR	2.51	582	25.7	(7.9)	(71)	6,757	232	44%	531
Livepeer	LPT	24.49	610	18.5	(7.0)	(75)	6,810	25	100%	25
Ontology	ONT	0.56	489	56.7	(5.0)	(95)	141	875	88%	1,000
Audius	AUDIO	1.24	773	77.7	(16.4)	(75)	2,739	621	57%	1,086

Source: Coingecko

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