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**The Open  
Application  
Network**

# Open Foundation Report

December 31, 2019



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This document was published on January 31, 2020, and represents the Open Foundation's year end dated December 31, 2019.

Information contained in this Report is given as of December 31, 2019, except as otherwise noted.

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The unaudited financial information provided in this Report has been prepared by the Open Foundation and does not include complete financial statements. The financial information provided may not comply with applicable accounting standards.

All figures in this Report are denominated in U.S. Dollars unless otherwise stated.

Deloitte Canada Inc. was engaged by the Open Foundation as an advisor to support strategic planning and defining the organization's transparency mandate. This Report was prepared by the Open Foundation with strategic guidance from Deloitte, and per audit regulations does not constitute a review or attestation to the financial data.



# Letter from Matt



Another year is in the books, and this one was a whirlwind. Having launched our blockchain protocol in 2018, 2019 was a year to allocate resources into establishing a strategy that differentiates us in the market.

Over the past year we have spent a lot of time evaluating both our own strategies and the evolving gaps in the blockchain space as a whole. Two big insights came out of that evaluation.

First, we observed that blockchain projects with a digital asset speak to both coinholders and developers with the same narrative and technical explanations. This resulted in complicated terminology, user journeys and documentation that makes it difficult for developers and entrepreneurs to create breakthrough applications that solve real problems.

Second, we identified the importance of decentralization to digital platform economies both now and in the future, and moved to refocus our strategy to better serve the platform space. In June, we launched a strategic review to explore what problems exist for established platform companies and how our technology could solve them.

We focused on platforms because of the global proliferation of economic and social activities moving to the internet. Most of this movement is facilitated by online platforms that build software to coordinate, connect, and empower us. These platforms build early network effects through free services leveraging data and scale, then extract value from their respective ecosystems. This shift toward a platform economy has resulted in unintended consequences that can only be addressed by next-generation solutions.

While blockchain's dominant incumbents have developed effective ecosystems to address and implement a future state of financial decentralization and internet decentralization, the platform economies of today have unaddressed problems that are clear opportunities for blockchain technology.

This research and the insights that came out of it pointed us towards a new direction for Aion. That direction culminated in our November announcement to split the Aion project into two distinct brands and narratives, connected and linked to a common vision: The Open Application Network (The OAN) and Aion.

The OAN is an open source public infrastructure for the creation and hosting of Open Apps to solve platform problems. Open Apps are programs that put users back in control and are universally accessible across platforms. Using Open Apps, developers can hook into existing platforms like Uber, Shopify, Twitch, etc. and create new breakthrough experiences.

Aion is now the exclusive brand of the digital asset, focused on establishing itself as a leader in the crypto ecosystem. As the economic underpinning of The OAN, Aion is establishing a third category of digital assets, distinct from the narratives of Bitcoin ("State Free Money") and Ethereum ("Decentralized Internet"), and their alternatives. This category will be supported by bringing together a world-class ecosystem of validators, miners, exchanges, wallets, thought leaders, and organizations that support Aion and its usage in The OAN.



This new direction will result in distinct narratives and go-to-market strategies for our two different audiences: platforms and their stakeholders (The OAN), and the crypto ecosystem (Aion).

The introduction of Open Applications as a distinct category represents a tremendous step forward for blockchain technology to solve real problems that society faces every day in the platforms we use.

The launch of The OAN and the accompanying visual rebrand was not our only accomplishment in 2019, as the shift in focus to platform economies was supported by some notable technical developments.

In June we launched the Aion Virtual Machine (AVM), the world's first JVM-compliant blockchain virtual machine. Additionally, in November we went live with Unity, a unique hybrid consensus protocol, merging Proof of Work and Proof of Stake to create a more secure and decentralized block production mechanism. Since launch, over 92M Aion have been actively staked thanks to the amazing community of 30+ validators. In addition, the Aion mining community has grown, doubling our average Hash Rate prior to Unity. Participation in the security of the network has far surpassed our initial objectives for Unity.

We also launched a multi-year privacy research initiative with the University of Waterloo. It is focused on the development of cryptographic techniques such as Zero Knowledge Proofs and Fully Homomorphic Encryption, to enable privacy-preserving interactions between user data and applications operating on this data. This research is accompanied by the release of the Tetragon Testnet, enabling on-chain SNARK verification within AVM-smart-contract-systems, by leveraging a modified ZoKrates toolchain.

But there's more work to do.

Looking forward to 2020, the team and I are as energized as ever about what we're building. With the launch of The OAN and the security and performance fundamentals of the network in place, we turn our time and capital towards adoption.

In 2020, we have two core guiding principles to how we organize: Product-Market Fit and Aion Awareness and Value.

**Product-Market Fit:** At the current state of maturity in the blockchain ecosystem, we need to directly own our relationship with the customer. If we rely solely on third parties, we cannot develop empathy for our audience and establish rich feedback loops. As such, we are scaling our product teams to develop a consumer-facing application, leveraging The OAN tech stack. This focus enables us to control our adoption strategy and showcase how The OAN can solve real problems within platform economies.

**Aion Awareness and Value:** In order to scale the security of the network, Aion must continue on the path to establish itself as a leading digital asset. Supporting and growing the value of Aion is critical to the sustainability of network operations. We have established a Growth team exclusively focused on Aion marketing, ecosystem development (exchanges, custodians, validators) and relationship management (stakers, miners, investors). This team, in collaboration with external partners, will grow global awareness and access to Aion.

We're excited for you to join us on this journey, and we look forward to tackling new challenges in 2020.

**Matt**



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# Glossary

## **The Open Application Network (“The OAN”)**

An open source public infrastructure for the creation and hosting of Open Applications to solve platform problems.

## **The Open Foundation (the “Foundation”)**

The not-for-profit organization tasked with stewarding the adoption of The OAN blockchain. The Foundation’s legal name is the Open Future Foundation.

## **The OAN Community (the “community”)**

Collective term for the members of The OAN ecosystem including but not limited to engineers, users, miners, stakers, developers, coinholders, third parties, and the Foundation.

## **Aion**

The cryptocurrency used to power The OAN.

## **Token Release Schedule (“TRS”)**

A smart contract that locks Aion and distributes the original holdings plus an additional amount of Aion over a pro-rata monthly basis.



# Key Protocol Updates

This section will provide the reader with a brief overview and explanation of our key protocol advancements implemented in 2019: The Aion Virtual Machine and the Unity Consensus Protocol. Detailed explanations of The OAN protocol updates can be found on The OAN Github and The OAN Blog websites.

## Aion Virtual Machine (AVM)

Over the past 18 months our engineering team and The OAN community have been hard at work building the Aion Virtual Machine (AVM), the world's first JVM-compliant blockchain virtual machine.

The community decided to leave the JVM intact so we could fully leverage the mature ecosystem around it. The choice to focus on a language like Java was a complex one, but ultimately it was decided that using Java would lessen the obstacles that many businesses and developers face when considering using blockchain technology. Java, the world's most popular programming language, will provide developers with familiar tools and a reliable development experience, thereby making blockchain technology development more accessible to a larger audience.

The development of the AVM is a significant addition to our open infrastructure and is a useful feature for our developer community.



## Unity Consensus Protocol and Token Economics

In November 2019, the Foundation launched Unity, a new consensus algorithm for public blockchain settings. Unity combines Proof of Work (“POW”) and Proof of Stake (“POS”) consensus protocols to improve overall security and scalability of The OAN. Unity is a consistent protocol that alternates from POW and POS block production. This ensures mining and staking communities are incentivized to contribute to the network’s security.

The POS mechanism in Unity will allow Aion coinholders to participate in network consensus by staking Aion for the first time. Coinholders can choose to self-validate or delegate their stake through several established staking pool validators. In return for improving network security, stakers will earn block rewards. The Foundation maintains its policy to not stake its own treasury.

### Issuance of Aion

With the change to Unity, the economics of Aion have shifted. Unity runs POW and POS algorithms concurrently. The introduction of POS results in a POW/POS block reward distribution split of 50/50. To compensate for the split, block rewards have increased from 1.5 Aion per block in pre-Unity to 4.5 Aion per block under Unity. The increase in newly minted coins will continue to incentivize miners and stakers to provide network security.

Approximate annual Aion block rewards are summarized in the below table. Block rewards are distributed at a fixed rate per block.

Annual POS	Annual POW	Total Annual Issuance
7,095,600	7,095,600	14,191,200

As the total supply of Aion increases, block reward issuance as a percentage of total supply decreases over time. The table below summarizes annual Aion issuance over time as a percentage of total supply.

Dec 31, 2019 Issuance %	Dec 31, 2020 Issuance %	Dec 31, 2021 Issuance %
2.99%	2.90%	2.82%





Below you will find a brief description of the supply and distribution of Aion, as well as an explanation of Aion's new inflation economics. Figures 1 and 2 demonstrate the circulating liquid supply of Aion owned by the Foundation and the general public, and Aion provided as rewards for block creation.

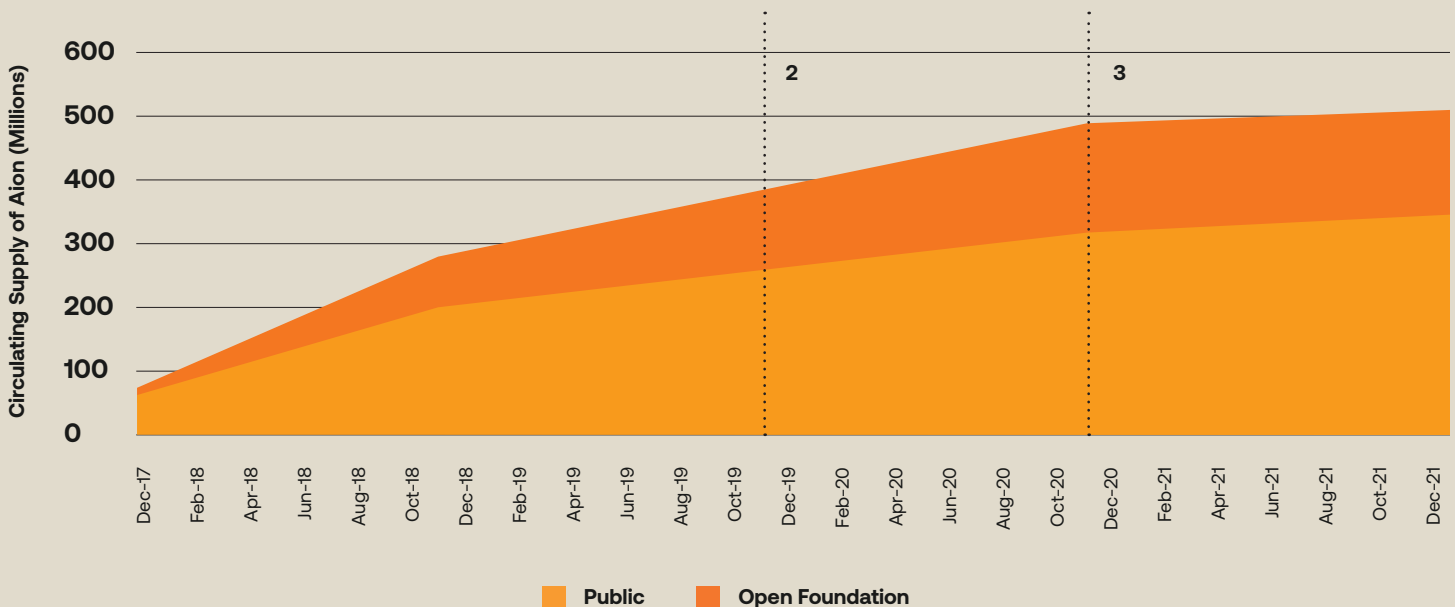
**Figure 1: Total Supply Breakdown**

Aion Distribution	Circulating Supply	Locked Supply	Circulating + Locked
Open Foundation	60,038,369	67,707,737	127,746,106
Public (TRS concludes Nov 2020)	321,488,273	25,453,696	346,941,969
<b>Total Supply at Dec 31, 2019 <sup>(1)</sup></b>	381,526,642	93,161,433	474,688,075
<b>Total Supply at Dec 31, 2020 <sup>(1)</sup></b>	488,879,275	--	488,879,275
<b>Total Supply at Dec 31, 2021 <sup>(1)</sup></b>	503,070,475	--	503,070,475

**Notes:**

1. Total supply includes block rewards

**Figure 2: Aion Circulating Supply Schedule**



**Notes:**

1. For illustration purposes only, the above graph does not accurately contemplate Aion transactions executed by the Foundation.
2. In November 2019 the new Unity consensus protocol was implemented.
3. On November 15, 2020 the Aion Private TRS will end, at which point the total amount of Aion held by the Foundation will shift to the public based on the ongoing spending habits of the Foundation.
4. At any given time, a portion of publicly held Aion will be locked in staking contracts.



# Spending

The Foundation's Finance team continues to maintain discipline over fiat, cryptocurrency, and Aion spending. The Foundation's Board of Directors meets periodically and plays an active role in overseeing material business and financial decisions as well as provides strategic direction for the organization. The Board of Directors consists of the following members:

## **Matt Spoke**

Matt is a Co-founder and CEO of The Open Foundation. Over the past 6 years, Matt has founded other projects such as Rubix by Deloitte, Blockchain Technology Coalition of Canada, and the Enterprise Ethereum Alliance.

## **Jin Tu**

Jin is a Co-founder and former CTO of The Open Foundation. He holds a Master of Science from Beihang University and built his career in software design and development.

## **Robert Schmultz**

Rob serves on the Executive Board of MidOcean Partners, a private equity firm focused on the mid-market. He is active with BlockChange Ventures, a venture capital firm that invests in blockchain companies. Robert was previously an SVP of eCommerce and CRM at Talbots, where he oversaw the company's modernization and expansion of its digital, direct marketing, and analytical capabilities.

The following sections outline the Foundation's fiat and cryptocurrency expenses and Aion expenses during the three months ending December 31, 2019 and summarizes the past three 2019 quarters. Unless otherwise noted, all figures are denominated in USD and are consolidated summaries of the Foundation and its subsidiaries. The Foundation has reported the below figures on an accrual basis to provide readers with information about the timing of its expenses.



## Expense Summary (excluding Aion)

Highlighted in Figure 3 are the Foundation's operating activities. Operating activities include the core activities incurred to steward the ongoing development of The OAN. Total operating expenses incurred in Q4 2019 increased by 24% compared to the prior quarter.

Figure 3: Fiat, BTC, and ETH Expense Summary

\$USD	Q1 2019	Q2 2019	Q3 2019	Oct 2019	Nov 2019	Dec 2019	Q4 2019	Total
Compensation	\$1,000,282	\$1,131,782	\$970,396	\$285,700	\$296,893	\$424,022	\$1,006,615	\$4,109,075
Marketing	48,044	97,356	410,043	230,824	159,033	118,106	507,963	1,063,406
Ecosystem & Technical	22,797	27,495	223,227	242,717	47,020	97,890	387,627	661,146
General & Administrative	273,320	261,843	222,828	91,502	130,160	100,474	322,136	1,080,127
Professional Services	125,281	73,079	69,048	62,581	24,896	32,981	120,458	387,866
<b>Total Expense</b>	<b>\$1,469,724</b>	<b>\$1,591,555</b>	<b>\$1,895,542</b>	<b>\$913,324</b>	<b>\$658,002</b>	<b>\$773,473</b>	<b>\$2,344,799</b>	<b>\$7,301,620</b>

- The December Compensation expense increase was due to scheduled semi-annual employee incentive plan payouts. Employee incentive plans ensure retention and encourage creativity and leadership.
- Marketing expenses increased by 24% in Q4 2019 compared to Q3 2019 in order to communicate The OAN's strategic rebrand to the worldwide OAN community.
- Ecosystem and Technical spending increased by 74% as a result of the Unity technology launch and updated digital asset strategies.
- Additional General and Administrative costs were incurred to recruit talent to help execute the Foundation's new strategic vision.
- Of the total compensation spending in Q4 2019, approximately 56% was engineering and technical related and 44% was marketing, ecosystem, and G&A related.



## Aion Expense Summary

The following table (Figure 4) highlights the Foundation's Q4 2019 Aion expenses and summarizes the past three 2019 quarters. Amounts are denominated in Aion.

Figure 4: Aion Expense Summary

Aion	Q1 2019	Q2 2019	Q3 2019	Oct 2019	Nov 2019	Dec 2019	Q4 2019	Total
Grants & Bounties	3,013,458	1,839,962	40,110	50,000	41,110	--	91,110	4,984,640
Employee Incentives	1,907,746	762,554	2,000	--	--	2,006,900	2,006,900	4,679,200
Ecosystem & Technical	94,584	408,237	--	175,491	87,856	199,451	462,798	965,619
Marketing	70,562	--	102,678	71,428	62,500	84,872	218,800	392,040
Total Expense	5,086,350	3,010,753	144,788	296,919	191,466	2,291,223	2,779,608	11,021,499

- Ecosystem and Technical expenses increased due to security audits, product and tooling, and community contribution programs. The Foundation attempts to align the long-term incentives of vendors and community members by compensating a portion of their services with Aion.
- Long-term Employee Incentive payments are released to employees in June and December of each year.
- The Foundation has engaged different marketing firms to help develop and roll out an updated marketing strategy.



# Financial Position

The following highlights the Foundation's fiat and cryptocurrency holdings as of December 31, 2019. Figure 5 outlines a breakdown of the Foundation's liquid and locked Aion holdings as of December 31, 2019. The locked portion represents the remaining distributions to the Foundation locked under the Private TRS.

Figure 5: Foundation Holdings

Fiat, BTC, and ETH			AION Holdings	
	Units	\$USD		Units
Fiat	10,087,237	\$10,087,237	Liquid Aion	60,038,369
BTC	194	\$1,395,635	Locked Aion	67,707,737
ETH	28	\$3,633		
Total		\$11,486,505	Total	127,746,106

*\*Please note that the balance and dollar value of the fiat, BTC, ETH, and Aion noted in Figure 5 is as of December 31, 2019 and differs as of the date of this Report due to fluctuations in cryptocurrency prices and operating spend.*

- The Foundation continues to fund the majority of its operations using fiat reserves.
- The Foundation has entered into agreements with some private TRS recipients that requires their future TRS distributions to be delegated into staking contracts. This will strengthen the security of The OAN network and empower long-term holders of Aion. The private TRS will conclude its last scheduled payment on November 15, 2020. Subsequent to this date, the TRS recipients who entered into this agreement will gain full control over their Aion distributions. As of December 31, 2019, total delegated TRS stakes resulting from this program amounted to 16,729,169 Aion. Such transactions have a neutral effect on the Foundation's overall Aion treasury and result in a shift from liquid to locked Aion.
- In November 2019, a net sale of Aion from the Foundation's treasury to a strategic venture fund was conducted for 12,000,000 Aion. This is not routine and was done as part of a broader objective to develop long-term strategic investors. To facilitate the sale, the Foundation also purchased future TRS payments from a separate coinholder. Such transactions may affect the liquid and locked Aion figures held by the Foundation.
- Investments, loans, and accruals transacted with qualified network partners totaled 727,459 in Q4 2019.
- As of December 31, 2019, the Foundation held 7,075,530 Aion in escrow on behalf of a network partner.
- The Foundation continues to work with network partners and the Open Application community to provide investments and grants to qualified projects. All material investments and grants are subject to approval by the Board of Directors.