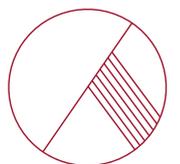# Agora Tokenomics Overview

Agora Tokenomics Overview

This document provides an overview of the Agora ecosystem asset: the VOTE token, as well as additional information pertaining to Agora's token sale.

We're excited to announce that Agora's VOTE token presale has commenced and is now available to accredited investors worldwide, including the United States. Agora will be raising $20 million through the VOTE token sale.

Introducing the VOTE token

VOTE is the native asset of the Agora ecosystem. The VOTE token is used to incentivize citizens and selected organizations to contribute to a secure and transparent election process by acting as authenticators of elections worldwide.

The VOTE tokenomics model has a wholistic function on Agora's platform, creating a decentralized mechanism for validating and auditing election results. VOTE is the first token to encourage civil societies and investors to verify real election results, providing high utility value to the Agora network as well as a clear reward mechanism for token holders.

In Agora's ecosystem, not only can each voter verify that his or her vote was accurately recorded and that it remained unaltered, but voters can audit the results of their own elections or those of other nations or organizations and get rewarded for it. In this way voters play a key role in ensuring fair elections and can place their trust in the electoral procedures.

With the VOTE token, Agora makes elections a crowd-participatory and incentivizing project for citizens and a cheaper, safer enterprise for election administrators.

The Agora Ecosystem

Agora is a global community of node operators maintaining a verifiable blockchain network which ensures a tamper-proof and 100% verifiable election process.

To ensure the maximum level of security, Agora's system combines the most advanced level of cryptography with a two layers participatory consensus security infrastructure. It consists of two types of nodes operators : a network of carefully selected nodes providing consensus on Agora's permission blockchain (Consensus Nodes), and

citizen token holders auditing the consensus mechanism (Citizen Auditor Nodes.

Each time Agora enters a contract with a government or institution, a portion of the cash inflow is allocated to purchase VOTE tokens to fund a required Election Bonus Pool. At the end of the election period, the Bonus Pool funds are released and transferred to compensate the node operators for their processing and verification work.

Overview of Agora's ecosystem
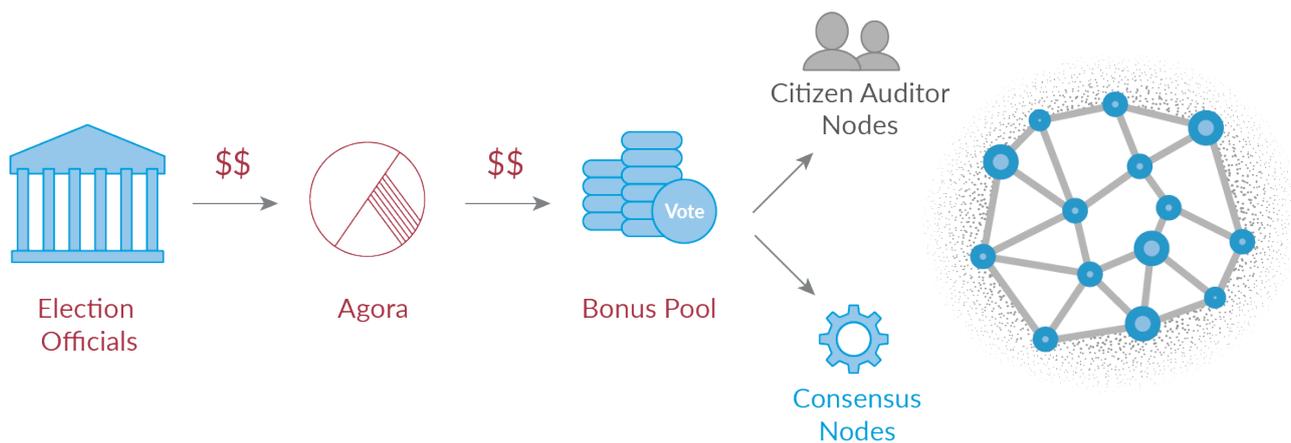
Election Officials: pay a blockchain network fee to run an election on Agora's system

Agora: purchases VOTE tokens on the market on the behalf of the Elections Officials to fund the required Election Bonus Pool

Election Bonus Pool: a pool of VOTE tokens purchased by Agora after signing an election contract with a government or an organization. To be paid out as a reward to Consensus Nodes and Citizen Auditor Nodes as a compensation for their service

Consensus Nodes: a distributed network of independent witness servers, together they form the "Cothority", a permissioned collective authority providing consensus on the Agora blockchain

Citizen Auditor Nodes: a global decentralized network of trustless nodes, together they form the "Valeda Network", which watches and verifies that the consensus is processed correctly

What are Consensus Nodes and how are they incentivized to participate?

Consensus Nodes consist of our invite-only network of NGOs, universities and other politically-neutral third party organizations. Together, Consensus Nodes form the Cothority, which processes transactions and provides consensus for data stored on Agora's blockchain.

The Consensus Nodes are contracted for two services:
- Technically maintaining a node, making sure that the infrastructure is stored safely and is working when needed; for pilots, tests and real elections.
- Providing consensus; meaning actively participating to make an election trustworthy thanks to the power of distribution and decentralization.

For every election, 5% of VOTE tokens from the Election Bonus Pool are distributed to the successful Cothority network as a reward.

This reward in VOTE tokens is received, held and managed by the Agora Foundation to undertake humanitarian projects in collaboration with the organizations operating the Consensus Nodes. Possible projects include holding educational sessions for children, providing coding lectures, educating adults about blockchain and elections all over the world.

If a Consensus Node refuses to accept a reward, its earmarked tokens are retained by the Agora Foundation, locked up for a period of two years and then awarded to other mission-driven projects.

Consensus Node Earmark Formula

Consensus Nodes in the Cothority will be equally rewarded according to the following formula:

$$R_{i,a} = 0.05 * \frac{b_a}{N}$$

$R_{i,a}$: Reward for the ith Consensus Node in election a
b_a: Election Bonus Pool for election a
N: Total number of Consensus Nodes

Cumulatively, Consensus Nodes will receive 5% of the tokens held in Election Bonus Pools.

What are Citizen Auditor Nodes and how are they incentivized to participate?

Eligible KYC verified token holders can act as Citizen Auditor Nodes for any election worldwide. Citizen Auditors (Citizen Auditor Nodes) act like observers comparable to election observers of our current paper ballot voting systems, they are able to view the open source transaction code of an election to publicly verify its authenticity.

In order to act as Citizen Auditor Nodes during an election token holders must stake VOTE tokens in a wallet for 90 days. Citizen Auditors are rewarded for their services in VOTE tokens, proportional to the size of their total stake, creating an incentive mechanism that rewards the long term holding of VOTE tokens.

Token holders who do not stake their VOTE tokens for at least 90 days will not receive rewards. Agora reserves the right to refuse someone to participate and any token holder abusing the system for e.g. spreading fake news or other bad actions will be penalized from the tokens they staked as collateral for honesty.

Citizen Auditor Nodes Reward Formula

All Citizen Auditor Nodes holding tokens for 90 days or more are eligible to receive auditor rewards when elections or null elections occur on Agora's network.

Once an election period has ended and ballots have been computed by the Cothority, all Citizen Auditor Nodes will run verified validations on the election. All of them will have equal opportunity to report on any given election, provided they meet the minimum 90 day and uptime requirements. All Auditor Nodes will be rewarded proportionally to their stake regardless of whether or not they are chosen to report.

Cumulatively, Auditor Nodes will receive 95% of the tokens held in election bonus pools.

Auditor Nodes will be rewarded VOTE tokens according to the following formula:

$$R_{i,a} = 0.05 * \frac{0.95 * b_a * S_i}{S_t}$$

$R_{i,a}$: Reward for the ith Citizen Auditor Node in election a
b_a: Election Bonus Pool for election a
S_i: Number of tokens staked by the ith Citizen Auditor Node
S_t: Total number of tokens staked

What are Election Bonus Pools and how are they formed?

Election Officials → $$ → Agora → $$ → Bonus Pool

Each election on Agora is required to form an Election Bonus Pool, which is used to reward Consensus Nodes and Citizen Auditors for their services. VOTE tokens in the Election Bonus Pool are held in a smart contract on the Ethereum blockchain, which must be funded prior to any election at prevailing market exchange rates. As network effect and adoption increases, this mechanism should reduce the circulating supply of the token.

Election administrators fund the Bonus Pools by paying a blockchain network fee charged by Agora for node consensus and auditing. Agora purchases VOTE tokens on behalf of the Elections Administrators from the secondary market.

At the end of the election period, the Bonus Pool funds are released and transferred to compensate the node operators for their processing and verification work.

Consensus Nodes subpool — A   B — The Bonus Pool

Cititzen Auditor Nodes subpool
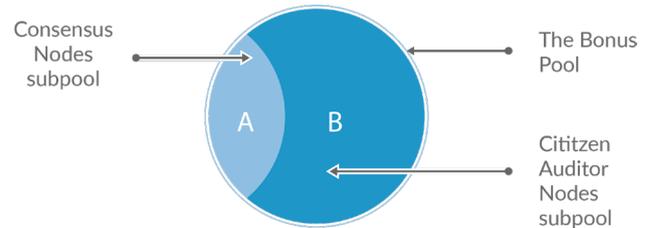
The purchases made to fund Election Bonus Pools are the primary source of demand for the VOTE token.

Election Bonus Pool Formula

Election Bonus Pools will be funded in VOTE tokens but charged to governments and other customers in USD according to the following formula:

$$R_{i,a} = k * P$$

b_{USD}: Election Bonus Pool in USD for election a
k: Blockchain network fee (weighted average per unit)
P: Voter population

The formula for bonus pool b_{USD} scales with the total voter population of a country, e.g. the number of people eligible to vote. We believe basing this metric on the total voter population rather than the number of participating voters allows Agora to remain unbiased to the voting process itself. The USD value applied to Agora Bonus Pools also follows a formulaic system which itself is not driven by market prices.

The formula for k, which represents the weighted average blockchain network fee per eligible voter, is derived from a fixed unit fee that scales with voter population.

The table on the next page states how a blockchain network fee will be applied as voter population for a given election grows.

Bonus Pools Defined by Voter Population

Voter population	Blockchain network fee	Max Bonus Pool
Up to 1,000,000	$0.025	$25,000
1,000,001 to 5,000,000	$0.020	$105,000
5,000,001 to 10,000,000	$0.015	$180,000
10,000,001 to 50,000,000	$0.010	$580,000
50,000,000+	$0.005	$38,330,000*

*Illustrative number based on world population of 7.6 billion people

An exemple of how it works

Election Officials → Agora → Secondary Market → Pool
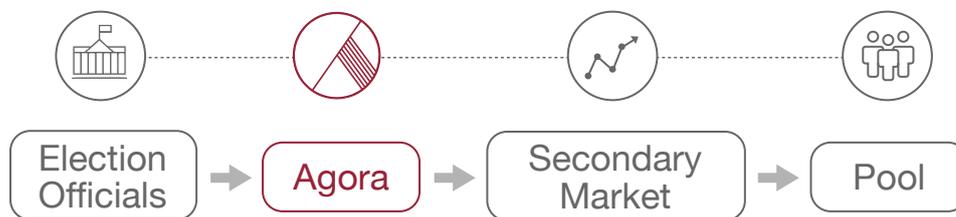
To illustrate how the VOTE token and Election Bonus Pools work, let's look at the following example involving fictitious Country A.

After meeting with Agora, the national electoral commission of Country A has agreed to use Agora's technology in its upcoming election. Country A has signed an agreement with Agora, which among many terms, includes the requirement to form an Election Bonus Pool. Country A has a population of 50 million people, which will require Country A to form a $580,000 Bonus Pool.

Prior to the election and in accordance with securities laws, $580,000 worth of VOTE tokens will be purchased and held in a smart contract. Assuming for this example the VOTE token has a $1.00 market price at the time of purchase, 580,000 VOTE tokens will be purchased and held in a smart contract linked to Country A's election.

Knowing that they can receive rewards from the Election Bonus Pool, some token holders will choose to stake their VOTE tokens to run a Citizen Auditor Node. Let's look at a node held by fictitious person Tom Notreal, who has been staking VOTE tokens for 91 days and has 1% of the VOTE tokens being held in staking Citizen Auditor Nodes during Country A's election. After the election is complete, Tom will receive 1% of Country A's Election Bonus Pool, which represents a reward equal to 5,800 VOTE tokens.

Takeaway: By being a long term holder of VOTE tokens Tom has been rewarded for his citizen action during the election.

Agora Ecosystem Sustainability

Agora executives wanted to make sure that each time their company is undertaking profitable projects the value of the VOTE token is positively impacted and puts token holders in a more fortunate position.

One of the reasons we believe Agora's token model stands out is its clear upward price dynamic, which rewards investors for Agora's success. Below are key attributes that make the VOTE token an attractive asset class.

1. Mathematically-Defined Demand

Tokens for Election Bonus Pools will be purchased in a defined amount correlated to governments' eligible voter populations. Any investor can model out VOTE token demand using projections of elections on Agora.

2. Shrinking Supply

As Agora's technology is adopted, the amounts being funded into Bonus Pools will grow, incentivizing more token holders to hold long term. This should have the effect of reducing market supply, which is generally associated with a higher token price.

3. Bonus Pool Distributions

In addition to attractive market fundamentals, long term holders who stake their VOTE tokens will be rewarded with Election Bonus Pool distributions. This provides an ongoing stream of cash flow to long term investors.

How will demand be driven in Agora's nascent stage?

During this period, it is expected that fewer elections will occur on Agora's network. To properly incentivize staking in the first 24 months of operation, Agora developed a giveaway program in the form of Null Elections, which provide eligible staking token holders with rewards at regular intervals.

Every quarter Agora will organize test elections during which tokens are issued and provided at a pro rata share to token holders who run Auditor Nodes by staking their tokens for at least 90 days.
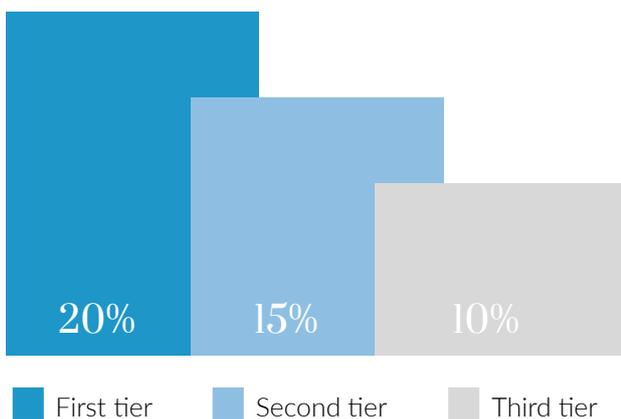
50M VOTE tokens have been reserved for Null Elections.

Token Details

Symbol	VOTE
Total token supply	1 billion
Soft cap	$1.25 million
Hard cap	$20 million
ICO price	$0.051
Type	Utility token
Type	ERC20
Presale start	May 1st, 2018
Mainsale start	August 30th, 2018

Discount Structure

20%   15%   10%

■ First tier   ■ Second tier   ■ Third tier

Discount	Amount of raise
20%	$3,750,000
15%	$6,250,000
10%	$7,500,000
Mainsale	$2,500,000
Total	$20,000,000

The VOTE token is being offered in three tiers, which are structured to reward early participants in our presale. The first $3.75M of purchases will receive a 20% discount to the main sale price.

The second and third tiers of our presale will receive 15% and 10% discounts, respectively. We are reserving $2.5M for Agora's main sale, which is tentatively scheduled for August 15th.
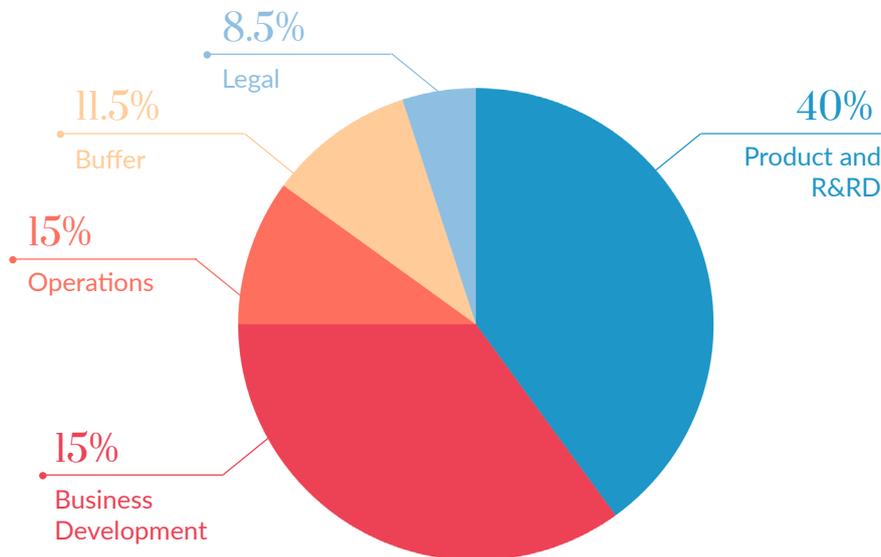
Token Distribution
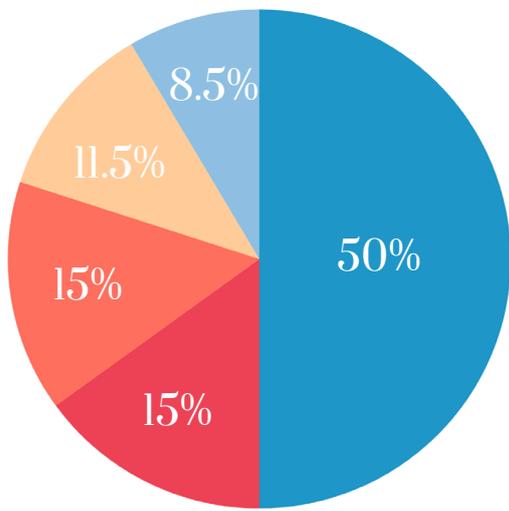
- **Token sale**
  Includes tokens for null elections

- **Company**
  Subject to a 4 year lockup with 1 year cliff

- **Team**
  Subject to a 3 year lockup with 1 year cliff

- **Partners**
  1.5% of total tokens reserved for community airdrops and bounties

- **Advisors**

Use of Proceeds

8.5%
Legal

11.5%
Buffer

15%
Operations

15%
Business Development

40%
Product and R&RD

Proceeds from Agora's token sale will be used to support development and widescale adoption of our technology. Agora offers an end-to-end verifiable voting software, which provides governments and institutions with a powerful platform that can bolster confidence in democracies across the world. This is a large undertaking, and our raise is intended to fund a project of a global scale.

Our ICO will finance Agora's growth on a 10 year timeline with a safety buffer. The cost of our sales force and adoption is a major component of our expenses and will be fundamental to Agora's success. In many jurisdictions, converting leads into customers will take many years and involve highly connected and skilled people in each geographic region.

Project Timeline

Agora began building blockchain voting technology two-and-a-half years ago to meet the mission-critical requirements of government elections.

With our core platform developed, we are now in the early stage of executing our growth strategy.

Q2 2015
Team builds centralized voting systems for Swiss government

Q4 2015
Team begins blockchain development

March '18
Agora technology demo during Sierra Leone presidential elections

May '18
Begin VOTE token presale

May-June '18
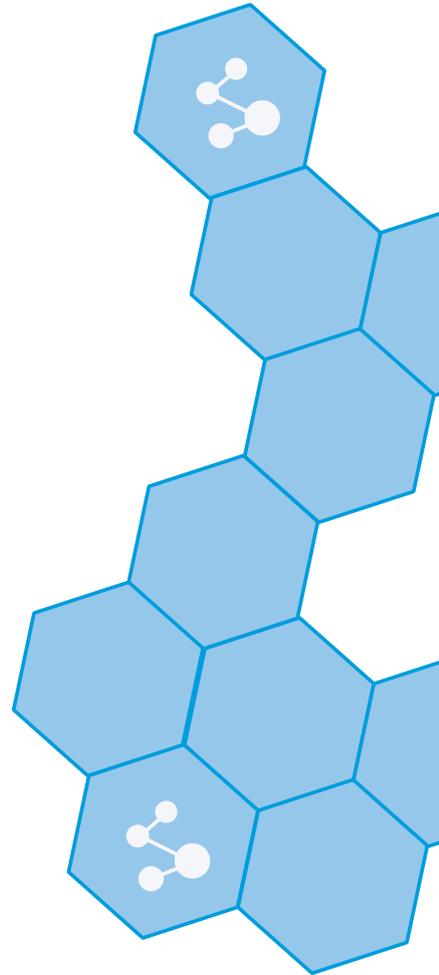Build team and expansion of PR/Marketing efforts

August '18
ICO / Token mainsale

Q3 '19
New election in Africa (confidential and pending)

Q4 '19
Completion of Votapp software

Our Roadmap to Become a Public Company

Finally, we want to touch on the regulatory strategy behind Agora's token sale, which has become an increasingly important topic for ICO investors.

Agora is pleased to announce our plan to become a publicly reporting company with the SEC.

By filing a registration statement with the SEC this year, Agora intends to make the VOTE token fully-tradable and to provide wide transparency to our investors. Pending SEC clearance, Agora will report audited financials and other required disclosures in an annual 10-K, file quarterly 10-Qs, and make other filings generally required of public companies. We are still a private company today, and our current presale will be completed as a private placement under Reg D.
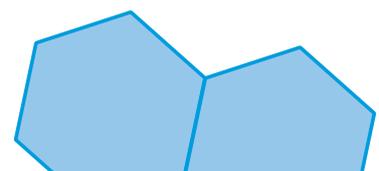
Agora

Join Agora's Token Presale

Agora's VOTE token presale has commenced on May 1st and is now available to accredited investors worldwide, including the United States.

Contact us:
hello@agora.vote

Register for our whitelist:
www.agora.vote/whitelist

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