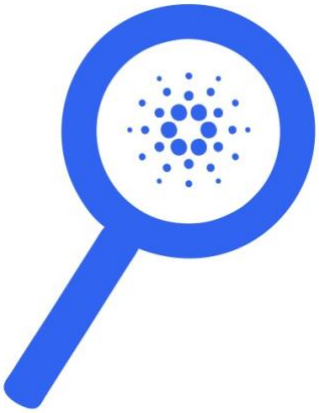
Smart Contract Audit Token
Decentralized Autonomous Organization



Whitepaper

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Abstract

Smart Contract Audit Token Decentralized Autonomous Organization (SCATDAO) is a new audit paradigm that reinvents the way audits are selected, performed, and financed. With SCATDAO we solve audits inherent problem, the conflict of interest that comes from paying for an audit service. As we have seen with Enron, Tyco, and countless others, the possibility always exists for an auditor to commit fraud to keep their client happy. With SCATDAO, the token holders choose the projects they care for and want to be audited. The audit process is standardized and performed by the community with all services funded by the DAO's treasury. SCATDAO auditors are incentivized only to provide accurate audit results, regardless of if the results are positive or negative. We are the client, we are the auditor, we are the Smart Contract Audit Token.

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Introduction

With an industry as nascent and technical as blockchain, mass adoption of decentralized applications (dApp), particularly dealing with Finance, will move slowly until enough trust has been generated with the general public. This can be done slowly as people cautiously use them and wait to see if any issues occur, or these applications can be independently audited using a consistent set of standards and provide a rating or certification on the code, assessment of the project's development team, and recommendation on its legitimacy. By creating this environment of trust, the DeFi ecosystem on Cardano will grow faster and attract a wider range of people.

The average user or investor does not have the technical expertise to read the code in a smart contract and understand if there is anything malicious included in it. Many people will want to participate in these applications but lending any significant amount of crypto to an unverified application is unnerving for people, compounded by the fact that it is a decentralized entity that they cannot go to and complain to customer service. Without trust that these applications were written properly to do the things they promise, there will not be mass adoption.

But how can we trust a paid audit firm to be impartial? The answer is we cannot. We have seen Enron, WorldCom, Tyco, and countless other instances of paid auditors issuing fraudulent attestations to keep the client happy and continue earning audit and consulting fees. We also have hundreds of new Audit Firms popping up and performing smart contract audits which the public is unfamiliar with, have no history or reputation to draw on, and therefore not much faith can be placed in their results and opinion. We must create a new audit paradigm to change the way audits are chosen and paid for, as well as a trusted organization that the public can build a relationship with and have faith in the audit opinions it produces. The world is finally waking up to the need for decentralization and it is at the core of blockchain. So why would we accept our audit services meant to protect our investments coming from centralized organizations? Enter Smart Contract Audit Token Decentralized Autonomous Organization.

There needs to be Smart contract audit standards developed and consistently applied by independent decentralized organizations, which can apply a clear rating to the dApp and inform the public that they are safe to use. It needs to assess the code used in the smart contracts, assess the development team, including their backgrounds and history to determine if they have a history of rug pulls or other unscrupulous behavior. But more importantly, we need a decentralized DAO created which will have audit projects chosen by the community and funded entirely though their treasury, to avoid the conflict of interest that arises from paying an auditor for their service. A DAO that can be updated and molded by its community to adapt to any new unforeseen audit risks that may arise as the industry evolves and matures.

We are big believers in auditor independence but would also like to highlight another aspect of why we are trying to transform the current audit system – the fact that not being rich should not prevent anyone from obtaining a smart contract audit. With basic audits costing 5K to 10K USD and complex audits as much as 100K USD, this creates a system where only extremely well-funded or independently wealthy dev teams can afford an audit for their smart contracts. This high cost of audit as a barrier to entry is one of the reasons we have created the Smart Contract Audit Token. Nobody ever has to pay for our audit services. The audits are funded by our

Decentralized Autonomous Organization's treasury. If Cardano or blockchain at large is truly meant to be for everyone, then we need to have certain critical infrastructure in place that allows anyone to build their vision, regardless of how wealthy or well-funded they are. Critical infrastructure such as free access to audit services. A resource where dev teams can obtain a comprehensive audit, receive feedback on any bugs or potential exploits they were unaware of, and demonstrate to the general public that their protocols are safe to use. Providing access to these critical pieces of infrastructure will: (1) increase competition which improves quality and lowers price; (2) increase innovation which bring cool new products to market; and (3) ultimately expedites blockchain adoption for the masses.

How It Works

Initial Process

When we first started we created a very long and complicated process for how we would like to perform decentralized audits (detailed below). This was based on theory and after talking to several smart contract auditors they all came to the same conclusion that this would be too difficult and complicated to implement on Cardano early on. Since Smart Contracts written in Plutus are just beginning there are not many well-established audit practices for them and there are not many people with the skill set of auditing them. This required us to adjust our approach. As the DAO grows and we attract more talented people with experience in auditing Plutus Smart Contracts we will work towards building and implementing the decentralized audit program outlined below. But since this will be a long and difficult process we would also like to implement programs that we can begin much sooner and arguably provide just as much benefit.

The immediate process will be very similar in how the audits are selected and financed. Token holders will still propose the projects they would like to see audited and the community will vote on it. The ones with the most votes will win. And the funding model will remain the same so that our DAO is financing the audits which eliminates the conflict of interest that comes from having the dev teams pay for their own audits. More on the funding model is discussed in the next section. The key difference is that once audits have been voted on by the DAO we would then either hire an experienced 3rd party to perform the audit on our behalf, or we would sponsor a bug bounty for it through the Bug Exterminator where we incentivize the community to search for bugs and be rewarded based on what they find (more on Bug Exterminator in later section). If hiring a 3rd party, we would request bids by experienced auditors in Cardano to do their audit work. The token holders would then review the bids and decide which one to hire through a vote. The DAO will be able to decide between hiring the third party or sponsoring a bug bounty contest. Again, in both of these instances we have eliminated the conflict of interest because we are funding the audit work and we own the results.

We have also created the DYOR Tool which is not used to assess the code but instead evaluates the project holistically, looking at things like the Development team, Tokenomics, Community, and Trading Metrics. This is available for the community to use for free to learn how to perform research and to share reports with others. We will also have auditors working on behalf of the DAO that will be using the tool to perform research and share it with the organization. The thought process behind this is most scams will occur before there is any code to audit. A project will raise funds based on a website or idea without having the product in place. Which means that simply assessing their smart contracts usually comes too late to prevent people from being taken advantage of. By incorporating this review feature we will be able to review projects early on and provide information to help the community in their research and ideally to make a more informed decision.

Long Term Process

Project Selection

Our token will have the ticker AUDIT. The AUDIT token is a governance token that holders will use to vote on which projects they would like to be audited. Anyone who holds a minimum of XX AUDIT can propose an audit to be included for consideration in voting (relevance of a minimum value is still being considered). There will be no minimum for voting, anyone who holds AUDIT is eligible to vote and have a say in which projects they want to see audited. The DAO will determine the number of audit projects that it can perform each quarter, based on the total revenue being generated by the treasury and the total cost of each audit that will be calculated. We will audit the projects that receive the most votes from the community (1 AUDIT = 1 vote).

Audit Methodology

We will develop the audit methodology and standards that will be used to assess the smart contracts and the development team who is responsible for creating the dApp. The goal is for the these to become the industry standard so that all smart contract audits are conducted in a uniform manner. Once these are created, training materials will be developed so qualified candidates can easily follow and learn how to perform this work program on an audit. Also, this audit process is not meant to be unchanged or immutable. SCATDAO will empower its community of auditors to propose changes and new best practices that they learn from performing the work. These updates or changes to the audit process can be voted on by the community and implemented. As Cardano and blockchain continue to evolve, we want the way to audit it evolve as well. Ensuring the best and most up to date methodologies are constantly being employed.

Who Performs the Work

We are in the process of developing training materials that will clearly outline our audit methodology and teach the work steps that need to be performed to complete the audit. Training materials will be available to everyone through our website and anyone can review this at their leisure to learn how to perform SCATDAO audits (fluency in Haskell/Plutus will be helpful in successfully review the training materials). A test is also being developed that will assess a candidate's understanding of our audit methodology as well as their fluency of Haskell/Plutus. Upon successful completion of the training materials and receiving a passing score on the test they will receive a certification and be added to the listing of Qualified Candidates.

In addition to our knowledge review test, we are developing a scorecard that will assess a candidate's qualifications and determine if they have the necessary skills required to successfully perform an audit on behalf of the platform. This will consider their background, work history, knowledge of Haskell/Plutus, completion of Plutus Pioneers or similar programs, etc.. We care first and foremost that someone has the ability and knowledge vs blindly relying on professional certifications such as CPA, CFA, CA, etc. If they receive a passing score, they will be added to the listing of Active Available Auditors and are officially available to perform audits on behalf of SCATDAO. Initially the SCATDAO dev team will be reviewing these candidates to onboard

them, but this responsibility will be transitioned to the new auditors based on the number of successful audits performed with us. This is to ensure a clear and straightforward path to decentralization of the process away from the Dev team.

If an auditor becomes busy and would not have the availability to participate, they can deactivate themselves at any time and return to the Active listing whenever they become available. There will be no cap on the number of Active Available Auditors. If someone who self designates as available is chosen for an audit, an email will be sent to them and they will be required to accept the audit. If they cannot accept but designated as available, they will be put on hold for X number of audits. As auditors successfully complete audits and demonstrate their competency and trustworthiness, they will move up in ranking and will have different roles, responsibilities, and compensation based on their rank. It is outlined as follow:

Audits Performed	Rank	Compensation USD
0	Pawn	0
1	Pawn	X
2	Pawn	X
3	Knight	X * 1.5
4	Knight	X * 1.5
5	Queen	X * 2
10	King	X * 2.4

Each audit project that is voted on and selected by the community will be randomly assigned three auditors from the AAA listing. This will be 3 way blind so that none of the people are aware of each other or are able to communicate, which is meant to prevent collusion. Two people will independently perform the audit work program in its entirety and upload their results to the website repository when they are finished. The 3rd person will perform the Audit Quality Review (AQR). The AQR must review the work performed by the two auditors, ensure that both auditors have reached the same conclusions, and concur with their findings for the audit work to be completed. The redundancy of having 2 separate people perform the work and compare the results is meant to provide greater assurance that the testing was done correctly. If the work performed by the auditors does not match, the AQR will designate that in the system and the auditors will be notified. They will be required to go through the process over again, redo the work, and resubmit. This will be repeated until they can achieve matching results.

NOTE: We may initially have more than 3 auditors assigned to each audit in order to speed up the onboarding process. This will allow a large group of people to get multiple audits under their belt and progress to take over the additional responsibilities.

The system would be configured to always bring in 1 Pawn if available so that new people can keep being onboarded into the program. It would also pull in 1 higher-ranking individual as the second auditor (if available) and a Queen level would be required to perform AQR. This is to

ensure that someone who is more experienced and has performed several audits on our behalf is reviewing the work and ensuring its accuracy. If there is a situation where there were no new Pawns, two Knights or Queens can perform the work as well. At the completion of the audit work and AQR review, the AQR will ensure all workpapers have been uploaded to the website repository along with the results, and the closing process will begin.

As this is a community effort and to encourage the maximum number of people reviewing and concurring on the results, the community is incentivized to review the workpapers, results, and the smart contract to assess if the work was done properly and to see if any additional bugs or exploits can be found. For anything found, a new AQR will be randomly selected to review the claims and do another pass through of the workpapers and code. There will be a deadline for review and a certain percentage of votes will be required to certify the results and close the audit. Rewards are paid to the community for anything found and for participation according to the below table, and auditors are penalized as discussed in the next paragraph: (we are currently working to determine what rates to pay and will update in a future white paper).

At the successful completion of an audit, individuals will move up a level if their work was free from errors. If the AQR determines there were errors in the individual's work that would alter the opinion of a reasonable person, they would be dropped back down to the rank of Pawn 1. If someone feels that they did not make an error, 2 additional Queens will be selected to review and make a ruling. If they determine there was no error, the individual will continue to advance as normal and the Queen who made the incorrect call would drop back to Pawn 1. Initially, the SCATDAO team will perform the AQR role. As soon as there are auditors available who have performed the necessary number of successful audits to earn the Queen rank, this responsibility will begin transitioning to them and away from the Dev team, a clear and well-defined path to full decentralization.

After someone has successfully completed 10 audits, they would become a King. A King would have all of the responsibilities of a Queen but would also be required to review incoming people and include them in the AAA listing. With each audit that they participate in, they would be required to review 10 new candidates as well (this will encourage constant and consistent growth). The candidates would be pulled from the system in the order that they applied. The Kings earn additional compensation for this additional effort, as outlined in the chart. If it is discovered that someone was admitted without the proper skills or rejected despite being qualified, the King would be bumped back down to Pawn 0 with a second infraction resulting in a permanent ban. Again, this will be performed by the Dev Team initially until sufficient Kings are available, a clear and well-defined path to decentralization away from the Dev team and into the hands of the community.

At the completion of the audit work and closing process, the work performed will be uploaded to a repository on the website and results will be distributed through the website and available to all.

Auditors who perform an audit on behalf of SCATDAO will receive a payment to compensate them for their time and effort. The compensation is outlined in the above table, and is meant to be very competitive to the industry. Auditors from all around the world who possess the required skills are encouraged to participate. The money will not be adjusted based on geographical location, which means an American Auditor and an Ethiopian Auditor would be compensated the exact same. This will hopefully encourage participation from the developing world where

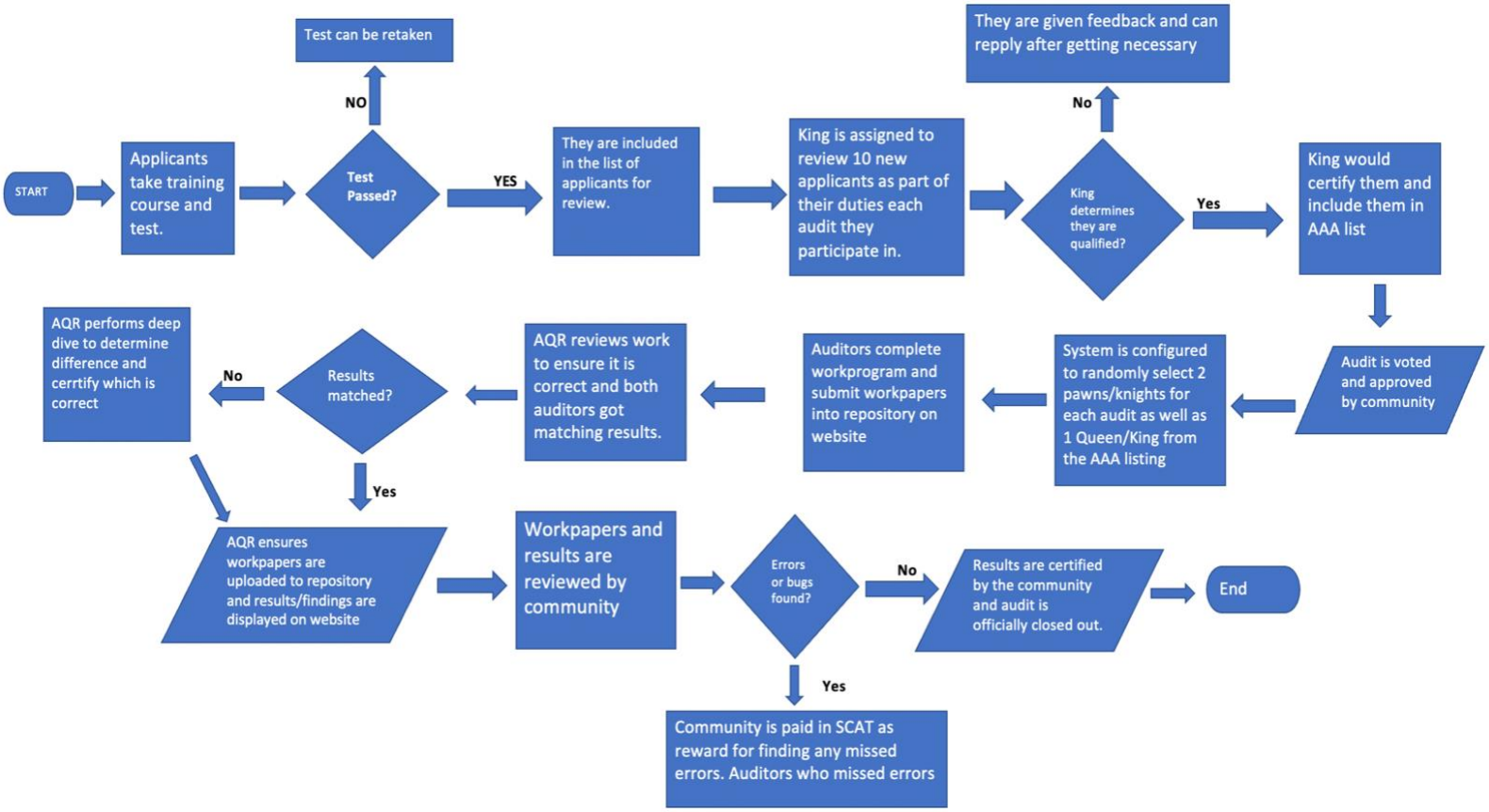
auditors are usually paid a fraction of what their western counterparts usually earn. In the spirit of Cardano, this project would like to empower audit professionals from all over the world with an opportunity to supplement their income, add to their resume, keep the Cardano community safe, and help build this new ecosystem.

Why Would people Want to Work on Behalf of SCATDAO?

We intend to provide generous compensation above industry standards to the members of our community who perform audits on our behalf. As mentioned, this compensation will not be adjusted depending on geographical location. An auditor working in the United States or Europe will earn the same amount as an auditor in Africa or Southeast Asia. As the pay will be generous for US standards, we hope it will be especially rewarding for people who come from emerging markets. SCATDAO is a global organization, and we want to tap into the vast amount of talent distributed throughout the globe.

SCATDAO is not meant to be a full-time job. We are seeking individuals who can perform our work program and would like to supplement their income with some rewarding part time work on a project-by-project basis. Auditors who work on our behalf will get some excellence experience to add to their resume, can work from anywhere they choose, never have to commute or come into an office, and can dress however they like and work on their own schedule. Combining this with the rewarding compensation, the better question is, why wouldn't someone want to audit for SCATDAO?

Process Flow Chart



Bug Exterminator Program

As we have been working through the process of developing our decentralized smart contract audit platform, we have determined that the final versions outlined here is a huge endeavor with many different part that can take years to fully implement. In order to start providing assurance over smart contracts sooner while building towards our finalized platform, we have decided to create a decentralized bug bounty program. We have made this decision as it can be built much sooner, provide assurance over smart contracts, and most of the features used in the bug bounty program will be used in our finalized audit program such as our token voting features as well as our decentralized treasury. We call it the Bug Exterminator.

Who Can be a Bug Exterminator?

Anyone can be a Bug Exterminator. There are no selection criteria, it is open to anyone who wants to spend time reviewing the code and receive payment for their findings. You simply need to fill out a registration form on our website that will create a username for yourself and an avatar or photo of yourself. You can remain anonymous for this role, we only need a username which you will utilize when submitting your bug reports for anything you find.

How is the Number of Bounties Determined?

The number of audits or bounties we can perform will always be a function of how much funds are in our treasury at any given time. We are still in the process of determining the total funding we will initially offer for each bounty (all bounties will have the same amount) and this decision will eventually be transitioned to the token holders. Determining the number of bounties that can be run each period will be a function of (total treasury funds – treasury reserves[1]) / bounty amount.

[1] Reserves would be a level that the treasury plans to maintain for any unforeseen expenses that may arise

How Are Projects Selected for Bounties?

This will run exactly like the process for our smart contract audits. There will be a window where anyone who holds our AUDIT token can propose a project they would like us to have a bug bounty for. This can be members from the community who care about a particular project as well as dev teams who are interested in running a bug bounty but may not be able to fund it themselves, as well as increase the visibility of their project. The window will be long enough that members can discuss and debate the options in our discord as well as invite different projects to speak and tell us about themselves if they are seeking to participate.

After the proposal window has closed, the voting window will open where all token holders will vote yes or no to any project during the round (similar to Project Catalyst). Each AUDIT token held will equal one vote, and it will take the total sum of yes votes, minus the total sum of no votes, and put all projects in order from most net yes votes to least. We will do as many as we have the funds for, starting with the highest voted project and working our way down.

How Does the Bug Review Process Work?

- Bug Exterminators will have a window to review the code and submit a report for anything that they find.
- They are required to submit 1 report per bug (cannot include multiple bugs in the same report.
- Payouts will be on a first come first serve basis. So if the same bug is submitted by multiple people, whoever submitted first will receive the payment.
- Bug Exterminators are allowed and encouraged to work as a team. They would simply register the team during the registration process same as they would an individual.
- There will be a standard template that they can use when submitting the form to ensure that they have provided all the necessary information.
- They will need to include clear instructions so that a reviewer can easily understand and replicate the issue that was found.
- Each exterminator will be required to self-designate the risk rating when submitting the form.
- Payment amounts will already be pre-determined for each risk rating and they will receive a payment of ADA as well as AUDIT tokens to give them a voice in our organization.

Risk Rating

We will be using the OWASP risk rating criteria and an excel sheet will be provided as part of the template which utilizes simple drop downs to determine the risk rating. They will be required to justify each selection choice they made in determining the risk rating (examples will be provided in the template). The risk ratings that the exterminator will be able to choose from are High, Medium. Low, and Non-Critical. Any submission that does not apply to the smart contract itself will be designated as non-critical. An example of the OWASP risk rating criteria is shown below.

Likelihood								
Threat agent factors					Vulnerability factors			
Skill level	Motive	Opportunity	Size		Ease of discovery	Ease of exploit	Awareness	Intrusion detection
4 - Advanced computer user	1 - Low or no reward	4 - Special access or resources required	5 - Partners		3 - Difficult	3 - Difficult	4 - Hidden	3 - Logged and reviewed
			Overall likelihood:	3.375	MEDIUM			

Technical Impact					Business Impact			
Loss of confidentiality	Loss of integrity	Loss of availability	Loss of accountability		Financial damage	Reputation damage	Non-compliance	Privacy violation
2 - Minimal non-sensitive data disclosed	0 -	0 -	9 - Completely anonymous		1 - Less than the cost to fix the vulnerability	1 - Minimal damage	0 -	5 - Hundreds of people
Overall technical impact:		2.750	LOW		Overall business impact:		1.750	LOW
			Overall impact:	2.250	LOW			

Overall Risk Severity = Likelihood x Impact				
Impact	HIGH	Medium	High	Critical
	MEDIUM	Low	Medium	High
	LOW	Note	Low	Medium
		LOW	MEDIUM	HIGH
	Likelihood			

Likelihood and Impact Levels	
0 to <3	LOW
3 to <6	MEDIUM
6 to 9	HIGH

Leaderboard

There will be a leaderboard on the website that lists out each Bug Exterminator along with how many bugs they have found and how much money they have collected. This is to bring awareness to the great people making a difference in our community. It also makes it a bit of a competition to encourage participants to find the most and be the best. We plan to have various awards and prizes periodically for the people at the top of the leaderboard.

Bug Evaluation Process

This is where things get trickier. We needed to develop a way to review the bug reports submitted and confirm which risk rating the bugs should ultimately fall under. This is fairly simple to implement if it is a centralized entity such as our Dev team performing the review. But the goal is to implement a decentralized program which requires us to get a bit creative and develop new methodologies to what is currently being done. We decided to use a variation of our decentralized audit platform that will require having a pool of qualified candidates who are available to review the bug reports for compensation.

How Are Evaluators Selected & Onboarded?

We will utilize a new process called the decentralized interview. Since the goal is to move towards decentralized audits, we do not want to have the decisions to onboard a judge be in the hands of the development team. Instead, we would like to have the entire process in the hands of the DAO where the organization is deciding whom they would like to onboard. There will be an application form on the website where the candidate can provide their credentials and experience which demonstrates that they have the competency to perform this role.

Applicants can apply anytime, and the DAO will hold a vote once per month to admit new judges into the organization. The voting will work like any other vote where 1 token = 1 vote. Any Evaluator will need to obtain a supermajority (66% of the vote) to be admitted. They will need to KYC in order to verify the information that they provided but after they are admitted into the evaluator pool, they can utilize a pseudonym if they prefer so that their reviews are not linked to their identity.
We expect that members in the Evaluator pool will also be participating in the Bug Bounties which is OK and encouraged, but you cannot be an Evaluator on a project that you have submitted bugs for.

Bug Report Review

Once an Evaluator has been approved by the DAO, they are added to a pool of available Evaluators. For each bounty program that is running, the system will be configured to automatically select one Evaluator at random and assign them to a program. This evaluator will be responsible for going through all bug reports submitted by Exterminators and assessing them. They will be required to identify the bug or vulnerability that was found and certify that it is a valid bug/vulnerability. They will also be required to review the risk assessment that the Exterminator provided and determine if it is correct or not. The evaluator will be required to write a commentary on why they agree with the assessment that the exterminator gave or justify why they believe it should be different and indicate the rating that it has been given.

The Evaluator will do this for all reports that were submitted and when they are done, they will be required to compile a summary report that shows all bug reports submitted (both valid and invalid) along with their justification for why it is valid or invalid and why it gets the risk rating they gave it.

Certification

After the Evaluator has compiled the summary report with all justifications, they will submit this report for certification. The certification process works as follows: 3 new evaluators are chosen from the Evaluator pool at random who will be responsible to review the summary report and certify the results of the Evaluator (i.e. certify which reports should not be paid, which reports should be paid, and the risk rating for each). All three will need to be unanimous for the results to be finalized. If they are not unanimous, there is a message board on the website where they can debate and post comments about why they feel a certain issue Is valid, invalid, or why the risk rating is incorrect. They will have an additional 5 days to debate and then the majority opinion will be certified (this is still being thought through and refined).

The certification process was designed to limit the power of any single Evaluator, to provide better results by requiring multiple people to concur on the results, and to prevent an Evaluator from colluding with an Exterminator (e.g. Judge is selected, tells their friend to submit several reports that they will just approve and split the money with each other). Since we are designing this system to be decentralized, there needs to be a process that keeps everyone accountable, acting in good faith, and able to work independently of any centralized oversight.

Summary Report

Once the results are certified, the system will notify the Evaluator. They will then compile a final report that only contains the valid bugs certified (descriptions, risk ratings, payouts, Exterminator who found them. This report is published on the website for all to see. After it is published, payments are sent to everyone. The payouts for low, medium, and high are already pre-determined. As long as the evaluator can confirm the issue and confirm what the risk rating should be, they can be queued up to receive payment which will be processed by the DAOs treasury.

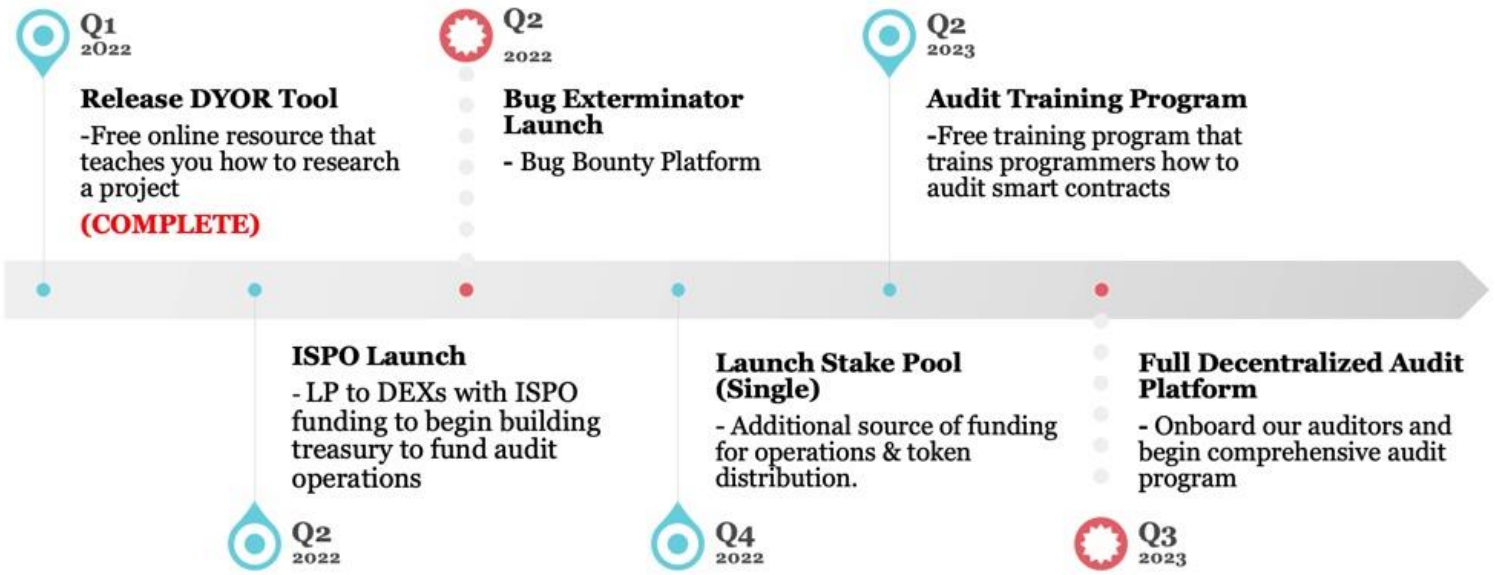
Benefits to Audit Program?

- Smart Contracts used for proposing and voting audit projects will also be utilized for proposing and selecting which bug bounty programs to run. This program will be a litmus test that allows us to refine our voting for when we get to our comprehensive audits
- The process of mainintaing a pool of Evaluators and assigning them for review tasks will operate similarly to the audit program. Using this in the bug bounty program will give us the opportunity to view it in action in the real world and make any refinements as necessary.
- Recruiting talented individuals to audit on our behalf is crucial in performing decentralized smart contract audits. We expect the bug bounty program to attract qualified candidates who may wish to learn our audit methodology and audit perform audits on behalf of our DAO.
- The final phase of our decentralized audits include a crowd-sourced review where any additional bugs found would impact the auditor’s pay and standing. This bug bounty platform will be utilized for those purposes.

Open Infrastructure

We will be funding bounty programs that are selected by the community on a regular basis. We also plan to open up the platform for any project that would like to launch a bug bounty program and fund it themselves. We will do this for several reasons. First is to help ensure a steady stream of income to people who wish to participate as Bug Exterminators and Evaluators. Second is we believe bug bounty programs are an effective way to gain assurance over a smart contract and would like to encourage as many projects to do this as possible by opening up our infrastructure.

Project Roadmap



How is it Funded

Liquidity Provider Fees

SCATDAO will never accept any money from any dApp to audit their projects, the funding will be generated entirely by the investments that the treasury has made into various DeFi projects to generate a return. Initially, the plan is to provide liquidity to Decentralized Exchanges as the sole source of income. Liquidity providers are given a percentage of the fees the DEX generates through its trades. This will accomplish our need to generate income for operations while also creating sufficient liquidity for people who would like to trade our token. A big issue with new tokens that limits their ability to grow is a lack of liquidity. By providing liquidity internally, we will ensure that people can buy and sell the token without creating wild price swings.

When providing liquidity, you need to do it in pairs, so half AUDIT and half ADA. The treasury will not be able to provide liquidity if it only holds AUDIT. Therefore, a sale to the general public will be necessary to generate the ADA to create the trading pair. We have 10% of all tokens reserved for the SCATDAO treasury which will be used to provide liquidity. During our ISPO, 15% of the supply will be distributed and we will earn rewards in ADA (this will give us ADA and AUDIT to create our trading pair). The income generated by these treasury investments will fund operations. An estimate of different levels of revenue based on trading volume is provided below.

Daily Trading Volume	50,000	100,000	500,000	1,000,000	5,000,000
DEX Fee	0.30%	0.30%	0.30%	0.30%	0.30%
% of Liquidity Provided[2]	100%	100%	80%	70%	60%
Daily Revenue	$ 150	$ 300	$ 1,200	$ 2,100	$ 9,000
Monthly Revenue	$ 4,500	$ 9,000	$ 36,000	$ 63,000	$ 270,000

Our AUDIT token will also be used to incentivize participation in all aspects of our DAO. We plan to utilize a combination of both ADA as well as our own token (AUDIT) when compensating for audit related services. This allows them to be rewarded with ADA as well as have a greater say in the direction of our DAO with governance tokens.

[2] Assumption is the more popular the coin becomes and the higher the total volume, the more people who would be providing Liquidity, so the smaller the % of the total LP for us.

Stake Pool

SCATDAO will be setting up a stake pool for three primary reasons. To assist and support Cardano's decentralization, to create an additional source of revenue to fund audit operations, and to distribute our tokens for free to the community. The first two points are fairly straightforward but would like to make it clear that this stake pool is owned and operated by the DAO, not the Dev team. All revenue generated from it goes directly into the treasury to fund our audits.

The last point is meant to be a way to distribute SCATDAO to people who support the project and get tokens into as many hands as possible. We do not want the DAO to be controlled by early investors with deep pockets who can afford to buy as much as possible and have a disproportionate say in our operations. We would like the entire Cardano community to be involved and have a say in what we do. Therefore, anyone who stakes to our stake pool will still receive their regular staking rewards in ADA, but will also receive a bonus of AUDIT tokens as well. This will not be the typical Stake Pool Offering where we keep the ADA and give you our token in return. We feel that the normal revenue we earn from operating the stake pool is enough reward and keeping all the ADA would be unfair to our supporters. Finally, we will limit ourselves to only a single stake pool to help encourage and promote decentralization within the Cardano ecosystem. If the pool becomes saturated, we will explore raising the fee.

With a fully saturated pool (64 Million ADA delegated) you can see a monthly revenue estimate below based on a 3% fee.

Assumptions:	
Fully Saturated Pool (ADA)	64,000,000
Standard Flat Fee (per Epoch)	340
Fee Percent	3%
Average Return	5%

Pool Reward per Month (ADA) =
(Total ADA in pool * Average Return * Fee Percent + (Flat Fee * 73[3])) / 12
(64,000,000 * 5% * 3% + (340 * 73)) / 12
= 10,068 ADA

[3] An epoch is 5 days. If 340 is the flat fee per epoch, then there would be 73 of these per year (365/5)

Tokenomics

Supply

We have minted 1 Billion AUDIT Tokens (asset1h2qa2evcnwpchh349pdxu3q6e8f4unulq2nzg2) and have it capped at that amount forever. No additional tokens can ever be minted. 1 Billion was chosen as it would allow for a lower price which the average investor could afford to participate in the DAO.

Stake Pool Rewards

SCATDAO cares about the Cardano community and wants everyone to be involved in keeping it safe regardless of how much money they have to invest. Therefore, 15% of the tokens will be distributed through our stake pool. There will be a stake pool fee charged in line with most other pools which will allow delegators to keep the vast majority of their ADA rewards and still earn tokens for us. We would also note that this allocation is large because we intend to distribute our tokens through the stake pool over an extended period of time. This is not the same concept as an ISPO which runs for a limited number of epochs. We will utilize the stake pool for the foreseeable future to supplement our operations and therefore want to have sufficient rewards for our delegators to give them more of a voice in how our DAO is run.

Treasury

Treasury is allocated 10% of token supply which will be used to provide liquidity to DEXs and fund the treasury.

Community Airdrop

To encourage as much participation as possible in our DAO, we plan to have a community-wide airdrop that will grant free tokens to everyone who is delegating to a stake pool. This is for ANY stake pool, not just for those who delegate with us. 5% of the total supply is being reserved for the community airdrop with allocations going community-wide, to our discord members, and to our moderators.

Public Seed Sale

1% of the total supply is being sold in a public pre-sale to raise funds to complete our first version of the platform. We will be forever grateful to Project Catalyst and everyone who has voted to fund us and get this project started. There are considerable expenses that we still have in order to complete this project, and we feel that selling a percentage of our tokens to raise these funds is a fairer approach than relying on Catalyst to foot the entire bill. Catalyst is fantastic for getting projects kicked off and creating an MVP or proof of concept, but by continually requesting funds each round, that limits the number of other projects that will get their shot at making their vision a reality. The funds raised here will be used to begin paying the headcount we currently have who have been working for free, pay marketing expenses, fund our ISPO, and any other overhead.

Participation Rewards

30% of the total supply will be held to reward community participation in reviewing audit work, finding bugs/issues, performing research, or other activities that support the work of our DAO.

Future Hires

As mentioned, we will be working on multiple versions of the platform. Tokens are held for future hires who will be needed to work on versions 2 and beyond. These tokens are not meant for any current members of the dev team. The DAO will determine the additional tasks it would like to complete and reward work for those tasks from this allocation.

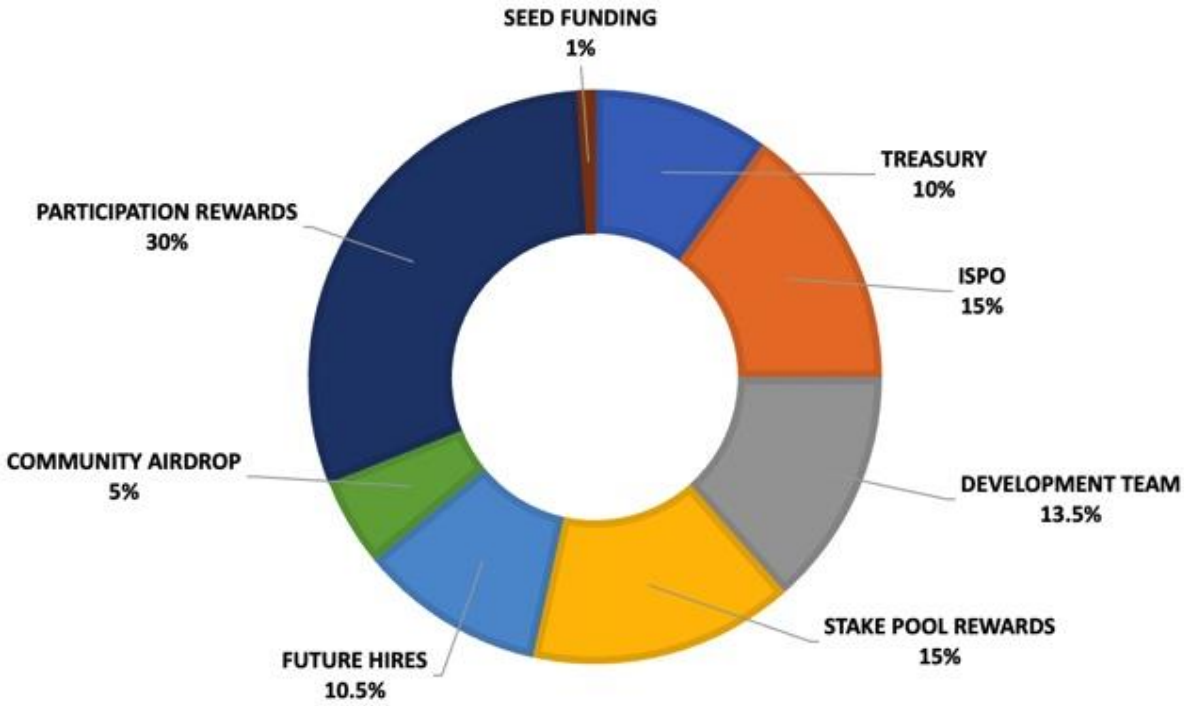
Development Team

The Development Team has been allocated 13.5% of the total supply. Tokens for Dev Team will be vested over a 3-year period, with the exception of ADAO, which will receive their allocation at the Initial DEX Offering to hold in their treasury. The tokens will be unlocked according to the following schedule:

Period	Tokens Unlocked
Initial DEX Offering	25%
1 Year Later	25%
1 Year Later	25%
1 Year Later	25%

3 Years Total	100%

TOKEN ALLOCATION



Token Allocation	
TREASURY	10%
ISPO	15%
DEVELOPMENT TEAM	13.5%
STAKE POOL REWARDS	15%
FUTURE HIRES	10.5%
COMMUNITY AIRDROP	5%
PARTICIPATION REWARDS	30%
SEED FUNDING	1%
TOTAL	100%

A Source of Trust for Cardano

One of the primary goals for SCATDAO is to be a trusted source where people go to begin their research on the Cardano Ecosystem. All projects that have been audited by the SCATDAO will be listed on the website along with the rating based on the audit that was performed. The projects listed here will be the ones that the Cardano community has chosen because they are passionate about it and feel it is worthwhile. This combined with the fact that they have been audited and vetted and determined to be safe for investment means being listed on the SCATDAO website will provide a great deal of credibility for the applications.

It is a similar concept to having a Billboard top 100 where people looking for new music go to see what's popular at the time. But instead of music, it would be investors looking for projects to invest in, users looking for cool new applications to explore, or newcomers trying to learn more about what is available on Cardano. They would get unbiased information about them, assurance that the code is free of any bugs or malicious exploits, and an idea of the team that produced it and their credibility. As we have already seen on Ethereum and Binance Smart Chain, there are plenty of developers who are releasing products with bad intentions, meant to steal their investors money. Each time this happens, it hurts the credibility of those chains as well as blockchain in general. We all want to try and limit the likelihood of this happening on Cardano so that investors and users can trust what they are putting their money into and invest and use new products with confidence. Providing trust to the public is why audit exists in the first place and SCATDAO takes that to the next level by removing and possible conflicts of interest

What if Someone Doesn't Want to be Audited by Us

Traditionally, an applications Development Team will hire an auditor and grant them access to their code and anything else required to perform their job. Without this access, the auditors would have nothing to review. With SCATDAO, we have changed the paradigm from products seeking to be audited to an audit collective choosing what they would like assurance over. Because of this, SCATDAO would not have the same implied access to code and everything else that comes from being explicitly hired by someone. This presents a potential problem if the project chosen for audit does not want us to audit them and does not want to share their code with us.

There are some mitigating factors for this risk that lead us to believe it will not be a problem. With the blockchain revolution, many developers have chosen to build their projects open source, to allow everyone to learn from one another and advance the industry at a faster pace. We greatly admire all teams who chose to go this route, and SCATDAO follows the same mentality by releasing all of our work and methodology freely as well. We expect this trend to continue and for a majority of products to have their code open to the public and available for us to review.

In addition, we expect inclusion in the list of applications covered by SCATDAO to be a point of pride for most Dev Teams. Applications just starting up as well as established ones would likely welcome the added exposure and confidence that would come from being audited by the SCATDAO, so even if a project was not open source, we would expect many of them to work with us to be able to perform the audit.

At the end of the day, being provided with a free comprehensive audit to give faith to the investing public is an easy sell. If for any reason an applications team did not want to be audited, that would be their decision and we would respect it. We would update the website to reflect that we could not cover them in our audit and the next highest voted project would take its place. As time passes and the SCATDAO becomes more well known, we expect that a project passing on this opportunity would be a minority.

A Multi–Chain Future

SCATDAO was created for Cardano, funded by project Catalyst, and will always have a strong connection and history with this blockchain. We are committed to this ecosystem and will always have a deep respect and admiration for it. We also feel that there will be many successful blockchains in the future that can and should all coexist with each other. We truly believe that this audit model is superior to the traditional model and that it should be adopted and implemented throughout the industry. Therefore in the future, SCATDAO token holders will have the option to suggest other blockchains to expand to and vote to determine if that is what the community would like.

Reinventing Other Industries

We would like to point out that the actual audit work performed is the similar whether it is being done by a centralized entity or by SCATDAO. We hope to create standardized methods that will be adopted within the industry, but most audits will follow a similar approach. The true difference is how the projects are selected and how they are financed. This means that this model can be imitated and followed for practically every other professional service that exists. We hope that SCATDAO leads this revolution to change the way we think about and form Businesses going forward.

Value Proposition

Q: What can you do with the Token?

A: Owning the token gives the holder the right to submit proposals or suggestions that the community can vote on, vote on these proposals, and vote on which projects are selected for audit. As control is transitioned away the Dev Team, the token will be used to govern all aspects of the DAO.

Q: Why would people want to buy it?

A: One of the primary goals for SCATDAO is to be a trusted source where people go to begin their research on the Cardano Ecosystem. Having a project audited and listed on the SCATDAO website will provide a lot of credibility and exposure for various dApps and projects and therefore be extremely desirable. This will create an incentive for developers to buy SCATDAO in order to propose and vote on the projects for audit. The average investor will also realize the positive exposure to projects being covered by SCATDAO and will want to have the projects they have invested in covered as well. They will need to buy and own AUDIT to be able to propose and vote for those as well. There will also be people who believe in the work we are doing and wish to buy the token to support the project and help keep the Cardano ecosystem safe.

Q: Does it solve a problem?

A: Yes, a big one. The conflict of interest of audit firms accepting compensation directly from the client they are auditing has always seemed like a ticking time bomb. Anyone that has been in the industry has had to deal with, “How am I going to explain this to my client.” We have seen Big 4 firms hiring the regulatory bodies that audit them, in order to try to go light on all of their other clients. It is a matter of time until the next Enron scenario plays out. It is not the Big 4 firms fault. At the end of the day, they have to keep the lights on. Instead, it is a flawed industry as a whole. At SCATDAO, we hope to change the conflict of interest and give audit recommendations based on merit without the worry of whether our client will rehire us. This is compounded by the current situation where there are hundreds of unknown companies performing smart contract audits without much history or reputation behind it. Someone could get an audit for their project, but if the company doing the audit is completely unknown, it doesn’t provide much assurance. We are finally realizing the benefits of decentralization, so continuing to rely on centralized services for audits meant to keep us safe no longer makes sense. A new model is needed and SCATDAO provides it.

Q: What if we need to make changes or improvements in the future?

A: Much like Cardano, SCATDAO will have governance built in to allow for changes and updates as required. Token holders can propose changes that can be voted on by the community and then implemented. The world is constantly changing and having organizations that can change with it is crucial for continued success.

Final Thoughts

This Whitepaper outlines our general plans and methodology which we are currently tirelessly working to implement. As things progress, we reserve the right to make changes to the process as we work through it. Any changes will be updated to the whitepaper immediately and a new version will be issued. In addition, SCATDAO is designed to grow and change with time. We are implementing a methodology that we believe makes sense to begin with but expect the community will want to suggest various improvements that can be voted on and implemented. SCATDAO will draw on the relevant experiences of our community and together we will create the greatest audit organization the world has ever seen.

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The SCATDAO project is owned and operated in full by Smart Contract Audit Token DAO LLC, Registered in Wyoming under company number 2021-001033249. Registered office in: 30 N Gould St STE R, Sheridan, WY 82801 USA. Smart Contract Audit Token DAO LLC can be reached at any time by emailing SCATDAO@gmail.com.