



# Pentonium

## CASE STUDY

*\*Note: This is just one scenario that is being discussed. There are many more*

User "A" wants to start a business in Blockchain. User "A" needs several services like solidity development, front-end development, community management, smart contract auditing, social media reach, and many more. All of the services might not be available locally so User "A" starts to search people beyond any boundaries. User "A" individually contacts Users "B", "C", "D", and "E" for solidity development, community management, smart contract auditing, and social media reach respectively.

### Scenario 1

On completion of the project, everyone gets what they want. User "A" gets the fully functional business ready and Users "B", "C", "D", and "E" get what they were promised. A win-win situation for all.

*But life is not so easy. This system completely works on trust.*

### Scenario 2

On completion of the project, User "A" gets what he wants and then refuses to pay what was promised to other users

### Scenario 3

User "A" has already paid certain amounts to others and they refuse to do the job.

In cases 2 and 3, there is a huge loss of time, effort, and money which should be eliminated.

Pentonium has taken a step to create a trustless environment for both service providers and clients.

## Introduction

Pentonium is an ecosystem consisting of a **freelance platform, a platform for the workforce, and swap**. A freelance platform enables service providers to list their skills and clients to get their job done with complete data security and assured by transparent governance.

**Service providers** are people who offer their skills in return for money. E.g: Solidity Development, UI Development e.t.c

**Clients** are people who need a job to be done in a specific time frame.

# What's wrong?

Data such as the Service Provider's rating, number of orders e.t.c can be **manipulated** on a centralized system. There are also services running under the hood where you can offer money to improve a Service Provider's rating and other things, there are also services for **selling old accounts** of Service Providers. Clients are aware that such manipulation would always have trust issues with a Service Provider as well as with the platform.

Due to high fees over bank transactions, centralized freelance platforms are bound to set **minimum withdrawal** on their platform. From a Service Provider's view, this is not very encouraging for a new account. The hustle to become a Seller / Service Provider of such a marketplace requires them to go through **long forms and wait** to get approval for it.

In the case of a dispute, centralized freelancing platforms will, on most occasions, side with the buyer. It is not at all surprising, since buyers are ultimately funding the platform. A **biased platform** can not last for long, discouraging Service Provider would in long term reduce the quality of the services provided over the platform.

## Proposal

A decentralized freelance platform ( marketplace ) with autonomous dispute resolution and end-to-end encrypted chat.

Using **IPFS** as a storage layer to store data regarding a job or to store files shared between the Client and the Service Provider on completion of a job. This reduces the cost to store data over heavy servers and increases the scalability of the entire system.

**SkyDB** offers an interesting api to easily deploy over the front-end making it a good choice to create an end-to-end encrypted chat mechanism.

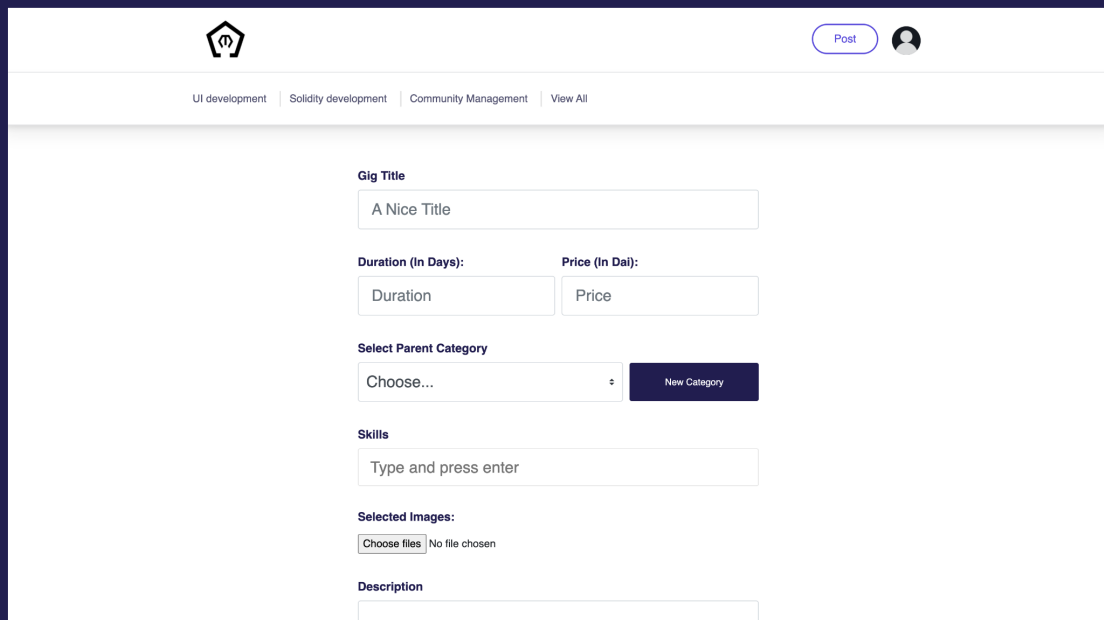
Smart Contracts are the bridge between the Client and the Service Provider, storing the IPFS **hash of the job details**, private and public **keys for the chat** also act as **escrow** to store funds till the completion of the job.

Dispute resolution is a pain point of Service Providers hence need to be dealt with transparency. We propose a democratic way in which the Community votes to select people who would resolve the dispute ( We call them the Marshal ). When a dispute arises between a Client and a Service Provider, complete details of the job would be made available to an odd number of Marshals who will vote to decide the result of the dispute between those two parties.

# Does it help?

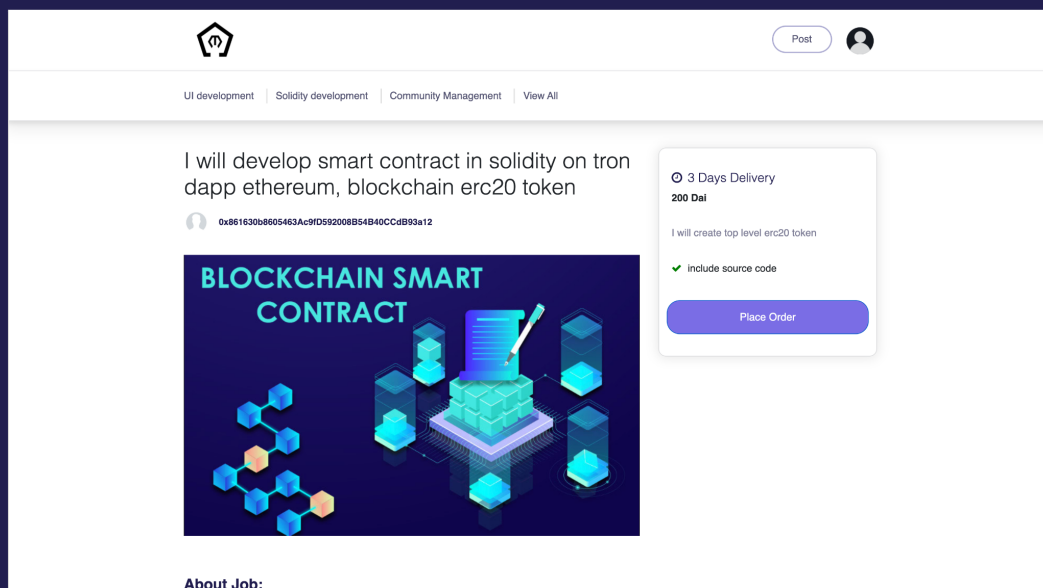
Being a **DApp** reduces steps to get an action done, it applies to a freelance platform as well. Clients can just connect their Metamask wallet and Place an Order with no extra steps involved for login/register.

No permission or going through long forms to sell your skill over such a marketplace is needed, makes Service Provider get onboard easy and quick.



The screenshot shows a web interface for posting a gig. At the top, there's a navigation bar with a logo, a 'Post' button, and a user profile icon. Below the navigation bar, there are tabs for 'UI development', 'Solidity development', 'Community Management', and 'View All'. The main form area includes a 'Gig Title' input field with the placeholder 'A Nice Title'. Below this are two input fields for 'Duration (In Days):' and 'Price (In Dai):', both with placeholder text 'Duration' and 'Price' respectively. A 'Select Parent Category' dropdown menu is set to 'Choose...' with a 'New Category' button next to it. Below the category selection is a 'Skills' input field with the placeholder 'Type and press enter'. Underneath is a 'Selected Images:' section with a 'Choose files' button and the text 'No file chosen'. At the bottom is a 'Description' input field.

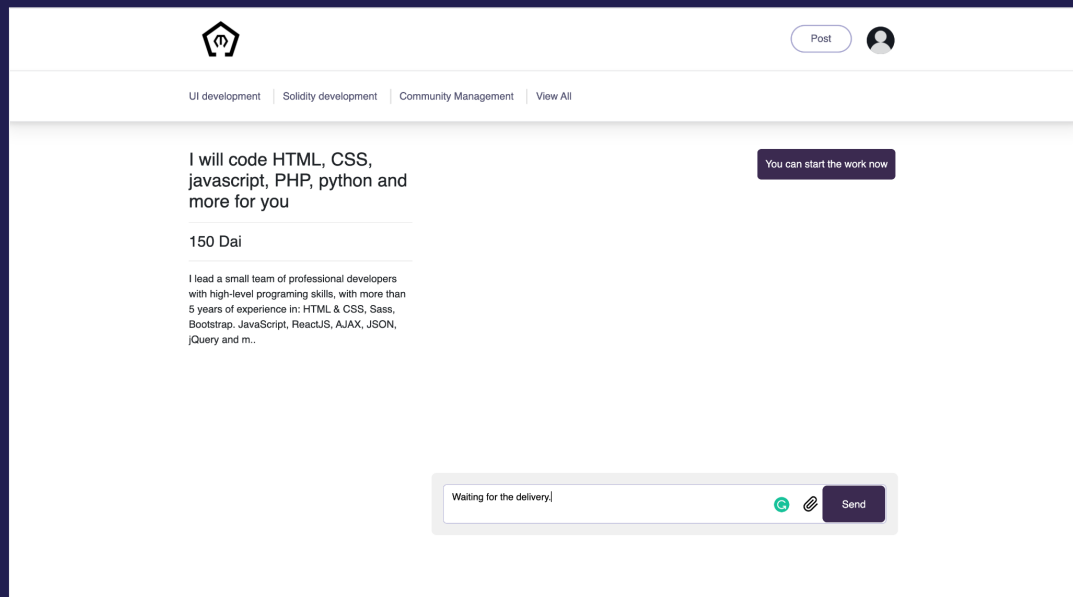
SERVICE PROVIDER POSTING AN OFFER ( JOB DETAILS)



The screenshot shows a client's view of a job listing. The job title is 'I will develop smart contract in solidity on tron dapp ethereum, blockchain erc20 token'. Below the title is the provider's profile picture and a public key: '0x861630b8605463Ac9fD592008B54B40CCd893a12'. The job description includes a large image with the text 'BLOCKCHAIN SMART CONTRACT' and a diagram of a blockchain network. To the right of the job details is a summary box showing '3 Days Delivery', '200 Dai', and a checkbox for 'I will create top level erc20 token' which is checked. Below this is a 'Place Order' button. At the bottom of the page, there is an 'About Job:' section.

CLIENT PLACING AN ORDER

As Smart Contract holds funds during an order until its completion and gets transferred to the Service Provider's account on completion removing the barrier of minimum withdrawal for Service Provider. The smart contract also increases transparency and security as it holds the Private Key of both the parties but only allows Users to see each other's Public Key makes the Chat secure.



A PREVIEW OF THE CHAT

Clients looking to get their job done without trusting Service Provider with their funds would get interested in such a platform with privacy of their data shared during the chat/order details.

Autonomous dispute resolution creates trust over the platform, peace of mind for both parties while taking or placing an order. Onboarding new users in a trust-less app is much easier than creating trust before onboarding.

## Private Offer

When a Service Provider posts an offer, the platform allows him to create a private offer for a specific address, for two major use cases.

- There are instances where a posted offer does not fit the Client's requirement and he would need some adjustment for which both parties might re-think about the costing of such contact and would like a **custom offer** for it to be executed.
- As compared to the current situation most freelance deals are happening through Telegram Chats and have made scamming common. Private Offer allows Service Provider **share a link to this private offer** which Client can pay to and get the delivery through Pentonium. This opens a new window to capture micro payments for small services.

# Sponsored Job Posts

Service providers have an open contract to run ads of their specific job posts over the platform. Every Category Page has a sticky section for such sponsored posts. This helps Service providers to reach out to maximum Clients. Getting a Job Post sponsored is very easy and transparent. Service Providers need to submit their desired amount of PTM token to the contract for that day they want that to run in. The weightage of the Job post is calculated via the amount of PTM submitted for that day and the time left to start a new day. Minimum amount to post a Sponsored Job Post is **100 PTM**, this makes it cheap as well as competitive between the Service Provider to acquire first position of the Sponsored Job. The PTM tokens collected through this pipeline have a locking period of 24H and then can be withdrawn.

## Order

Placing an order is simple and is like any other platform but what goes through the process is what makes it interesting to know. Whenever an order is placed, it takes the amount of order needed in **Dai** from the Client's wallet and locks it into the escrow smart contract. Once the Service Provider approves the order this triggers **5% of the Dai to get converted to PTM** and stay locked in the escrow contract until the order is delivered. Once the order is delivered, 5% of the fee that is in PTM now goes to Pentonium's wallet while the rest of the fund gets transferred to the Service Provider. This creates a passive buyer that would exist as long as the orders came in, also creates a **locking period** for the token until the order gets delivered.

## Marshal

Marshals are an important part of the platform, they spend time resolving the dispute to make the platform running without any issue. In return for that, a **Marshal earns a major portion of the dispute fee** submitted by both the parties ( Client and Service Provider ). The winning party get's his dispute fee back after the judgement.

To become a Marshal, one needs a minimum of **1,000 PTM** ( as of now ) **locked** over the Marshal vault contract, write a brief note on how much time he can allot to the work as well as what are his expertise in. Once submitted, their entry appears over for voting. Any PTM holder with more than **10,000 PTM** can vote for or against the Marshal to be selected. Once the Marshal is selected, he will get access to the dashboard through which he can resolve disputes. Every new dispute will appear on his dashboard to get evaluated in time. A Marshal can only evaluate those orders which are equivalent or less than the value of Marshal's locked PTM. Marshal's will need to increase their PTM locking in order to increase the valuation of the order he needs to evaluate. **The value of the order is directly proportional to the dispute fee a Marshal can collect.**

80% of Dispute fee goes directly to the Vault while the Marshal get's **Vault token**. Every deposit to the Vault mints Vault token to the Marshal's address, while on resolving a dispute also provides Marshal with Vault token and increasing their PTM holding over the Vault.

Marshal can also get **checked** through a different structure, an order might get **re-evaluated** in case of dissatisfaction of either party, in that case, if the previous evaluation doesn't match with the current one, Marshals engaged in previous evaluation with a different decision will be charged with a penalty collectively to **reimburse** the current dispute evaluation fee. Which will decrease their PTM stake hence

will force them to evaluate orders carefully. This becomes possible as applying a **hold on dispute fee for 24 hours** to give users a chance to apply for re-evaluation. This structure helps rank a Marshal as he grows with good decisions over the time while loses control over big orders in case of wrong decisions.

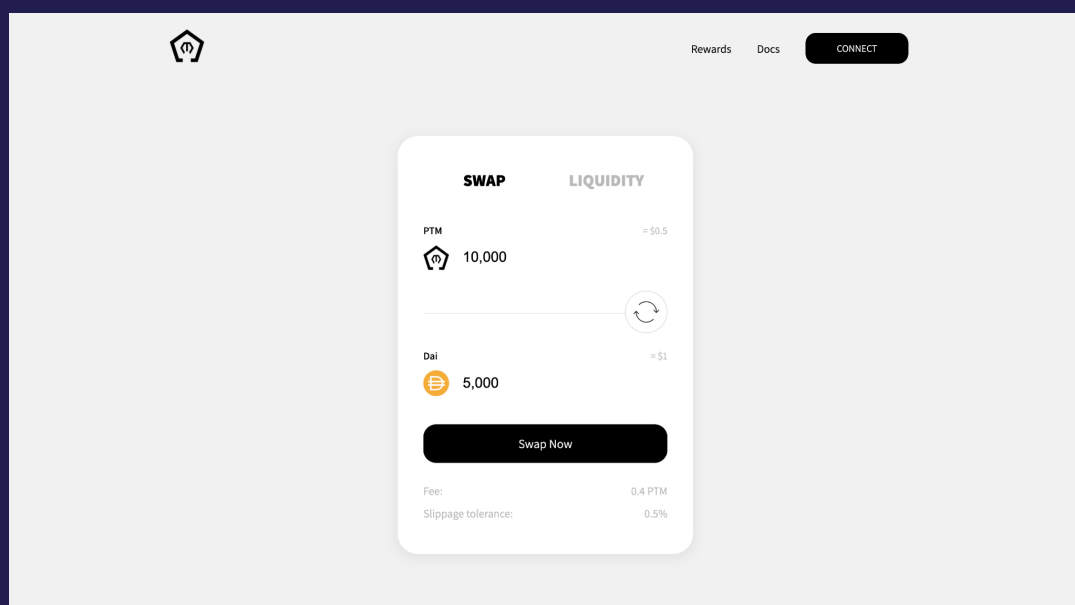
## Other Products

Apart from the freelance platform Pentonium is working on other products as well to create an ecosystem, impacting a much bigger market.

## Swap

Swap or AMM is a type of decentralized exchange (DEX) protocol that relies on a mathematical formula to price assets. Instead of using an order book like a traditional exchange, assets are priced according to a pricing algorithm.

Pentonium is working on a Swap to facilitate internal exchanges required by the PTM token to sustain while an order is placed.



PREVIEW OF THE SWAP

## Platform for Workforce

Pentonium has figured out the same trust issue that is faced on a freelance platform is also faced between employee and company on a remote job. Even being a legal entity, recruiting people around the globe could be sometimes difficult to trust, if the payment is through crypto (the easiest way to pay, borderless).

Pentonium suggests the same structure used by freelance platforms to resolve trust issues to be used between employee and company.

# PTM Token

Total Supply	100,000,000 PTM
Contract Address	0x068d45b086f5b8dffe9a87cb151fce5a36ac04b0
Network	BSC
Decimals	18
Ticker	PTM

PTM tokens are used throughout each of Pentonium's products.

- Freelance platform charges a **5% fee in PTM** on each order completion which is locked from the day of order till the delivery.
- Service Providers can run ad with a minimum of **100 PTM** for a day
- In case of dispute, both parties pay a dispute fee in PTM which is **1% of the order**.
- Marshals are required to lock a minimum of **1,000 PTM** or more to earn a dispute fee.
- To become a Marshal, one needs to go through voting, the community needs a minimum of **10,000 PTM** to vote in or against a Marshal.
- Pentonium creates staking pools, which require **PTM to be locked** over a period of time, to earn rewards

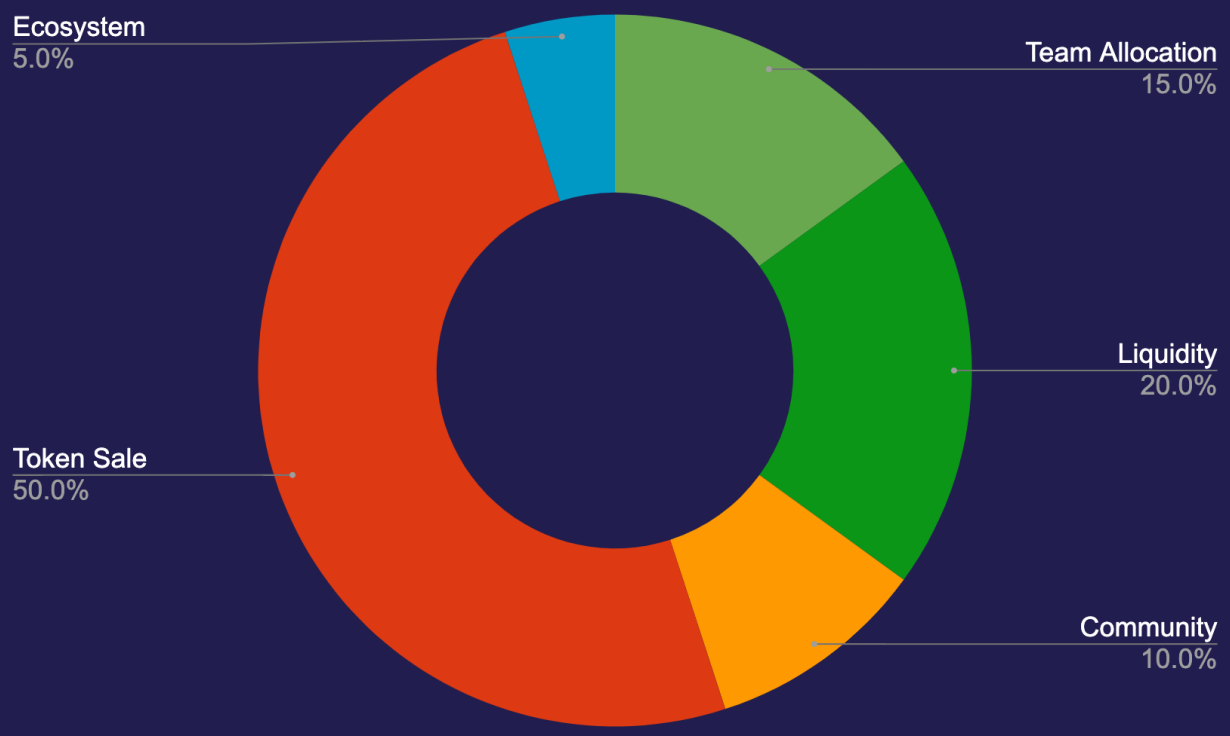
## Liquidity

Pentonium has plans to incentivise liquidity providers via several campaigns around it.

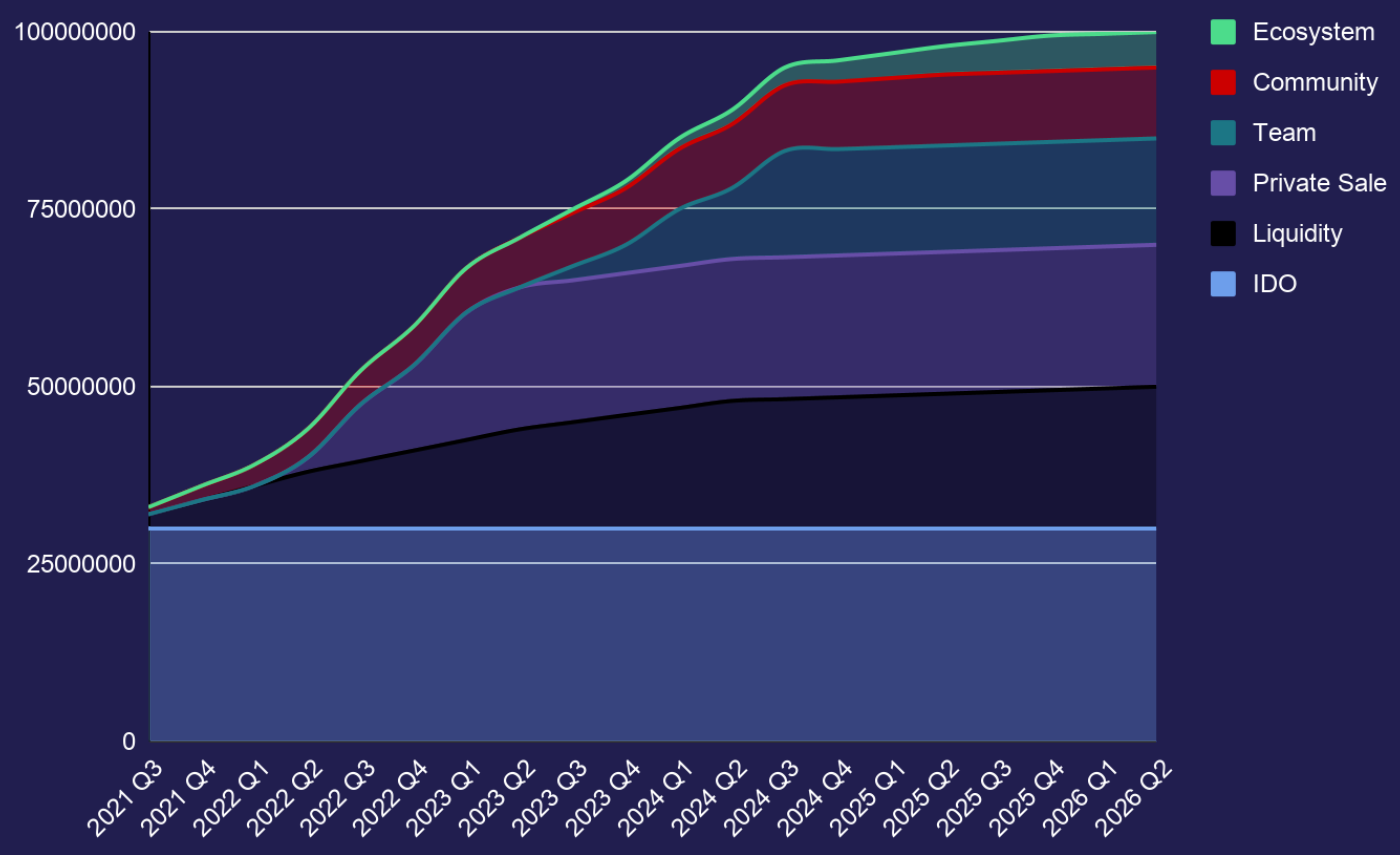
PTM staking would allow PTM holders to stake just their PTM token to provide liquidity and avail half the yield, this will be made possible as Pentonium will provide the required fund against the PTM to provide liquidity. This will be for a limited amount of PTM tokens and will expand as we go further.

Users can stake pair also to provide full liquidity to the swap, availing the full yield. Furthermore, **1% sale of PTM** from the Swap will also go to this campaign and will be distributed among those who have locked their liquidity for three months.

# Token Distribution



# Token Distribution Timeline





# Competitors

## **Ethlance**

Ethlance is a first of its kind job market platform, built entirely on blockchain and using only cryptocurrency for payments. There is no dispute resolution layer or chat to handle the requirements throughout the contract.

## **AnyTask**

AnyTask is a centralised freelance platform based on Electronium that allows users to enter an unbanked economy. The platform is not decentralised and doesn't allow sharing a link for a private offer.

# Thank You!

Website	<a href="https://pentonium.com/">https://pentonium.com/</a>
Github	<a href="https://github.com/pentonium">https://github.com/pentonium</a>
Telegram	<a href="https://t.me/pentonium">https://t.me/pentonium</a>
Medium	<a href="https://pentonium.medium.com/">https://pentonium.medium.com/</a>
MVP	<a href="https://beta.pentonium.com/">https://beta.pentonium.com/</a>