**ICO Overview**

The Odin ICO will be used in the funding and development of Odin Investment Wallet, along with contributing to the initial deposits of the portfolios sold in the wallet

The ICO aims to raise a total of 8 million USD over the period from 1th April 2018 (00:00:00 GMT +9) to 30th April (23:59:59 GMT +9). A total 34,625,000 tokens will be distributed for this phase of the ICO out of a total of 138,216,668 tokens. The remainder of the tokens will be used for future crowdsales and a small portion will be held by the holding company.

**ICO Specifications**

1. A total of 34,625,000 tokens will be sold in the ICO
2. Any investor can invest in the ICO up to a cap of 3 ether
3. If the investor is KYC approved, they will be allowed to contribute higher amounts with no cap
4. If an investor who is not KYC approved sends an amount greater than 3 ether, their ethereum address will be issued only 3 ether worth of tokens, and the remaining ether amount will be refunded by the smart contract
5. In case of any emergencies or irregularities, the ICO can be paused/unpaused or stopped. In case the ICO was force stopped, all funds in the contract will be moved from the destination wallet address to a refund contract address, and investors will be allowed to withdraw their contributions by invoking this contract and calling the respective method
6. The price per token is updated via the smart contract to match live values of ethereum in USD and also the planned pricing scheme of the ICO

**Odin Platform Overview**

The Odin Investment Wallet is a product that BTM is developing for our client in Singapore. It is a platform which simplifies and eases the process of investing into [cryptocurrency](https://www.cryptocoinsnews.com/cryptocurrency/). Its initial version will be a mobile app and would aim to maintain three portfolios of cryptocurrencies for three different risk profiles, namely Low, Medium and High Risk portfolios.

The portfolios maintained are called “Low Risk”, “Medium Risk” and “High Risk”, and will be issued in the form of individual units priced at a certain price per hour, depending on that value of underlying assets. The price of each individual portfolio is recalculated at the end of every hour to match the price of individual cryptocurrencies inside the portfolios. A user can own multiple portfolios and will be allowed to buy and sell his portfolio units at any point of time.

A key feature that the client wishes to market in the product is ‘Spare Change Investments’, which allows the excess change in a transaction, to be invested into one or more of the above portfolios depending on his risk setting. Spare Change will accumulate and would automatically get invested when a threshold amount is reached (say $50) or at the end of every month.

To give an example of a scenario:  
“*Paul uses the Odin Investment wallet and sets his risk profile to invest 50% of his spare change to the Low Risk Portfolio, 30% to Medium Risk Portfolio and 20% in the High Risk Portfolio.   
Paul goes to the Starbucks to purchase a coffee with $2.50. His debit card is charged at $2.50, and his Odin app would indicate that a spare change of $0.50 has accumulated to his spare change due for investment. He makes a number of similar transactions, and when his accrued spare change due hits the $50 amount, his debit card is only then charged.  
With his current setting, $25 out of $50 that was charged, gets invested in the low risk portfolio, $15 to the medium risk portfolio and $10 to the high risk portfolio.*”

In addition to the spare change, the app would allow investments to be made in lump sum at any point of time. The wallet user can always choose to buy some units of a portfolio with his debit/credit card (or other payment channels). The payment due would be calculated depending on the amount he wishes to invest, and the hourly price of his chosen portfolios.

The wallet user can sell all or a certain number of units of any of his portfolios at any point of time. When the wallet user places a sell order, the total amount that is due for withdrawal will be calculated for him (depending on the hourly price of the portfolios) and would be displayed to him for confirmation. After accepting the confirmation, a new withdrawal ticket will be issued for crediting the quoted amount to his bank account.

And last but not the least, the app allows the tracking of a wallet user’s portfolio valuation and performance. It displays the price history of each of the portfolios in graphs and charts, the current composition of each of the portfolios as well a user’s investment or transaction history.

**Functional Specifications**

1. **OdinCoinSale.sol - The Crowdsale Contract**

The contract responsible for distributing tokens through an ICO. Responsible for performing KYC checks on investors, collecting investor funds in ethereum, sending out tokens to the investors and forwarding the raised funds to the multisig address of the ICO owner (client).

The funding goal for this ICO is to raise a total of 8 million USD over the period from 8th January 2018 (00:00:00 GMT +1) to 28th January 2018 (23:59:59 GMT +1)

A total of 34625000 tokens will be distributed for this phase of the crowdsale

**Features**

 1. Any investor can invest in the ICO upto a cap of 3 ether

 2. If the investor is KYC approved, they can send as high an amount as they want

 3. If an investor who is not KYC approved sends an ether amount greater than 3 ether, then 3 ethers worth of tokens will be issued to him, and the remaining ether amount will be refunded

 4. The ICO can paused/un-paused in case of any major technical problems. Any ether sent to the contract address during this phase will be refunded to the investor.

 5. The ICO can be force stopped in the case of an emergency. This would result in any future funds send to the ICO contract to be refunded. A funded refund contract address would then be made available to investors, who could then invoke the withdraw method in this contract to withdraw their contributions in ether. Detailed instruction will be sent out in case of such an incident

 6. The price per token is hourly updated to match live values of Ethereum in USD and also the planned pricing scheme of the token sale which will be provided on the website (<http://odintoken.io/>)

1. **OdinCoinToken.sol: Token Contract**

A standard ERC-20 compliant token contract

**Features**

 1. Token Contract which issues 138,216,668 Odin Token.

1. **RefundManager.sol**

The contract used to manage the refund process in case the ICO had to be stopped in the event of an emergency.

**Features**

 1. The RefundManager contract is responsible for issuing refunds in the case of a force stopped ICO.

 2. The ICO is said to have failed when the EmergencyStop method is called.

 3. All balances from the destination multisig address would be transferred to the RefundManager Contract which then refunds users according to their ether contribution made. Users would invoke the withdraw method from their own wallets (myetherwallet or others) to retrieve their refunds.

 4. Clear instruction would be given out incase of a force stop of the ICO

**Contract Deployment Information**

1. Install and instantiate truffle development environment
2. Import or place code in respective folder
3. Unlock primary ethereum account used for deployment
4. Compile contract: truffle compile
5. Deploy contract: truffle migrate –reset
6. Open console: truffle console
7. Declare contract objects

OdinCoin.deployed().then(function(instance){token=instance})

OdinCoinSale.deployed().then(function(instance){sale=instance})

RefundManager.deployed().then(function(instance){refund=instance})

1. Approve crowdsale contract to spend required number tokens on behalf of the token contract

token.approve(web3.eth.accounts[0],100000000)

token.approve(sale.address,100000000)

1. Verify approval

token.allowance(web3.eth.accounts[0],sale.address)

1. Ether can be sent to: sale.address