

## Project Overview

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### Project name

Groundhog

### Team members

Scott Burke (CEO)

Andrew Redden (CTO)

Robert Moore (Full-stack developer)

Yashar Asheri (Front-end developer)

### What project are you building

Groundhog is a suite of tools to power the crypto subscription economy.

### Why did you decide to build it

We were building a previous product which accepted monthly subscription payments from users in crypto, and we realized there was no good way to make or accept recurring, pre-authorized subscription payments in Ethereum. We built a proof of concept at ETHDenver 2018, renamed to Groundhog and pivoted to focus entirely on this huge opportunity. We decided to build our multi-signature smart wallet on top of the new Gnosis Safe due to its security and state-of-the-art contract wallet functionality.

### How long will it take

6 months

### How much funding are you requesting

\$100,000

## How did you hear about the GECO

We build on top of the Gnosis ecosystem and heard about GECO through Twitter and Gnosis team members.

## Your Proposal

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### Project description

#### Overall goal

- Enable robust, secure, magical, friction-free recurring subscription payments in the Ethereum ecosystem with Gnosis Safe architecture at the core

#### Future outlook

- Groundhog consists of a payment gateway, checkout flow and API, on-chain Groundhog wallet and off-chain services powered by the Gnosis Safe stack, and web and iOS apps to interact with your Groundhog wallet, and authorize and manage subscriptions. Merchants have a portal to access and manage their wallet, earnings, statistics and subscriptions.
- Groundhog can augment and/or replace credit card and ACH payments for subscription services.
- The checkout experience is a familiar e-commerce checkout flow.
- Merchants can interface directly with our API, or if they use a platform which we have a plugin for, they can simply install the plugin.
- Groundhog will help bring the subscription economy to crypto and blockchain projects - providing the tools to build key recurring revenue streams to enable profitable and sustainable companies.
- We believe that not only will Groundhog be successful, but it will also be a boon to the entire ecosystem.
- Groundhog is a showcase of Gnosis Safe technology.

## Features



## Groundhog ecosystem overview

This is an overview of the lifecycle of a subscription payment through Groundhog once the customer enters a checkout flow on a merchant's web site via mobile or desktop.

Both merchants and customers can use any of our apps or other supported apps to interact with the Groundhog ecosystem, including our iOS and Web apps, MetaMask, Ledger, or WalletConnect-compatible apps.

### STEP 1

Customer initiates checkout flow on merchant web site

### STEP 2

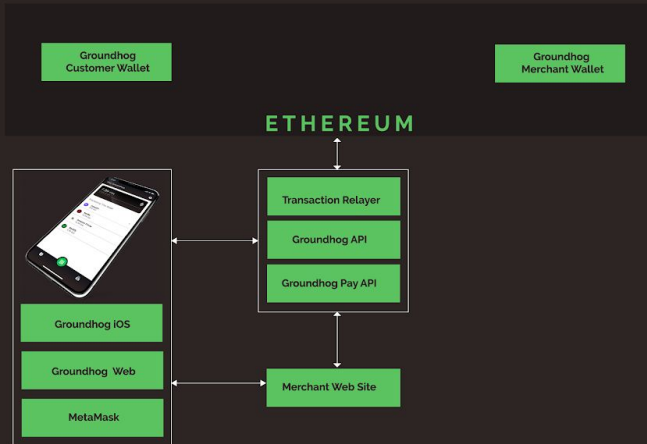
Customer signs transaction on Groundhog iOS/Web app or other crypto wallet

### STEP 3 ONE TIME

The first time a customer uses Groundhog, a wallet is created and user is prompted to fund via crypto transfer or fiat via partners

### STEP 4

Customer is returned to merchant web site



## Processing

### STEP 1

Merchant web site or e-com platform pings Groundhog every month when it's time to bill

### STEP 2

Funds are moved from customer wallet to merchant wallet

### THAT'S IT!

Customers can manage their Groundhog Wallet and subscriptions any time through their preferred app or device

## Overview of the Groundhog Ecosystem

### Bulk Executor

- Executes 1-n subscriptions and then processes the split payments inside one transaction

Oracle Registry - manages the activated oracles of the Groundhog Ecosystem, and some network static assets

- ETHUSD (MKRDAO Oracle), enables oraclized denomination in any compatible pairs.

### MerchantModule

- User defined Payment splitting
  - ETH and ERC20
- Fee collection

### SubscriptionModule

- Enables recurring subscription payments with 1337

## Checkout.js

- Embeddable react widget to process checkouts

## Weatherman (modified safe-relay-service)

- Enables creation of consumer and merchant wallets
- Preloads the required modules into the safes at creation
- Handles executing txns and multisig txns
- Enables bulk execution

## Pay API

- Handles requests from checkout.js
- Merchant/consumer wallet lookup
- Allows for custom integrations

Groundhog uses meta transactions for all of its application interactions. Adhering to the 1337 specification. Groundhog provides a low friction ecosystem for processing recurring subscription payments.

## Team description

Scott Burke (CEO, Co-founder) - Scott is a technical founder, ran an innovation lab for a billion-dollar-per-year state lottery, was the CEO of a NorCal-based online gaming company he led to a multi-million dollar acquisition, and has built over a dozen products over the years including three on blockchain. World Government Summit award winner.

Andrew Redden (CTO, Co-founder) Andrew co-authored the EIP-1337 standard for recurring payments on Ethereum, ran data architecture for a startup serving almost every major league sports franchise, and was rolling out bitcoin ATMs in the real world as far back as 2013. Hard-working developer and consistently on the frontier of blockchain technology. World Government Summit award winner.

Robert Moore (Full-stack Developer) Experienced full-stack developer specializing in JavaScript and React.

Yashar Asheri (Front-end Developer) Talented designer-turned-developer passionate about decentralized finance and the intersection between design and computing.

# Timeline, Milestones and Deliverables

## *Phase 1*

### Deliverables

- Merchant portal live
  - Front-end to Gnosis Safe services
- Groundhog web wallet live
  - Front-end to Gnosis Safe services
  - Subscription management
  - Account funding
- Checkout live, allowing checkout in ETH or DAI
- Automatic subscription processing
  - Groundhog processes subscription rebill through SubscriptionModule without merchant hitting Groundhog webhook

Time and Price estimate

2 months - \$33,333

## *Phase 2*

### Deliverables

- Improve checkout and wallet UX
- Oraclized denomination
  - Sign subscription in one currency, pay from another (ex. Sign for 50 DAI per month, but pay equivalent value from your wallet in ETH)
- In-wallet decentralized exchange
- More robust merchant statistics
- Add Ledger support
- Add funding methods

Time and Price estimate

2 months - \$33,333

## *Phase 3*

### Deliverables

- Complete iOS app v1
  - Front-end to Gnosis Safe services

- Subscription management
- Account funding
- Submit to app store
- Implement Gas Station Network
- Iterate checkout and wallet UX
- Add Trezor support
- Add funding methods

Time and Price estimate

2 months - \$33,334

## Others

- We are a Techstars company (Techstars Anywhere 2018)
- We recently completed the ConsenSys Ventures Tachyon accelerator in San Francisco
- We raised >\$600k in 2018 and are now raising our next round of equity funding
- We have a robust customer pipeline and are now onboarding our first merchants
- We won the Maker bounty at ETHDenver for “building a novel lending platform” with Dai on top of Groundhog including automatic recurring loan repayment and CDP liquidation management and collateral top-up.  
<https://twitter.com/GroundhogPay/status/1105901956101521409>
- We were recently named one of the Top 100 Projects Pioneering Decentralized Finance by ConsenSys, and top 6 in payments projects.  
<https://twitter.com/ethereumJoseph/status/1111360514372833283>