Contact List & Hours Tracking Sheet

👆 Please fill this out if you haven't - thank you! 😁

Luna is a 1Hive swarm focused on modelling the ecosystem with cadCAD to support the community with computer-aided governance. Read the manifesto on the 1Hive Forum or discuss in the Luna Swarm discord

Join our calls every Friday @ 1 pm PST / 4 pm EST! Add the event to your calendar

Repo of $HNY Issuance cadCAD model: https://github.com/lkngtn/honey-cad/blob/stochastic/honey.ipynb
Luna Swarm DAO: https://aragon.1hive.org/#/luna/

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*Having participated in the last Luna Swarm meeting and seeing your experience and past work I will support a new proposal and I would like to match 50%, up to 20 HNY, of the new requested amount 🍯 **https://forum.1hive.org/t/luna-swarm-expanding-the-1hive-cadcad-model/1190/4**

2021.02.26 - Luna Swarm 1Hive modelling sync

Recording:
Attendees:

Agenda:

●

2021.02.19 - Luna Swarm 1Hive modelling sync

Recording: *https://youtu.be/OW_deonZ_eQ*
Attendees: Jeff, Luke, Z, Tommy, bbobboy, WHATEVVER,

Agenda:

- New member onboarding
  - Wiki.1hive.org
  - https://wiki.1hive.org/community/swarms/luna

- Next Luna Swarm proposal discussion
  - Agave Risk Params
  - Honeyswap Arbitrage / Marketing Making / Spread Reduction
    - Uniswap model: <TBD>
  - Honey computer aided governance
  - Sustainable farming on Honey

- How to determine allocation points for different pools to attract liquidity to reach slippage target
- Using cadCAD to determine what those allocations should be for swaps on specific pairs to make liquidity more attractive
- Communal resource allocation problem
  - With proxy to minimize total fees and slippage
  - Fees impact traders but benefit LPs
  - LPs want low slippage too (minimize Impermanent Loss)
  - Slippage as service quality metric
  - Just need enough liquidity to mute the volatility
  - Slippage should be an order of magnitude or two below txn sizes
- "Fund manager" functionality
  - A Balancer (esque) pool of Uniswap pools to actively rebalance
  - Like a pool of bonds, where underlying assets are yielding
  - Rebalancing between lower interest and higher interest pools, collecting fees on the meta-AMM pools
  - Better aggregation of DeFi primitives, with strong invariant properties of AMMs
  - State channel based AMM?
    -

- Honeyswap improvements (sustainable farming)
  - HackMD thus far: https://hackmd.io/SKqIypW4QL2lYcMouCVfhg
  - Uniswap liquidity pool data code snippets could be coming to cadCAD
  - Z: Take LP tokens, bridge them to L2, put them in BAL pools of other LP tokens
  - Trade derivatives on L2 while keeping actual value on L1
  - Possible to tare LP tokens with other tokens

- Reflexer approach: self-referential stability & governance minimization
  - 1Hive based stable coin somewhere down the road

- We have 4.75 HNY left for the project - when do we need to submit a new proposal and for how much/for how many months?

2021.02.012 - Luna Swarm 1Hive modelling sync

Recording:
https://www.youtube.com/watch?v=VLwmr8zteb4&list=PLzL4U4Szfai3hvGLVEbYmbyaK6sX1TSr2&index=11
Attendees: lkngtn, Blazar, Boring877, Do$h, Dogeking, Friedrengi, griff, jeff, metaverde, zargham, Px, RogueTwo, sem, solarmkd, tze42, ygg_anderson, 1662,ChuyGarcia, pab,

Agenda:

- Initial HNY issuance proposal complete!
  - https://forum.1hive.org/t/dynamic-honey-supply-policy-proposal/2224
  - Questions/comments on proposal?
    - Current outflow modeled at 5% of common pool/timestep max spend
    - Current inflation/issuance is at 30%/year, but spend is much less
    - Reserve currently at 30% in common pool, if we reduce to 20% it would slowly burn $HNY
    - Does this skew the 1Hive ecosystem towards constant spending?
      - A bit of a bias towards action and productivity rather than accumulation
    - Does the model account for price?
      - Yes, since it impacts inflows
      - Stochastic "random walk" spot price
    - Will we have enough DAI in reserve to pay workers if $HNY price were to crash again?
      - Recommend exploring various reserve strategies for 1Hive
      - Deal with slippage thru DCA, or taking swap returns into HNY-XDAI pair as treasury (rather than all at once)
    - We have a lot of flexibility in policy choices while keeping issuance as simple as possible
      - Benefit of using HNY rather than other reserve asset
    - What happens if we implement as is?
      - 5% spend, 30% reserve, 10% issuance
      - Better than most governments ;)
    - Great job Luke!

- Next Luna Swarm proposal discussion
  - Agave Risk Params
  - Honeyswap Arbitrage / Marketing Making / Spread Reduction
  - Honey computer aided governance

- Other DAO2DAO research & payment/agreement primitives
  - Jeff will present some other work on similar R&D arrangements
  - Luke: useful for not just research!
    - Admin burden ALSO in Marketing, support, community management, etc
    - Talking about the work IS often a lot of work!
    - Support ongoing invisible labor that doesn't directly produce outputs

2021.02.05 - Luna Swarm 1Hive modelling sync

Recording: (TEC Lab: Honey is Money)
https://www.youtube.com/watch?v=inxXeviR6p4&list=PLusWL9gf0FISmLiW2iPykEW2k8PUrlbyC&index=8

Attendees: Cancelled

Agenda:

- Honey is Money TEC Lab led by Shawn Anderson:
  https://www.youtube.com/watch?v=inxXeviR6p4&list=PLusWL9gf0FISmLiW2iPykEW2k8PUrlbyC&index=8

Action Items:

-

2021.01.29 - Luna Swarm 1Hive modelling sync

Recording: *https://youtu.be/NIUC2A9Pb34*

Attendees: Jeff, Luke, Sem, Z, Shawn, Gabi, Andrew, 24Nico

Agenda:

- Sem & Andrew invited to this weeks call: CV data & model review
- Andrew can go over existing CV model and establish where to plug in agent behavior
- Sem can cover data sources such as the Graph and how they can be used to port in live system data
- Shawn will touch on conviction voting data and 1hive honey model visualizations.
- Sem
  - Web3 api gas fee return script
  - Not the most efficient way to go about it
- Andrew
  - Walkthrough of CV data fetch from Aragon CV pilot

Action Items:

-

2021.01.22 - Luna Swarm 1Hive modelling sync

Recording:https://www.youtube.com/watch?v=0PMMiX6H9Vs&list=PLzL4U4Szfai3hvGLVEbYmbyaK6sX1TSr2&index=9

Attendees: Luke, Shawn, Jeff, Danlessa, Boring877, Zargham

Agenda:

- Additional work test gridding substeps
- Pandas dataframe work & axis labeling

2021.01.15 - Luna Swarm 1Hive modelling sync

Recording:
https://www.youtube.com/watch?v=df_oVg5NqkA&list=PLzL4U4Szfai3hvGLVEbYmbyaK6sX1TSr2&index=8

Attendees: Luke, Shawn, Jeff, Tonga, Gabi, Danlessa, Boring877, 24nico, Zargham, Dievardump

Agenda:

- AMM arbs for Honeyswap
    - https://hackmd.io/7Z2e-Is7Toi-5SaRl4K3tA?both
    - Clone doc for 1Hive purposes
    - Cross-chain gas arb: https://xdai-arb-graph.surge.sh/
    - Questions from the 1Hive perspective
        - What is the expected spread depending on current gas price & liquidity delta b/w AMMs?
        - Only support functionality for small # of pairs with large liquidity, rather than aiming for large # of pools with low liquidity
        - Liquidity rewards are important!
        - Arbitrage is profitable - *how do we leverage that to benefit the 1Hive community?*
    - Shawn interested in deployment, testing in parallel with math spec
        - Define problem space enough for software reqs
    - How do we weigh benefits to community
        - Liquidity opportunity - when volume increases, LPs & 1Hive benefit
        - Centralized arb bots vs decentralized approach to make arbing easier
        - Arb bots on smart contracts? Buy & burn $HNY as
- Review contributor compensation & hours tracking sheet: https://docs.google.com/spreadsheets/d/1k0ezsUvC4D2HmQJYlrv__pERxjWfC1Qc4_ZX84TuVuw/edit#gid=865923527

- Repo created by Luke: https://github.com/1Hive/luna-swarm
  - Different workstreams for diff collaborators as needed
- Luke Model walkthrough for Q&A
  -
- Shawn - Uniswap subgraph example + TEC dashboarding
  - https://github.com/tecommons/tec-lab

Action Steps:

-

2021.01.08 - Luna Swarm 1Hive modelling sync

Recording: https://www.youtube.com/watch?v=ASiqA8IlXRY&feature=youtu.be

Attendees: Luke, Jeff, Jess, Z, Shawn Anderson, Danilo, Monstrosity, Spankyg, Tonga, CurlyBracketEffect, Blazar, marcvi1a, DOSH, Pab

Agenda:

- Holidays halted progress on modelling over the past few weeks, picking up progress with this call
- 1Hive Token Economy Model exploration - future blog post by Luke: https://hackmd.io/5CSKEwJETLa-RQe-hWPC2g
- Looking at plots:
  - Divergence in 1st diagram, convergence in third - interesting to explore in between.

-

Action Steps:

- ~~Luke will create a Luna swarm repo, based on cadCAD model structure best practice (CV repo)~~
- Populate Luna Swarm wiki (connect with Metaverde)
- ~~Jess will populate timesheet for next call~~

2020.12.18 - Luna Swarm 1Hive modelling sync

Recording: [*https://www.youtube.com/watch?v=WBlm12ldENQ&feature=youtu.be*](https://www.youtube.com/watch?v=WBlm12ldENQ&feature=youtu.be)

Attendees: Luke, Jeff, Jess, Z, Monstrosity, Boring877, CurlyBracket, Burrrata

Agenda:
- Identifying 1Hive stakeholders & varying needs
    - Tech specs - requirements doc based on modeling outcomes
    - Impact on 1Hive economy - data-driven assumptions based on models
    - Formal proposal from Luke (early Jan) - based on early modeling efforts, proposed tech spec & how that impacts 1Hive & $HNY
- Luna Swarm wiki can hold notes, links, repos, etc
    - Who is working on this? → Metaverde in the 1Hive community
- Honeyswap fee structure
    - Next top priority for modelling
    - Luke will write up some thoughts on this as next modeling topic
    - Z: find someone interested in forking existing uniswap model, link it up with data from Honeyswap
        - https://www.youtube.com/watch?v=7555Zh7hWXg
        - https://github.com/BlockScience/uniswap
        - Test policy choices with outcomes, since they can be counterintuitive
            - E.g. raising fees can reduce volume and reduce income overall
- Time tracking/contributor compensation
    - Jess will introduce a timesheet for participant contributions
- Luke discuss model progress
    - Plotly falls down with large data sets
        - Matplotlib & seaborn are more hands on
        - Notebook viewer for better rendering: https://nbviewer.jupyter.org/
    - Per last week, including a stochastic process for Price function
    - Next steps to produce **test grid** for various analyses
- Q&A with Zargham

Action Steps:
- ~~Jess can link Luke to the TEC parameterization discussions. Jess to share in Luna channel~~
- ~~Luke will create a Luna swarm repo, based on cadCAD model structure best practice (CV repo)~~
- Populate Luna Swarm wiki (connect with Metaverde)

- ~~Jess will populate timesheet for next call~~

2020.12.11 - Luna Swarm 1Hive modelling sync
Call Recording [Part 1]
https://www.youtube.com/watch?v=qOQDHMWFjtU&feature=youtu.be

[Part 2] https://www.youtube.com/watch?v=KqZIKH_XYE0&feature=youtu.be

Attendees: Luke, Boring877 , dw , mZ , Santapiper , Burrrata , Monstrosity

Agenda:
- Luke discuss model progress
- Q&A with Zargham

2020.12.04 - Luna Swarm 1Hive modelling sync
Recording:
https://www.youtube.com/watch?v=sYxGthj3xGc&list=PLzL4U4Szfai3hvGLVEbYmbyaK6sX1TSr2&index=3

Attendees: Luke, Boring877, DavidKing, Monstrosity, Zargham, Jess, Jeff, solarmkd, rperez89

- Finalize & submit proposal (10 mins)
    - Funds aimed to cover project spin up & prep, recordings,
    - POAP certificate for completed internships
    - Proposal up on 1Hive.org!

- Check in with Luke modeling (45 mins)
    - Worksession in VS collab code (now or in future)
    - Luke set up parameter scenarios and sweeps to compare them

- Sourcecred + pollen + modeling integration - Sandpiper interest?

Action Steps:
- ~~Jess to submit proposal~~
- Jeff to send CV gitcoin grant funds to Luna DAO

2020.11.20 - Luna Swarm 1Hive modelling sync
NOT RECORDED

- Schedule recurring Luna Swarm call:
  https://calendar.google.com/event?action=TEMPLATE&tmeid=MjR0bTA5aGhjdmU2ZGo4ZnU1N2FiZzdtMHRfMjAyMDEyMDRUMjEwMDAwWiBjYWRjYWQub3JnQG0&tmsrc=cadcad.org%40gmail.com&scp=ALL

- Spin up aragon org for funds mgmt (address for submission)

- Study group participants vs direct collaborators on the swarm

- Iterative proposals where we can expand contributors as they skill-up

- Value created by R&D should be pretty visible to 1Hive community
  - Learning curve is steep, mentoring & skilling up community members
  - Take the new cadCAD Education course!
  - Figuring out roles & expectations (learning vs contributing)
  - Tiered compensation?
    - New coders
    - Coders
    - Coders who are teaching others
    - **PM/documentation/coordination**
    - **Project champion**
    - **Subject Matter Expert**
    - Other input/general contributions: i.e. analysis, discussion

- Include other swarms where appropriate
  - Morphosis education funding
  - Marketing & Buzz swarm

- Initial proposal: **1 month of funding Research into 1Hive issuance policy**

- ○ Apply research methodology in pursuit of goal over allocated time period
- ○ How much $HNY to make this happen? 15-20 HNY ~ $5000 USD
- ○ Awesome education opportunity for new modelers/system designers
- ○ Project effort documentation
- ○ Scope tasks for contributors

- ● Proposal amount for ongoing cadCAD Research process
  - ○ Championed by Luke, supported by 1Hive team?
- ● How are we funding the Luna Swarm?
  - ○ Time based vs outcome/deliverable based
  - ○ Design & research vs software development
  - ○ **$HNY requested? Length of research period?**
- ● Outcome of this call:
  - ○ Proposal with funding amount drafted for posting
- ● Include links to cadCAD Quest for context on methodology background
- ● **Champion, budget, methodology, timeframe**
- ● DAOs CAN fund R&D, unlike startups which are so cash sensitive

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2020.11.13 - Luna Swarm 1Hive modelling sync

Attendees: Luke, Z, Jeff, Griff
NOT RECORDED

- ● Add next steps to Luna Swarm post:
  https://forum.1hive.org/t/luna-swarm-expanding-the-1hive-cadcad-model/1190
- ● Lucidchart:
  https://app.lucidchart.com/invitations/accept/562ca884-3062-42bb-b586-2901865f2a71
- ● Honey Issuance problem statement:
  https://docs.google.com/document/d/1iXFFs3iO33MHn_9rHHk8WMBhed14G4p9fmDc98fQmT4/edit
- ● Analytic work on asserting the extent of CV algorithm estimation of optimal policy to be passed
 - ○ How does affinity of proposals affect mapping

2020.11.05 - Luna Swarm 1Hive modelling call #2

Recording: https://www.youtube.com/watch?v=VAf6RTGVk-E&feature=youtu.be

Intros/ Interests in Top of list proposals
- **Z** - how to improve governance with tech, algorithmic policy making
- **Luke** - **issuance policy model**
- **Jess** - Comms/PM/cultural build Token Engineering - supporting with coordination/PM
- **Sandpiper** - python familiarity, data analysis in morphosis channel, ensure synchronicity of data models
- **Luigy** - crypto enthusiast, not much into modeling new to cadCAD, but more application **issuance, farms modeling**
- **Felix** - python & data structuring background, looking to check out the cadCAD library
- **Gabi** - 1Hive dev, new to cadCAD
- **Tonga** - some Python experience, new to cadCAD, here to learn
- **Will** - solidity dev @ 1Hive, curious about cadCAD models, python experience
- **Sem** - (not able to join call but wants to work on issuance)

- ~~Jess to share past cadCAD community calls and cadCAD onboarding doc for channel awareness~~
- Perhaps it would be helpful to have further documentation (from Luke?) about how the cadCAD models have been used in the system - does this already live anywhere?

- **Primary model of interest:** HNY Issuance model - effort level? Member interest?
  - Goal: get more ppl engaged with this kind of modeling work
  - Iterative model, complexity in interconnection (affects market liquidity, etc)
  - **First model:** issuance alone as a subsystem, incorporate effects on honeyswap & CV later
  - Issuance policy is a statement about how the creation of honey relates to other things. Rate of issuance/time compared w/ throughput of projects, e.g
  - **Problem statement of status quo:** issuance per block, 60% / year, can be set with governance. High issuance not a big deal in bootstrapping phase, but not sustainable in the long term, reduces long term benefits of farming, etc. Need to ensure long term honey flow, without diluting honey too much. Issuance OR fee capture can fund these initiatives. Dynamic issuance to ensure adequate honey flow with fee capture variation?

- ○ System framing diagram:
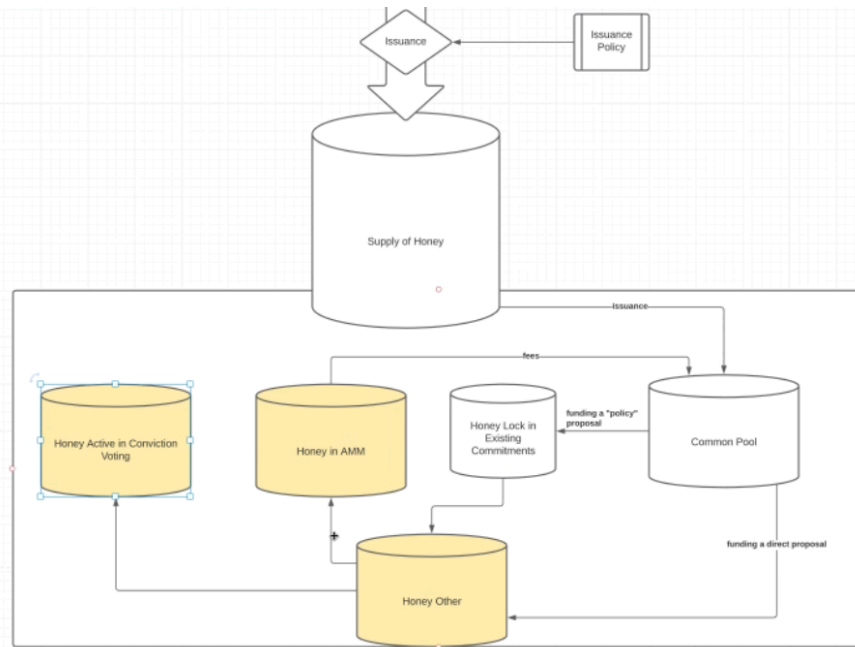
- ○ Issuance is trading off between the need for an available pool of funds (e.g. common pool), want to avoid zero sum conviction game (where we avoid collaboration over scarce funds for my own proposal)
- ○ **Action items: turn this diagram into proposal statement, with deliverable being a clear problem statement for policy design**

- ● Secondary: conviction consensus

- ● Draft proposal to submit for Conviction Voting on 1Hive for funding
  - ○ Scoping first few low hanging projects - **focus on one at a time** and making sure it is **inclusive to new cadCAD coders**
- ● Organize contributors, document contacts/skill level/expectations for compensation/tiered structure based on skill level

2020.10.25 - First Luna Swarm 1Hive modelling call

Call Recording

Model: https://github.com/BlockScience/Aragon_Conviction_Voting
Walkthrough video: https://www.youtube.com/watch?v=ZtVtBjcIlRw&feature=youtu.be
TL;DR thread: https://twitter.com/commonsstack/status/1309211776425365510
Model Expansion Working Group Kickoff Call:
https://www.youtube.com/watch?v=IZZUDnCBhYg&feature=youtu.be

- Fork CV repo to 1Hive
- Sprint projects to add model functionality:
  - Quadratic voting
  - Negative voting
  - Variable voting quorums
  - **Set parameter with conviction (e.g. conviction consensus)**
    - Which parameters do we want to start with?
    - Sem interested
  - Secondary markets (honeyswap)
    - Uniswap cadCAD model already existing - composable for integration
  - **Issuance model (farming incentive, regular issuance, common pool issuance e.g. faucet)**
  - **Faucet**
  - **Pollen & sourcecred**
  - **Celeste / courts, proposal moderation & dispute resolution**

- How to incentivize long term sustainability & activity on 1Hive

- **1Hive Forum post:**
  - Mission (few sentences)
  - Method (cadCAD & data science, CAG)
  - Bulleted list of subsystems of interest for modelling
    - …(from above)
  - Sub-proposals for individual sprint sessions
  - Keep as general as possible for multiple community use of the models

- Santi: ML algos, python
- Sem: conviction consensus / dynamic average consensus for parameter signalling/setting
- Felix: requesting wiki for 1Hive repos
  - Contributor guide for devs, where repos are, how they're connected to pollen, PR process, etc

Action Steps:

Forum post:

✂️ Mission:

The 🌙Luna Swarm is a collaboration of individuals and organizations that seek to rigorously model the 1Hive ecosystem in [cadCAD](#), providing tools for operational decision support with future design and governance decisions.

This post lays out a **[work-in-progress] roadmap of features** to build on & improve the initial [cadCAD Conviction Voting model](#), and modeling other features, mechanisms and subsystems specific to 1Hive. These items can be discussed, prioritized & funded via proposals as needed by the 1Hive community in subsequent posts for individual sprints.

🔬 Method:

Using complex systems engineering and rigorous data science methodology, the 1Hive ecosystem can be iteratively modeled to provide [Computer-Aided Governance](#) to empower the 1Hive organization using cadCAD.

[cadCAD](#) is a complex systems design methodology, and a Python package that assists in the processes of designing, testing and validating complex systems through simulation, with support for Monte Carlo methods, A/B testing and parameter sweeps.

📑 PROJECT OVERVIEW:

🛠️ What's has been modeled already:

- Conviction funding in the 1Hive ecosystem

🎯 What feature additions are needed:

- [Conviction consensus](#)
  - Dynamically set parameter with conviction
- HNY Issuance model

- - Understanding impacts of farming incentives, issuance curve
- Common pool allocation model
    - Examine faucet effectiveness in HNY distribution
- Pollen & sourcecred
    - Network analysis of community distribution
    - Parameter tweaking for improvements
- Celeste / courts, proposal moderation & dispute resolution
    - Model complex system interaction & mitigate attack vectors
- Secondary market dynamics (e.g. honeyswap)
    - Uniswap cadCAD model already existing - composable for integration

📝 How feature models will be prioritized:

The prioritization of work will be driven primarily by the working groups interest on various feature models with consideration for 1Hive's desired priorities, while aiming to keep those models generalized so they can be applied to other DAOs.

💎 Compensation & funding opportunities:

In order to reward Luna Swarm contributors and incentivize long-term sustainability, the working group will submit funding proposals to the 1Hive community to be allocated to developers. Initial request amount to be decided by working group.

🐝 **Join the Swarm!** **There will be another call Nov. 5 @ 11am PST / 2pm EST / 10pm CET to keep pushing the ball in scoping work and submitting a proposal to 1Hive to fund the work.**

☎ **Join the call here (((CALENDAR LINK)))**

👋 **Say hello or reach out to us in the Luna channel in the 1Hive Discord:**

🍯 **1Hive Discord Invite**
🌙 **Luna link**

📚 More Information

1Hive Conviction Voting cadCAD Model:
https://github.com/BlockScience/Aragon_Conviction_Voting
cadCAD Model walkthrough video:
https://www.youtube.com/watch?v=ZtVtBjcIlRw&feature=youtu.be

Conviction Voting TL;DR thread:
https://twitter.com/commonsstack/status/1309211776425365510
Model Expansion Working Group Kickoff Call:
https://www.youtube.com/watch?v=IZZUDnCBhYg&feature=youtu.be

1HIVE FUNDING PROPOSAL #1 DRAFT

Luna Swarm Proposal #1

Proposal Description:

As discussed in the Luna Swarm Manifesto, we are presenting the **first Luna Swarm Proposal to Model Sustainable Honey Issuance.** This proposal requests 20 HNY to compensate time spent by swarm members to build a cadCAD model to test various parameters around Honey Issuance policy. This will give the 1Hive community a deeper understanding of the various issuance parameters that could be set, and how they impact the long-term sustainability of the 1Hive ecosystem. The goal of this model is to provide 1Hive with operational decision-support through data-driven agent based and dynamic systems modeling - in other words, Computer-Aided Governance.

This proposal compensates contributors for 1 month of work in the roles below. Subsequent proposals will be submitted for additional work lasting beyond that time period.

Team Information:

Project Modeler: Luke Duncan, 1Hive Summoner

Project Consult: Michael Zargham, BlockScience Founder

Project Coordination: Jeff Emmett, Commons Stack Researcher

Project Communication: Jess Zartler, TE Commons Communications

Additional roles are likely needed but are TBD as contributors are available. Internships welcome.

Funding Information:

Budget requested: 20 HNY

Beneficiary ETH address: 0xf189357b782d56ee3331697371e61ab8e9b8e97f

How funds will be managed and dispersed: HNY disbursements will be transparently allocated to swarm members according to an agreed upon distribution. Internships available, with POAP certificate on completion

POAP

~~Zargham~~

~~Luke~~

~~Shawn~~

~~Boring~~

~~Jeff~~

~~Jess~~

~~Monstrosity~~