

Castalia: The Citadel of Truth

## Pre-Lude

Castalia is the citadel of the truth process. The Castalians are the stewards of [The Glass Bead Game](#).

Its inaugural guild of players is composed of 36 participants of the [Liminal Web](#), the metamodern epistocracy on the quest to metabolize the [metacrisis](#) before it obliterates humanity, life, and the universe.

The game's goal is to bootstrap the collective wisdom of the **noocortex**, the cortical layer of the noosphere, the pluraligning culture necessary to regulate the culture as a whole.

This noocortex serves as the foundation for a techno-cortical web of individual and collective AI daemons who, inspired by patterns of meaning-making, will transcend the edges of human sensibility to help solve the wicked problems of the 21st century.

Castalia will inspire the cryptonomic support required to nourish its players by generating deep and complex cocreated modular social media generated by The Glass Bead Game. The rewards are both distributed amongst all the players, and to the individual players who generate the most meaning, establishing coopetition, the balance between competition and cooperation.

Once this seed guild is established, Castalia will gradually grow through the release of +1 invites, and the cocreation of new guilds ([The Cryptosophers](#), [The H<sup>4</sup>](#), [The Trimtabs](#), [The Lacticians](#)) to judiciously expand the culture. Once a thriving culture has grown, the platform will open up to a wider audience.

Once Castalia is established, it can then be revealed that it is part of [Turns](#), a developmental metagame, where players can create their own games beyond the GBG with their own rules and designs.

# Castalia

A Co-Creative Wisdom Ecosystem

Castalia is a wisdom generation social network powered by

- user-generated collectible hypercards,
- synchronous and asynchronous co-creation games,
- topic specific collective intelligences,
- crowdsourced resources,
- feedback relationships,
- and ai-augmented creativity.

[Deviantart](#) x [Dada.nyc](#) x [Github](#) x [Hypercard](#) x [Reddit](#)

Stack: [\\_Protocol](#) x [ERC-721 Non-Fungible Tokens](#)

Platform: Web, Windows, Mac, iOS, Android.

Target: Metamodernists, Game Bs, Limanal Webbers

E.G game: <https://www.youtube.com/watch?v=BNywyIAzsz0>

Current build: <https://weco.io/s/castalia/posts>



**Castalia** is a co-creative social network inspired by Hermann Hesse's community of truth-seekers in his book [The Glass Bead Game](#).

It is the citadel of the **epistocracy** - the epistemological elite involved in solving the world's wicked problems through art and philosophy.

The **Glass Bead Game** frames the social network as **a collective game of cocreation**. Players cooperate and compete to make the most interesting **beads** which are voted into a **hierarchy**.

**Beads** are posts that allow for multi-level multimedia information, like an article, a one minute audio summary of the article, and an article's first draft, as well as **other beads the bead is influenced by**, all contained in one unit.

Players can **create** public and private beads, **collect** beads into public and private **strings**, and **gift, sell and trade** beads with other players. Players can also **customize** their beads, changing **colour, shape and ornamentation**, and mint limited edition **NFT beads and strings**.

Beads are also co-created in [Glass Bead Games](#). A default GBG is a **2 player, audio-mediated, 1 minute per turn, 10 turn game**, but it can be played with **2-16 players, in any media, and any length**. This means that players can choose the media that suits them best - **words, audio, video, games, images, music, creative coding, etc.**

Beads are organized by **topics**, each of which has its own **hierarchy**. An initial set of high-level abstractions - society, death, ego, etc - serves as the initial **topology** but experienced players can design their own topologies, which players can use as the basis for new games.

**Players** can organize into private and public **guilds** where they play around specific topologies and game styles. For example, a guild can play on the topics of psychology in beads of 1000 words. Or on the novels of Dostoevsky, with 3 minute video moves. Or images, photos, short films, etc.

An algorithm matches players with other players based on voluntary **encrypted psychological profiles**, their collected beads and strings, and the players they follow.

**Guilds** share **files, equipment and housing** in a co-creative commons, and help each other produce optimal beads through an **internal bead hierarchy**

and **feedback relationships**. Guilds can publish beads under their communal name, and play Glass Bead Sessions with other guilds.

Any player or guild can receive **donations** and **subscriptions** that allow access to premium beads. Any bead can be **gilded**, the revenue then **distributed** amongst the cocreators.

Each player has their own **feed** following the games, players, topics and guilds they are interested in, and their own **queue**, which helps them organize the priority of information they need to integrate. A **Spaced Repetition System** allows for old beads to be automatically placed in the queue for optimal integration.

The resulting beads, their hierarchy, their influences, the psychoprofiles of the creators and cocreators, are all fed to **AI agents** who uses **machine learning** and **Generative Adversarial Networks** to generate **new variants of the beads**, which are then fed back to the players, who accept, discard and upvote the AI generated beads. Each player, guild, and the game itself has its own AI agent.

The aim is to facilitate **multi-level competition and cooperation** amongst knowledge generators, establish **multi-perspectival, transmedia meaning hierarchies**, and **have fun saving the goddamn world**.

## Addendum

Castalia is a memetic evolution supraorganism.

The beads are the concentration of manifold perspectives into memeplexes which are voted on by the players - the collective intelligence - thus establishing a transmedial meaning hierarchy.

The game's time limits accelerate memetic generation rate, co-creation increases memetic cross-pollination, and daily, weekly, monthly and yearly championships increase competition.

The meaning hierarchy is fed to an AI, which generates memeplexes of ever higher complexity and depth that are voted once more into the meaning hierarchy.

A high quality epistemological ecology is maintained by making the website invite only. As resources are distributed amongst all the players, the incentive to invite wisely is high.

The game is won when every possible bead has been made, and [Indra's Net](#) is complete.

**Metaphor: Lichess for Dialogos.**

**Simple premise:** Take turns to communicate.

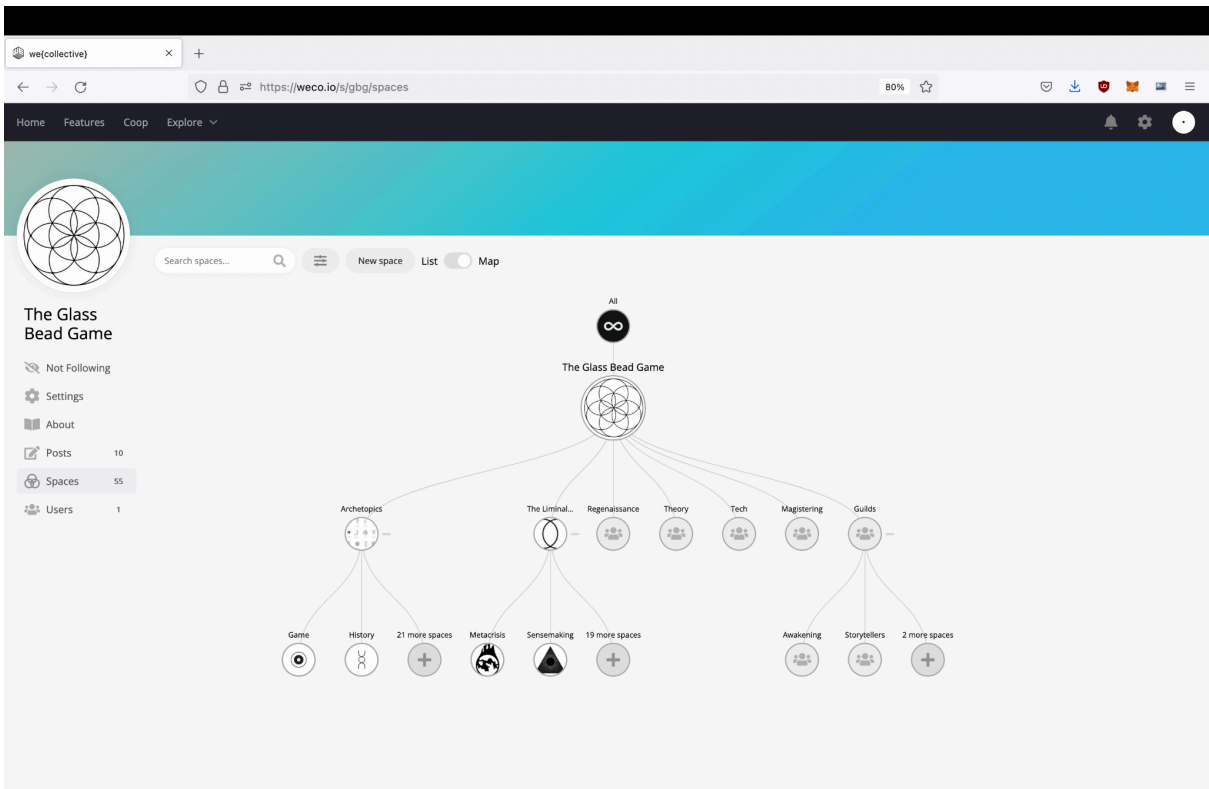
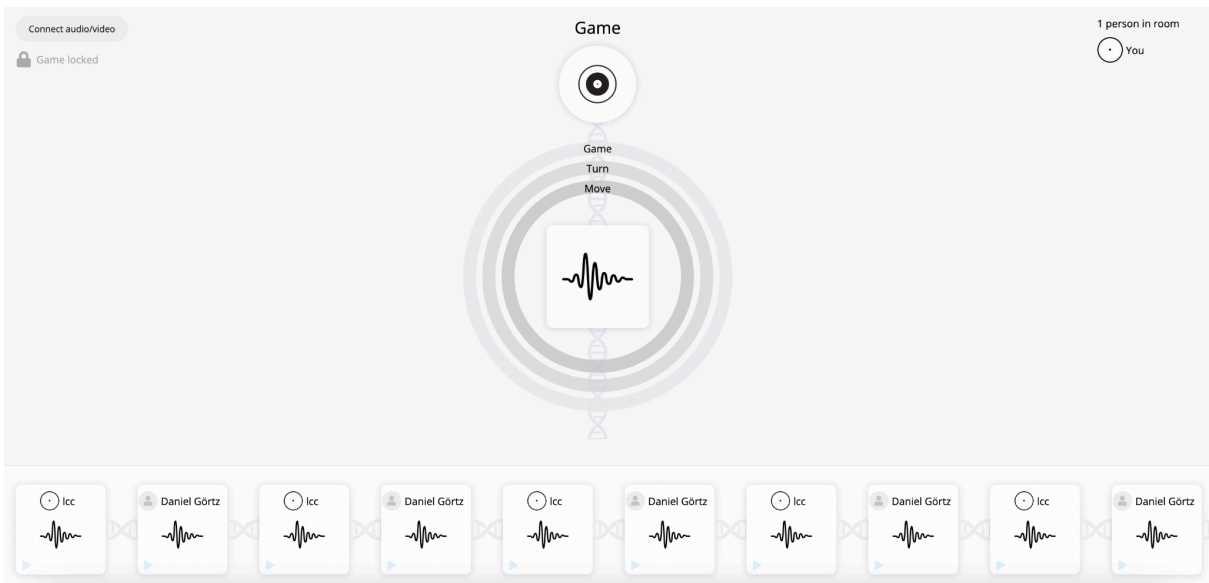
**Infinite permutations:** Maximum customizability of number of turns, turn length, media constraints, number of players, topics and sets of topics, values, gamespaces and social spaces.

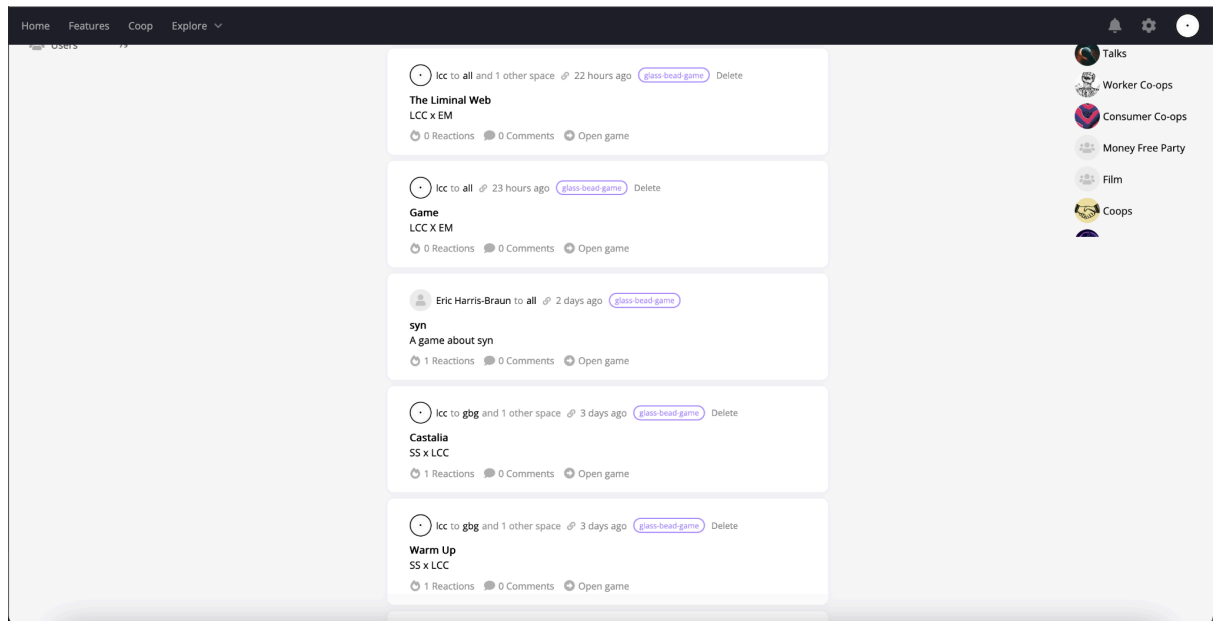
Bridging into Web3, Holochain and the metaverse. IRL and VR [transmedia](#) events in cathedrals of truth.

**VR/XR Vision:** Within bio-mimetic cathedrals of glass and vine, the portal to the Noosphere where the Castalians nurture Indra's Net.

# Current status

Functional MVP of audio gameplay upon a holonic social network.

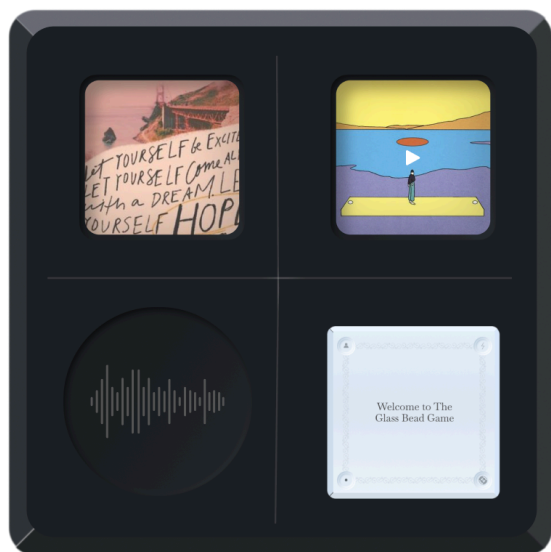
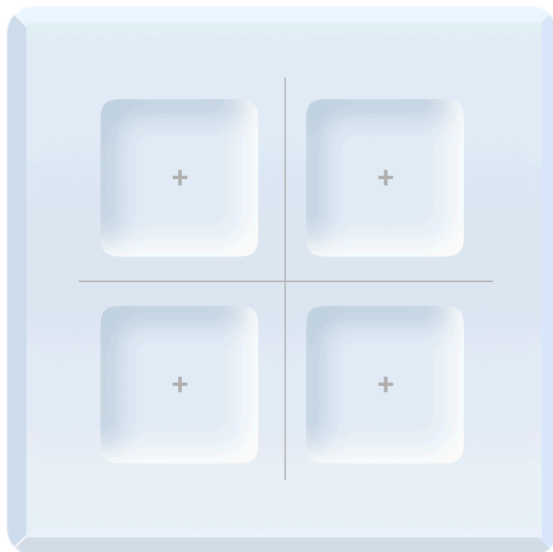
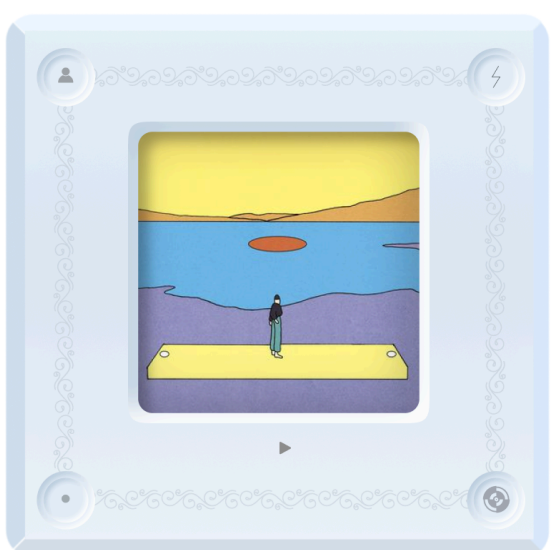
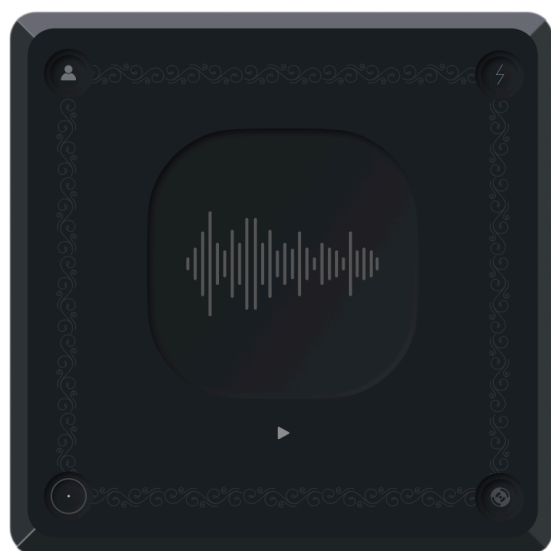
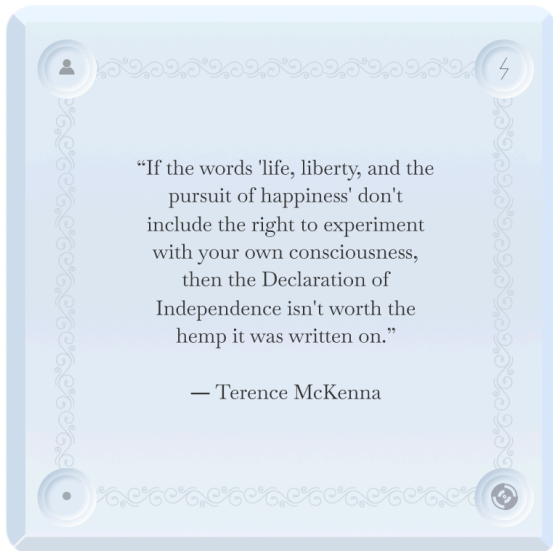


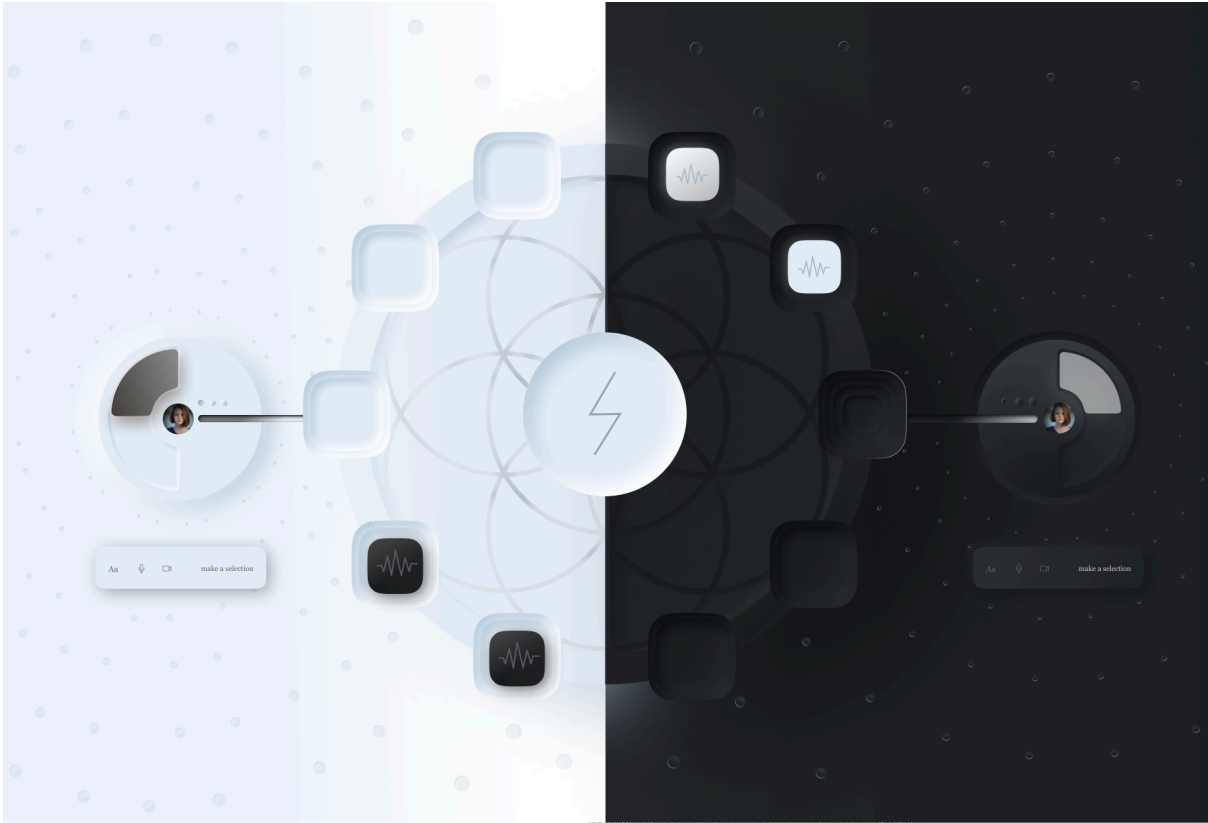


Game example: <https://weco.io/p/222>

**Next steps:** further build interpersonal, communal infrastructure, and refine UI, allowing players to

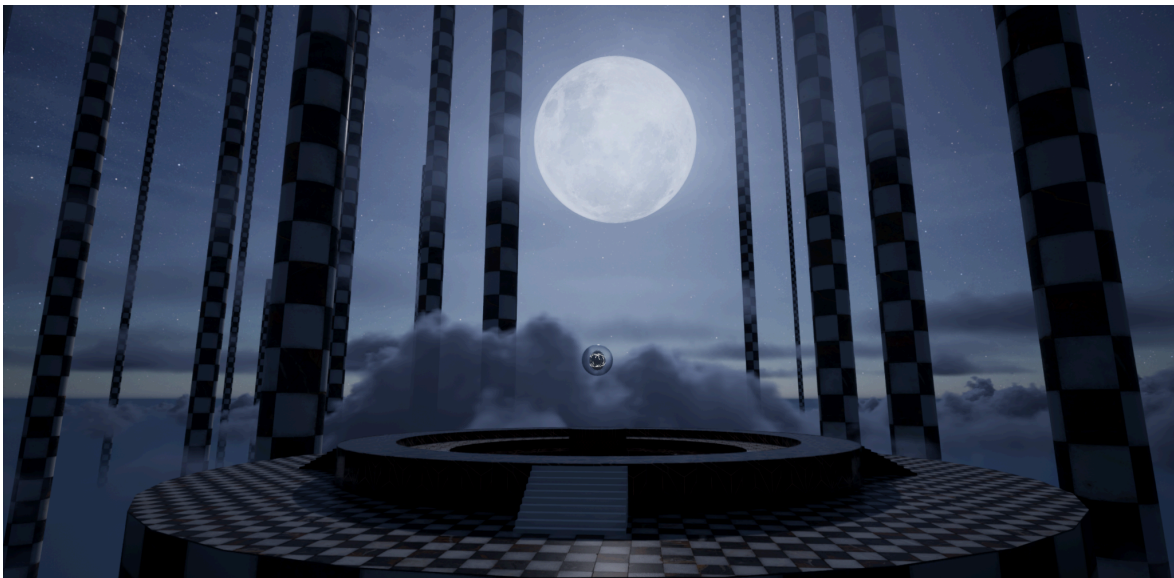
- schedule games
- play asynchronous games
- customize the gamespace
- browse beads
- join guilds
- mint NFTs
- play with new media
- add new topic sets
- transcribe audio
- practice game governance







## Metaverse explorations (UE5)



## Economics

Castalia is a “coopetative” where players simultaneously cooperate and compete to cultivate deeper and higher understanding.

Revenue comes from patrons rewarding players, guilds and Castalia as a whole with donations and subscriptions for the generation of beads, strings, games and game assets.

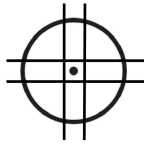
Revenue generated from a game is distributed amongst all the players involved, as is revenue generated from a guild distributed amongst the guild members, and revenue generated from Castalia itself distributed amongst Castalians.

Players can map out inspirations from beads, strings, games and players, and voluntarily direct a % of the income that move (or all of their moves) generates back to the inspirer. (see [transclusion](#))

Games amongst players can be subsidized with a “requested games” section, where two players are called upon by the public to play a game on a particular topic.

Subscribing can integrate staking, with a % reward of the revenue generated by the subsidized node (player, topic, guild, Castalia) returned to the patron, with higher % for closer nodes (player->Castalia).

Any moves can be minted as an NFT to generate informational scarcity.



## BEAD

Every day  $x$  **BEAD** is minted, where  $x$  is the number of players.

Initial guild = 50 players = 50 BEAD per day.

Every day, crypto is added to Castalia's **Reward Pool**. At the end of the day, the RP is divided amongst the players according to the BEAD they have earned.

If no one makes any moves, all players receive 1 BEAD. However, whenever a player makes a move, the proportion of BEAD they receive increases, and all other players' proportion decreases.

If two players A and B.

Player A makes moves = 1.2 BEAD

Player B makes no moves = 0.8 BEAD

Different tasks earn BEAD (play a game, string beads, transcode beads etc)

BEAD earned for playing a game with other players is shared amongst the players.

BEAD earned from stringing with other players' beads is shared with the other players.

BEAD earned from transcoding beads is shared with the player who created the source bead.

Upvotes, given by the other players, multiply the proportion of BEAD earned per task.

Number of tasks  $\times$  number of upvotes that each task has received.

By only players being able to upvote, the collective intelligence regulates its own hierarchy. The better the collective intelligence regulates its own hierarchy, the more discoverable higher quality posts will be, and the more the RP will receive.

At the end of the day, each player receives  $RP/(p)$ BEAD, where  $p$  is the player id.

Simultaneously, every week  $x$  bBEAD (bronze), every month sBEAD (silver), and every year gBEAD (gold) are minted. Each type of BEAD has its own RP to incentivize short, mid and long term play.

A percentage of BEAD goes to bBEAD, a percentage of bBEAD goes to sBEAD, a percentage to gBEAD.

Furthermore, every guild, every player, every set of topics, every topic, every game, every string and every bead has its own RP that is distributed equally amongst its participants.

E.G A specific bead receives crypto into its RP, which is distributed to

1. The player (majority %)
2. The-guilds-the-player-is-part-of's RP

3. The inspirations it originated from
4. If part of a game, the other players involved
5. Castalia's RP

BEAD cannot be brought onto or off the platform, so it can't be speculated upon.

The value of BEAD is determined by the sum of all reward pools.

A % of the reward pool is separated and invested into DeFi to increase Castalia's treasury.

A % of the reward pool is separated and distributed amongst the members, no matter their performance.

## December:

Play whole string

Responsive UI

Closing meditation stage (max: 300secs)

Contemplation

roles within games: Hacker, Hippie, Hipster, Hermetic

Set up git process: branches, tickets, permissions etc

## Rough 6 month plan (Jan 2022-June 2022)

### Step 1: Build interpersonal infrastructure

## Month 1

**Milestones:** *Solid functional GBG MVP: All video and audio consistently working for all users, UI responsive on all devices, easy to use/understand*

- Solidify video chat functionality
  - TURN server
    - Add SSL certificate to server
    - tighten security group
    - add extra credentials in coturn configuration
    - improve error handling
    - improve logs
    - configure scaling/load balancing
    - consider adding servers in other key regions
    - stress test with larger numbers of users
  - Test and fix any remaining video based bugs
  - Option to minimise video wall
- Improve audio functionality
  - Add time-slider
  - **Add download audio option**
  - Simulate timer movements when replaying string?
  - **Possibly add further audio processing (EQ, noise reduction etc.)**
- Finish any remaining work to make UI responsive
  - adapts to all screen sizes
  - UI simplified and rearranged for mobile devices as per designs
- General UI
  - add custom topic images
  - add custom background image
  - **add helper FAQ's**
  - add markdown to comments (enables embedded images, links, text formatting etc.)
  - save admin comments to db
- Add gbg posts to gbg space (and archetopic space if archetopic selected) by default
- 'New linked game' button (links to previous game)
- Create crypto wallet and add donate button on site
- Add easy feedback option
- Add new topic sets
  - Start writing intro, features, and coop text for site

## Month 2

**Milestones:** *Time-based features set up: Events, calendars, scheduling games, async games*

- Set up 'event' type posts and include scheduling functionality in 'glass-bead-game' posts
  - option to add and update date/timestamp
  - option for users to mark themselves as interested or attending
  - shareable links
  - notification system (using 'node-schedule') to notify users when date approaches
  - scheduling system memory stored in db so persistent across server restarts
  - privacy settings:
    - **private (only selected users/players can view the game/event) vs. public (anyone can view the game/event)**
    - **for GBG: open (creator sets the desired number of players and any user can join) vs. closed (creator sends invites to selected users and only they can join)**
- Create calendar organelle for spaces that pulls in and displays games and events from contained child spaces
  - includes filters: event type, sort by (likes, comments, time of day etc.), etc
- Add calendar features to users profiles pulling in events they have liked or responded to
- Set up async games
  - Allow game creator to chose move period (I.e 24 hours)
  - Notify users when it's their move
  - Allow them to re-record their move until they're happy before saving the bead

## Month 3

**Milestones:** *Enhanced bead functionality and personality quiz set up*

- **Tutorial (Initiation)**
  - react to (like, rate, link etc.) and comment on beads
  - add new media to beads: text, images, urls etc.
- **Set up back of bead UI**
- **view created and interacted with beads on profile**
- view, filter, and search beads in spaces
  - list mode
  - map mode
- transcribe processed audio clips and highlight keywords to user (Google Cloud Speech to Text API?)
- add further UI/audio customisations to the game
- set up space moderation controls (flag and remove unwanted posts)
- Personality test on account sign-up, with personality visualisation

## Step 2: Build communal infrastructure

## Month 4

**Milestones:** *Initial blockchain integration and governance protocols set up*

- allow users to mint beads as NFTs
- **allow users to donate crypto to spaces (topics/guilds etc.)**
- look into creating platform currency, user wallets etc.
- Set up polls and store votes on chain
- Start on governance modules/organelles

- Set up user verification method to prevent Sybil attacks

## Month 5

**Milestones:** *Efficient, clean, concise, and scalable codebase, easy for devs to set up locally, ready for open source contributions*

- Clean up components, pages, styling
- Make whole site responsive
- Set up CI/CD
- Switch to Redux for state management
- Start writing up documentation
- Set up local dev server config for other devs
- Consider moving API calls from EC2 server to Lambda functions
- Stress test and make sure backend is safe to scale
- Clean up DB (rename tables, columns etc. where required)
- Add tests
- Add more log-in options (FB, Google, etc.)
- Improve sign-up process (Upload images, include interests, location, suggested spaces, intro tour guide of site)

## Month 6

**Milestones:** *Wrap up remaining work and prepare for next stage*

- Write up full white-paper
- Plan out roadmap for next year of dev work
- Fix remaining bugs
- Add in further requested features from community
- Complete any unfinished work
- Seek further funding

## Step 3: Develop transpersonal infrastructure

Coavatars

Feed sharing

individual and collective holonic mind maps

Interguild games

AI daemons

## 6 Month Budget

James Weir: Full stack developer (React.JS/Node.JS) = 2,333£ a month.

Laurence Currie-Clark: Game Designer = 1,500£ a month.

Prateek Cariappa: UI/UX = 1,685£ a month.

Needs: 6 months for James so he can safely quit his job and start full time. = 14,000£

3 months for LCC = 4,500£

1 month for Prateek = 1,685£ a month.

= 20,185£

Proposed Sources:

[Holochain](#)

Virtue

Further potential funding sources:

<https://panvala.com/>

<http://kernel.community/en/>

<https://consilienceproject.org/>



## Governance Notes

Each guild generates a metagame.

Each metagame has at genesis a duration, a topology, and memetic, game and player constraints.

The metagame duration is the length until it is locked. The length can be infinite.

The topology is the set of topics to be explored. The set can be infinite.

The memetic constraints are the mediatic forms and lengths of the explorations. The forms and length can be infinite.

The player constraints are the type and number of players that form the guild. The type and number can be infinite.

The game constraints are the synchronous and/or asynchronous nature, and the length, number and duration in between moves. The length, number and duration can be infinite.

Guild governance is decided on genesis.

What can be changed by governance?

By whom?

At what intervals?

i.e. adding a topic, adding a new media, ending a game, inviting new members.

## **Feature list notes**

*(numbers indicate priority assessments by team members with low priority (1) to high priority (3))*

3 Improve/test video streaming

3 Security audit

## **Backend**

2 2 Interconnect beads horizontally and vertically

1 1 Follow player

2 2 Interconnect beads

1 1 Friendships (reciprocal following)

## **Frontend**

1 1 Electrum wrapper

2 3 quick start game

3 3 Browse beads

3 3 Browse strings

3 3 Browse games

3 Browse favourites

3 Audio controls

3 Update sound effects

3 Shareable links

3 more topologies

2 blockchain integrability

2 audio normalizations, de noising

2 speech to text transcription

## functions

- 3 add to favourites
- 1 1 srs
- 3 calendar/ personal and space (add start time timestamp to games)
- 2 feed: recommended + browse other feed
- 2 2 hexis
- 2 2 guilds
- 2 2 classes
- 3 3 async game
- 3 3 game: play all
- 2 2 player colours
- 2 3 sounds
- 3 3 feedback

- 3 3 donate (btc, eth)
- 2 1 transcoding
  - 3 customizations (timer on/off, sounds, symbol, music)
  - 2 other media (text, )
  - 2 game permissions (play/spectate/private)
  - 1 reverb, echo effects
  - 1 equalization
  - 2 record sobremesa (before and after game)
  - 2 asymmetrical games (different turn lengths, different number of turns)
  - 3 default gbg post type to glass bead game space
  - 3 default archetopic to archetopic space
  - 2 colocking (both have to consent to save game)
  - 3 new game button (which auto links to previous game)
  - 2 archetypes
  - 3 back of beads
  - 1 Credential permissions (show law degree to enter law guild)
  - 3 responsive design
  - 2 sound for chat (+toggle)
  - 2 Feedback relationships
  - Annotate everything
  - 2 minigit: Fork any move
  - 1 Writing concentration environment
  - 2 Competitions: daily, weekly, monthly, yearly
  - Xp points per topic.
  - 2 Topic sounds: Each symbol a pulse, an ambient loop.
  - 2 Meditation environment
  - 1 Integrate libgen, scihub
  - 1 Mathematics, code
  - 1 process: reveal drafts
  - 1 collaborative drawing
  - 1 autopodcasting
  - 1 Tractatus game

### Initial audiences

Ngos

Metamodernists

Spiral

Teal organization

Designers

consultancy

systems thinkers

cryptonauts

Initial Audience: Discord of 185 members who have experienced the game in its primitive Zoom format, many of whom are regular players. Close links to organizations with the Liminal Web, including The Stoa (25,000 youtube subscribers), Rebel Wisdom (234,000 youtube subscribers) and the Metamoderna Forum (371 members).