

# Coral Coin

QuadCoreAltCoin

A photograph of a cobblestone street. In the upper center, there is a rectangular metal grate with a grid pattern, partially covered by moss and debris. Below the grate, the cobblestones are painted with yellow text. The text is in Dutch and reads 'Niets in gooi' on the first line and 'HIER BEGINT DE ZEE' on the second line. The cobblestones are grey and irregular in shape, with some cracks visible. The lighting suggests a sunny day, with shadows cast on the stones.

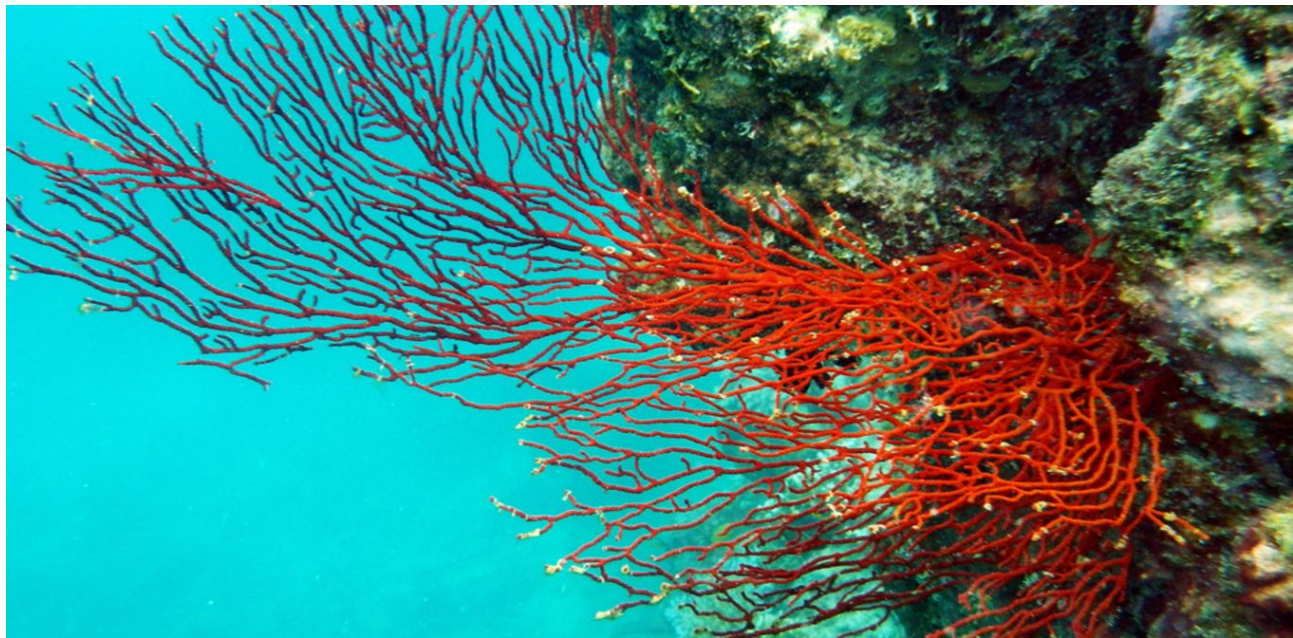
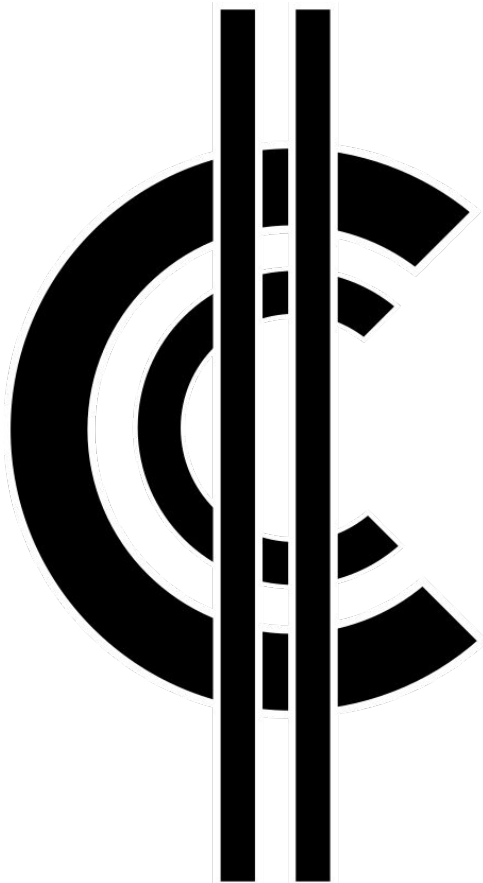
Niets in gooi

HIER BEGINT DE ZEE

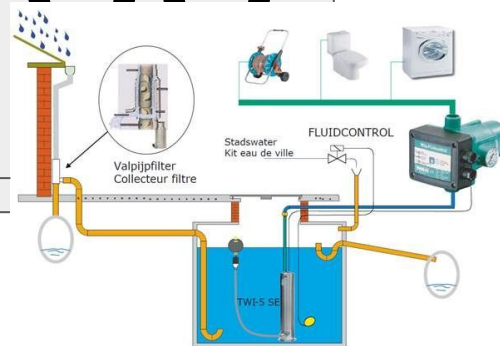
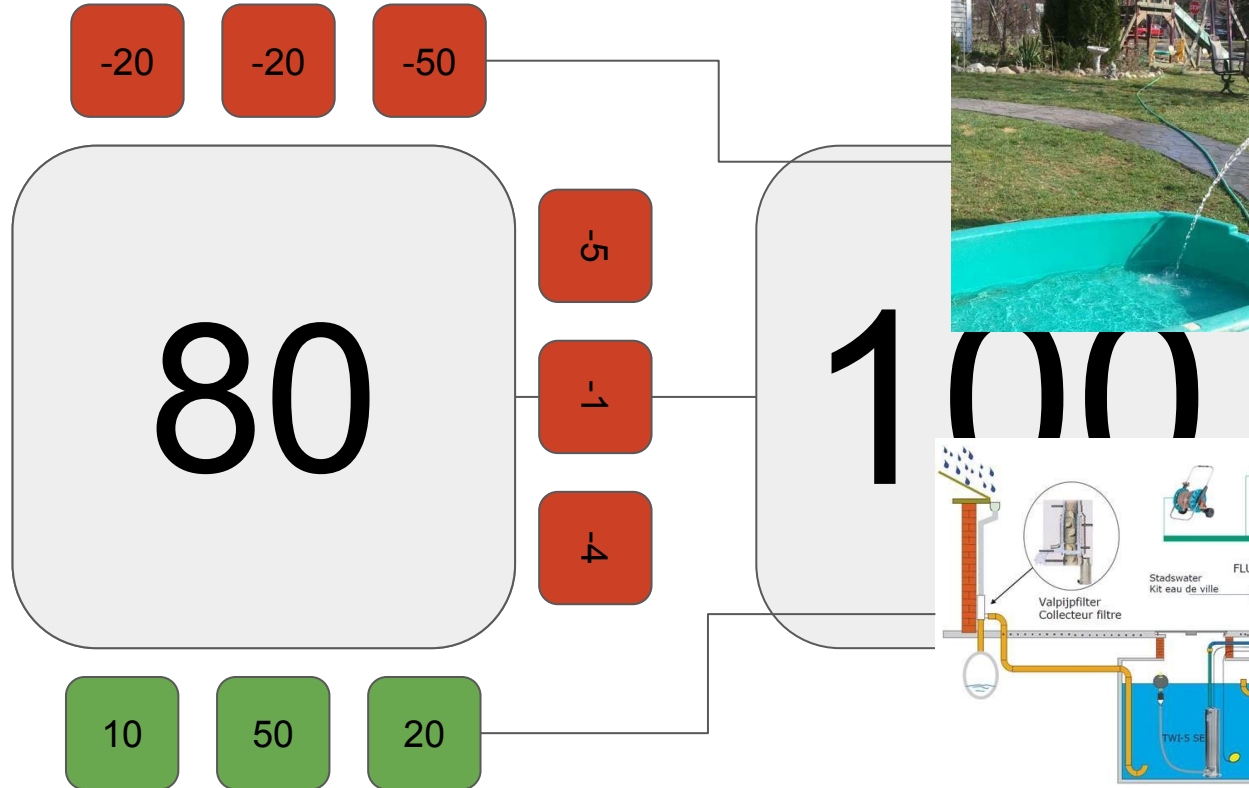








Grow coral on a top branch node in the tree



10€

10 Coral Coins in wallet!



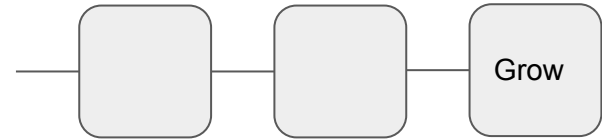
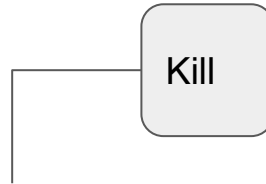
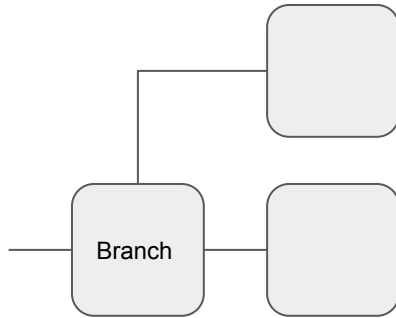
10¢

# aKGBw

add Kill Grow Branch wait

The outcome of a transaction can be one of the above

-10€

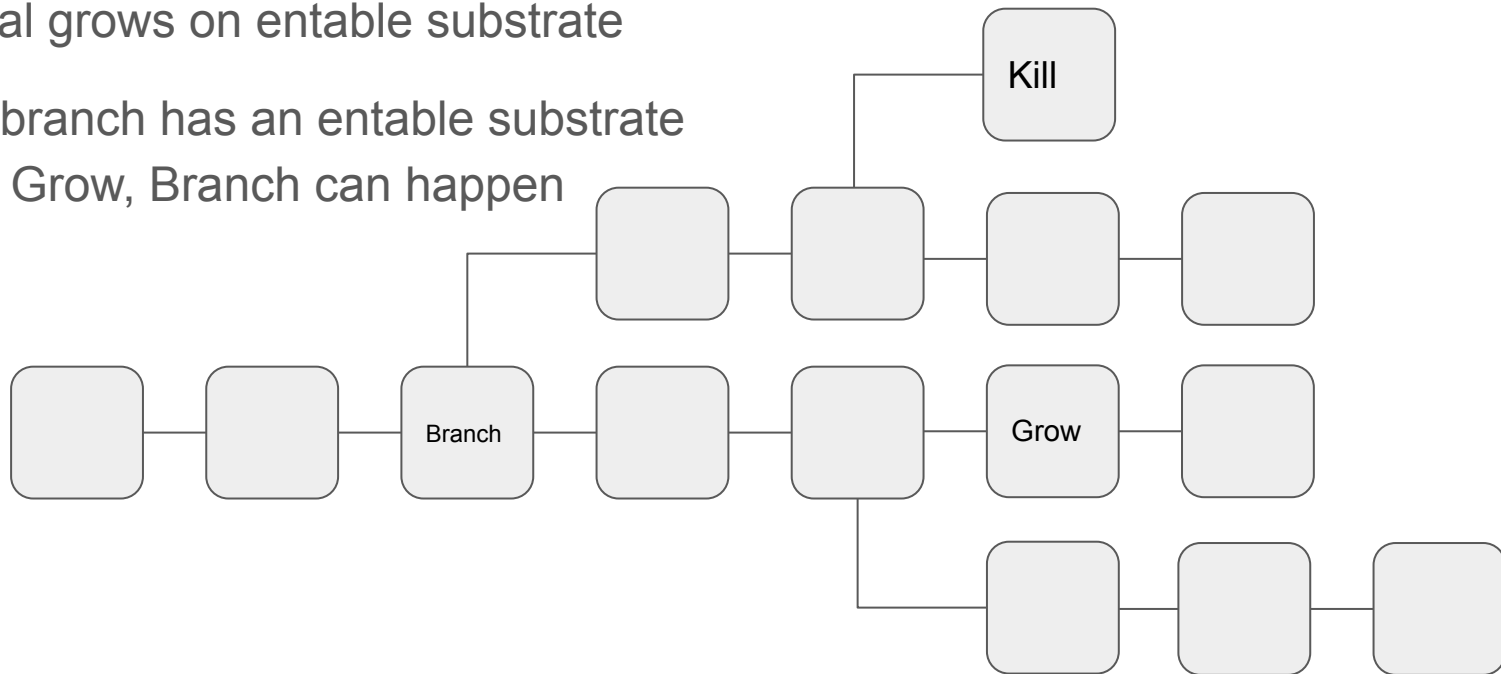


# Grow coral

## Coral grows on entable substrate

## If a branch has an entable substrate

## Kill, Grow, Branch can happen



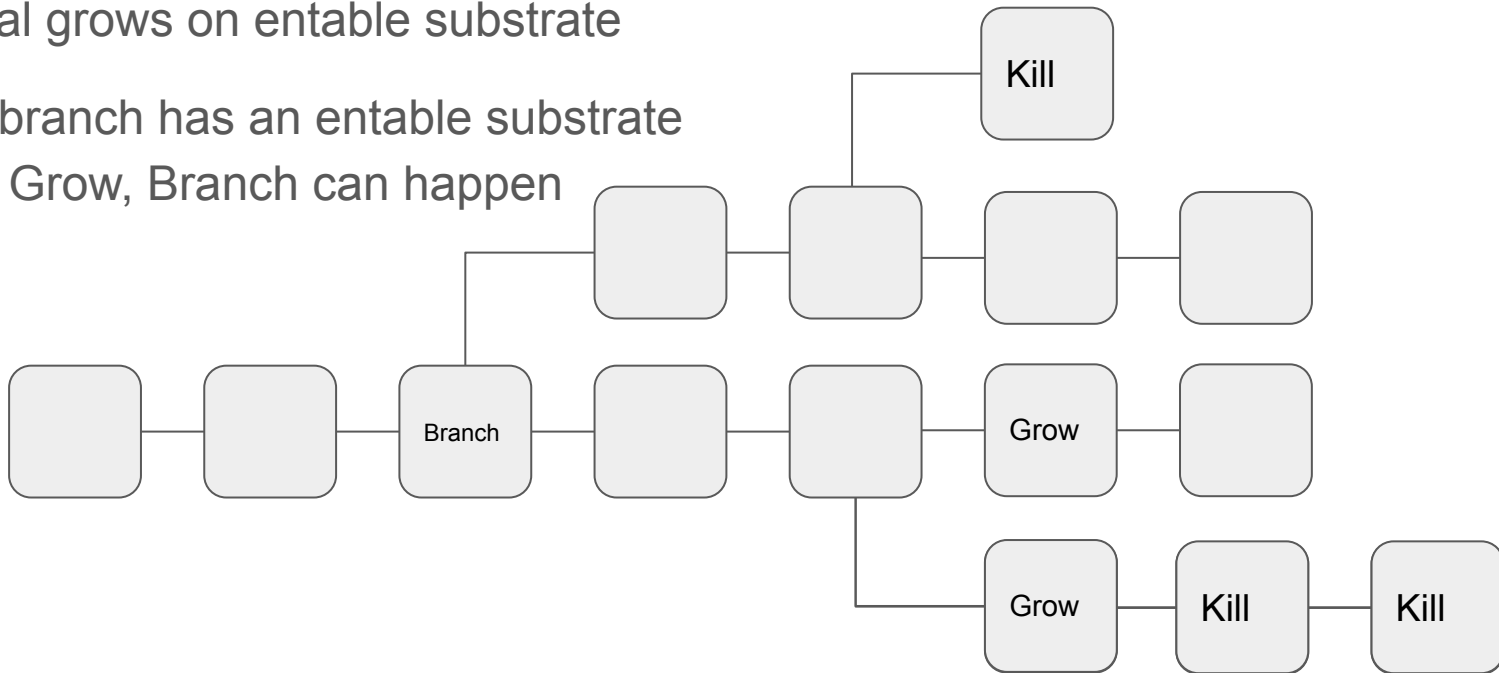


# Grow coral

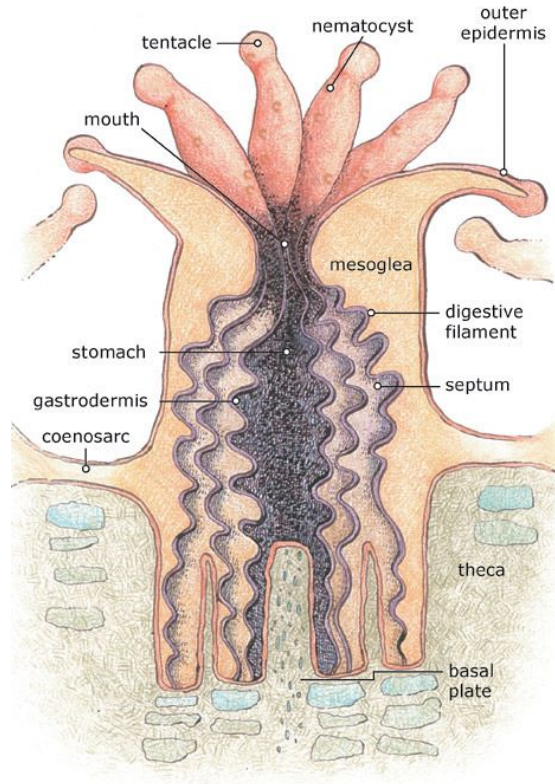
## Coral grows on entable substrate

## If a branch has an entable substrate

# Kill, Grow, Branch can happen



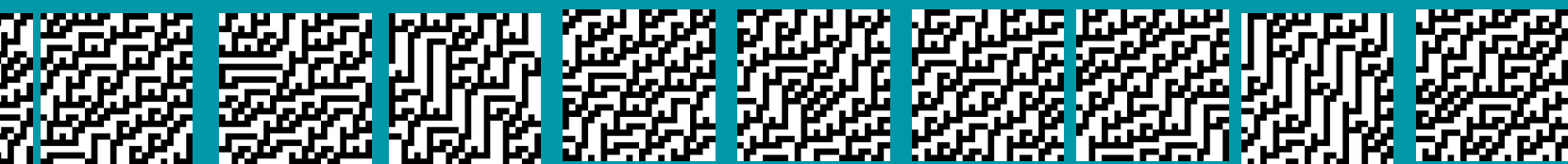
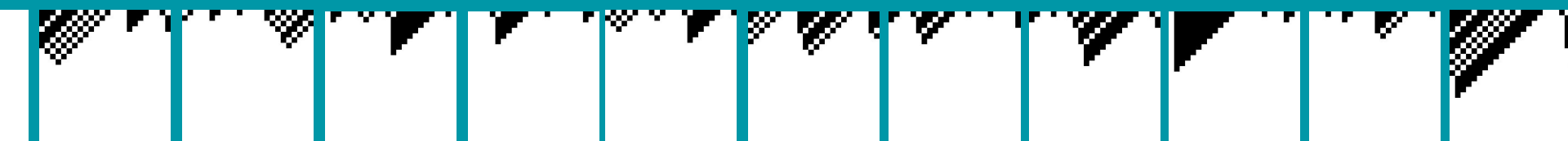
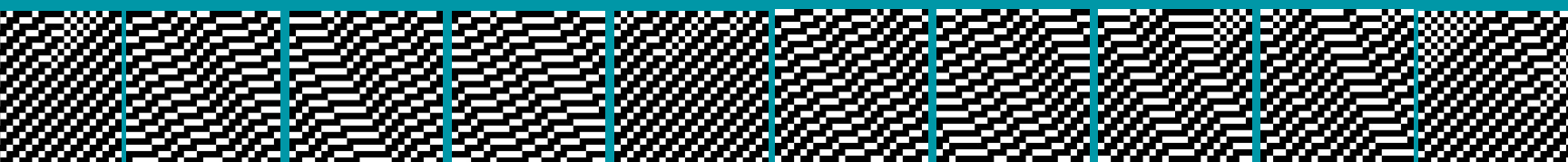
# Individual NFTs



Every water transaction influences the branch balance

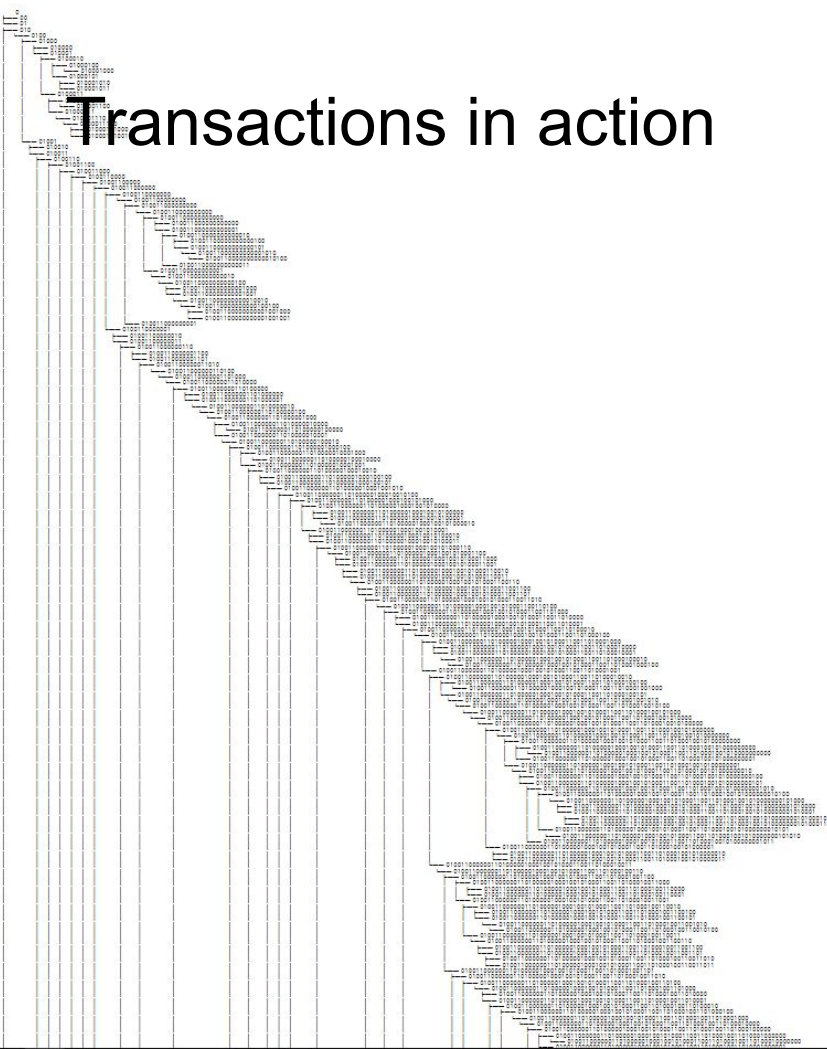
Individual contributions are weighed locally and generate an NFT





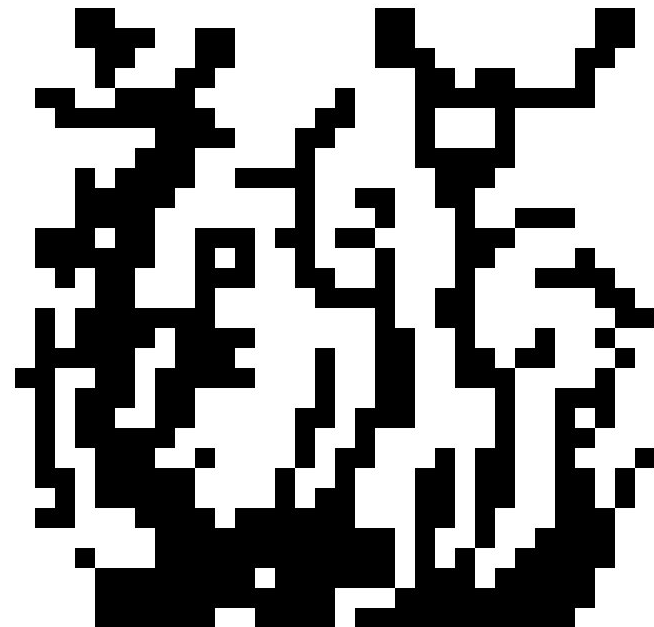


# Transactions in action





# Real Time Global Scope Zoomable NFT Coral Ecosystem View



# Rules

## elements

kill - grow - branch - wait (KGBw)

A certain time must have passed before deciding KGBw:

`KGB_time = 1 (day)`

decide KGB:

action	when	influence
kill	0-10 or 180-200	extrema: kill up till last branching point, otherwise % till branch
grow	30-45, 55-90	grow % on branch
branch	45-55	convert a leaf node to a branch node
wait	10 - 30	we don't die, yet don't grow as well

Thus, we will pass this as a parameter to the NFT viz.

## water influences

Each leaf node has a water bias, starting at `100`.

**global water:** when entering water in a branch, the water gets distributed downstreams (up in the image). The water is not necessarily distributed evenly. So the waterbias can be elevated in certain branches.

**local water:** on a leaf node, you can also have drought. This is a subtraction to the waterbias.

## individual contributions

An NFT is generated based on each transaction. Each transaction has either a positive or a negative influence, some examples:

1. emptying your watertank before a large period of waterfall is positive (make space for buffering incoming water)
2. filling your swimmingpool during drought is very negative.

The transaction itself has an NFT created, based on cellular automata. On one leaf node, all NFTs have the same seed.

## the coral tree

We start with one coral tree. The community should try to grow the Coral Tree by combining their efforts in branches of the Coral Tree. A branch is thus a form of granularity and also gives an individual more weight in its own branch (the further you can branch, the lesser there are people to take into account, yet also the more vulnerable you are towards large weather influences).

## gameplay mechanics

A user measures his/her water usage. He/she has a (smart) contract with his/her water supplier.

The water supplier is the one who decides how many Coral Coins to enter in the system.

by using water, you have an influence on a leaf node. Due to influence of **global** and **local water**, the leafnode itself has already a bias of water (between 0 and 100). When the smart contract is executed, the time passed on a leaf node is count. With enough contributions and the time passed, a decision for a leaf node is being made (KGBw), allowing the coral reef to evolve.

Each time an individual agent makes a contribution, the leafnode checks whether a certain time has passed at that node. The sum of all contributions and waterbias after that time is kept, all individual contributions at that node are kept on the blockchain, yet not used anymore. Based on the sum, we make a decision towards growth (or not).

## Coral Coins



# Save the reef - enjoy the planet



10000 €

[https://github.com/putteneersjoris/rythms\\_in\\_nature](https://github.com/putteneersjoris/rythms_in_nature)