WHITE PAPER

CARBON BASED LIFEFORMS

Prizes & bounties

TRACK PRIZE - DAO's

NEAR - NET ZERO IS NEAR

FILECOIN - IPFS General category + Social Good Warrior

FLUX PROTOCOL - FLUX'S FIRST PARTY ORACLE ON NEAR

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I) INTRODUCTION

Our project is composed of a CO2 tracking tool to create a unified subgraph database monitoring CO2 emissions and mitigations, and a DAO protocol on the NEAR Blockchain. The Carbon Based Lifeforms DAO harnesses the power of its created database to help companies achieve their environmental goals, their marketing goals, as well as create a viable environment economy.

Context

The NEAR Foundation engaged South Pole, the leading low-carbon project developer and climate solutions provider, to measure the carbon footprint of the NEAR protocol and meet its commitment to climate neutrality. By offsetting the first year's emissions in supporting tree planting projects and seeking to reduce avoidable emissions through to the second accounting year, NEAR has been awarded South Pole's carbon neutral product label for 2021. The three green projects supported by NEAR are Kariba Forest Protection, Vegachi Forest Restoration and Afognak Forest Carbon.

II) CURRENT ENVIRONMENTAL MARKETING ISSUE

Many companies invest heavily in marketing & communication visibility for their green projects. However, the effectiveness of such spending is often very low as people get more aware of the lack of transparency and reliability of such brands' announcements.

III) OUR SOLUTION: CARBON-BASED LIFEFORMS

To solve that issue, we are convinced that Transparency and Action-based marketing strategy is the future of Brands' environmental representativity. That is why we developed Carbon Based Lifeforms, a community-based web3 protocol that can show companies that they can get a better return on their environmental strategy by using our all-in-one marketing strategy that provides them with :

1) Offsetting their carbon emissions via green projects exposure
2) Grow their visibility and their environmental representativity among the consumers
3) Insetting their carbon emissions via optimizing their carbon footprint and benefitting from top-tier experts and live data-monitoring to reduce their emissions
4) Create a long-lasting relationship with their consumers in creating consumer experience and a viable environment economy

All of this with the same traditional budget they were used to spend into pure public environmental communication strategy.

IV) SOFTWARE ARCHITECTURE

Blockchain is specifically tailored to bring the required transparency. Also, the decentralized architecture of the blockchain offers the possibility to develop a fully transparent and community-based application.

Carbon Based Lifeforms protocol gives consumers access to the best database ever created on the environmental impact of different companies. And it also gives them the possibility to take action in our DAO to provide companies with environmental and marketing services to achieve their environmental goals for the greater good.

To develop Carbon Based Lifeforms we used as Technical implementations:

- Flux Oracle
- IPFS
- Subgraph
- NEAR Blockchain
- Innovative functionalities: company ranking, bounty hunting, green betting, DAO voting, and actions.

Our project is composed of two components interconnected. A CO2 tracking tool to create a unified database monitoring CO2 emissions, CO2 mitigation actions, and carbon offsetting by any entity around the world. And a DAO protocol on the NEAR Blockchain. The Carbon Based Lifeforms DAO harnesses the power of its created database to help companies achieve their environmental goals, their marketing goals, as well as create a viable environment economy.

I) CO2 EMISSIONS AND MITIGATIONS TRACKING TOOL

*Use of **satellite imagery data***

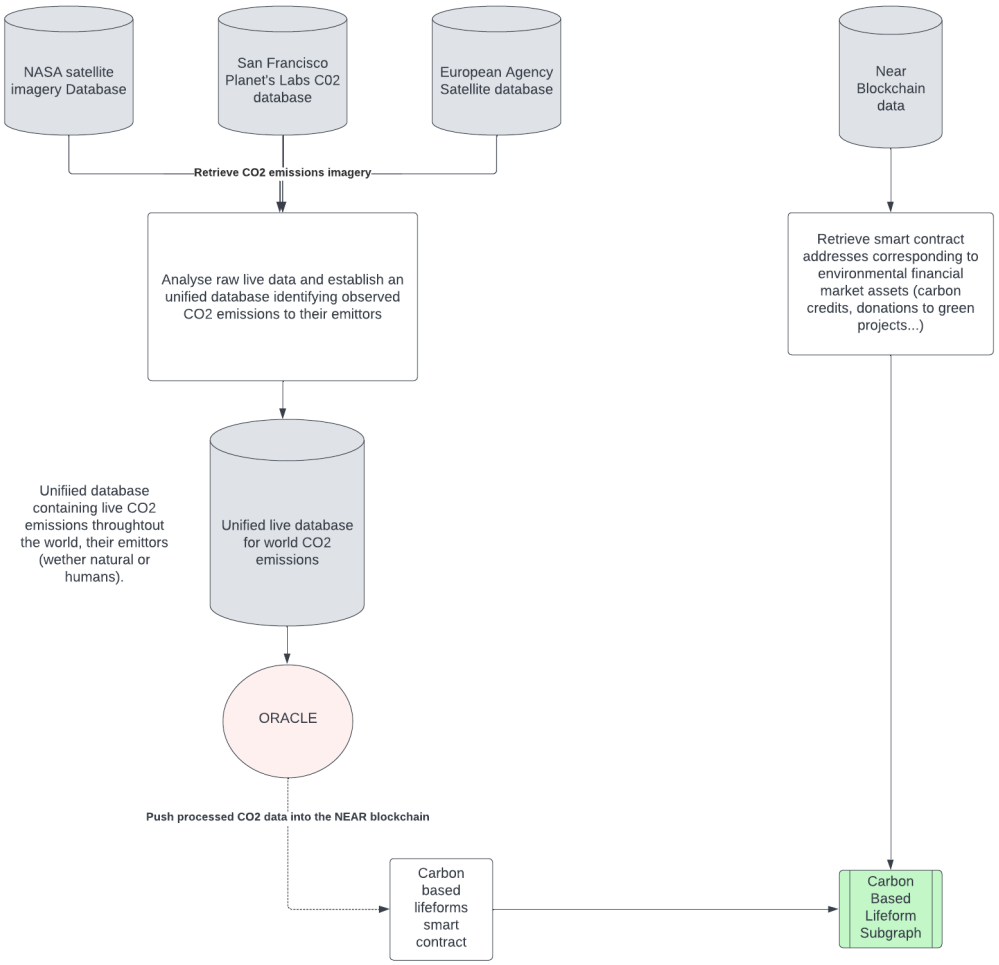
With the current boom of space technologies and space service providers, we are provided with high-accuracy data to measure and spot the CO2 emission of any entity wherever they might be located on the planet. We use open-source data from international organizations such as NASA and the European Space Agency (ESA), from public organizations such as Carbonmapper.org, as well as private space service providers such as Planets Labs with its 200 pelican satellites constellation.

*Monitoring of **On Chain financial market activity related to environmental assets***

Identification and monitoring of Smart-contract on near blockchain that are related to the environmental financial market :
Monitoring of Carbon Credit Market
Monitoring of Donation
Monitoring of environmental impact nft collection like the "Green Nft" auction by South pole and Mintbase

Software Architecture for the CO2 tracking tool.

1) We retrieve open source databases from satellites mapping terrestrial CO2 emissions
2) Creation of a unique database by analyzing CO2 emissions and linking them to their source (human or natural event)
3) The oracle retrieves the data from the database
4) The oracle pushes data into the NEAR blockchain by activating the "carbon based lifeforms" smart contract
5) In parallel, we identify and monitor NEAR smart contracts corresponding to the financial market of environmental assets (carbon credit, donation to green projects,...)
6) The subgraph collects data to create a unified global database of live data related to CO2 emissions, who is responsible for them, and the actions taken by each entity to counteract them
7) The subgraph updates its data
8) Run a query at the subgraph to get the desired data



II) DAO Based Protocol

A) Functionalities

DAO voting

The Dao will directly be in charge of the allocation of a part of the budget coming from the client company. That part of the budget is 100% directed to green projects exposure to offset the carbon emission of the company. We already have established connection with Open Forest protocol and we identified other environmental positive projects (MintBase green NFTs, Raiz) from which the Dao will be able to select.

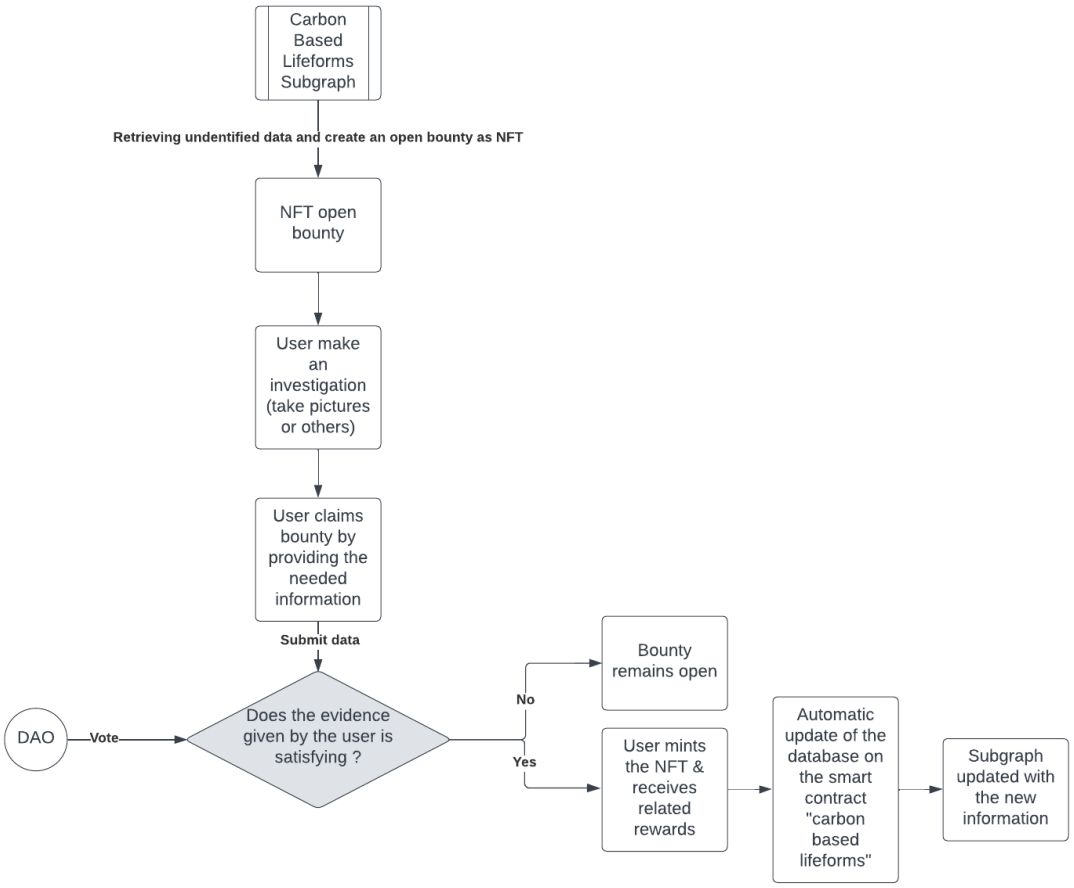
Insetting their carbon emissions via optimizing their carbon footprint and benefitting from top-tier experts and live data-monitoring to reduce their emissions.

Dao members can self employ themselves through bounty-hunting and open missions. The goal of the bounty-hunting is to enhance our tracking tool. The open mission consists of using our data and providing the client company expertise to their environmental strategy.

Bounty-Hunting

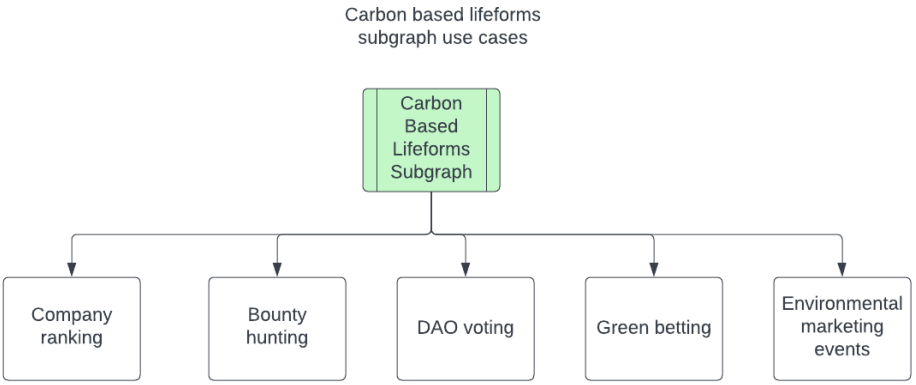
Our vision is to create an economy that rewards actively involved people in the community. We open bounty claimable by anyone who does the investigation on specific geographic areas where our data is not complete.

1) The subgraph retrieves unidentified data and creates an open bounty as NFT
2) User can make his investigation thanks to the open bounty instructions
3) User claims bounty with the submission of data needed
4) User deposits money to submit in order to avoid free-rider behavior
5) DAO vote to accept or refuse the submission of the user
6) If submission succeeded by the DAO, the user earns rewards + his money deposited and there is an automatic update of the database on our smart contract + subgraph updated the information
7) If submission failed by the DAO, the user lose bounty and it is re-opens for everyone



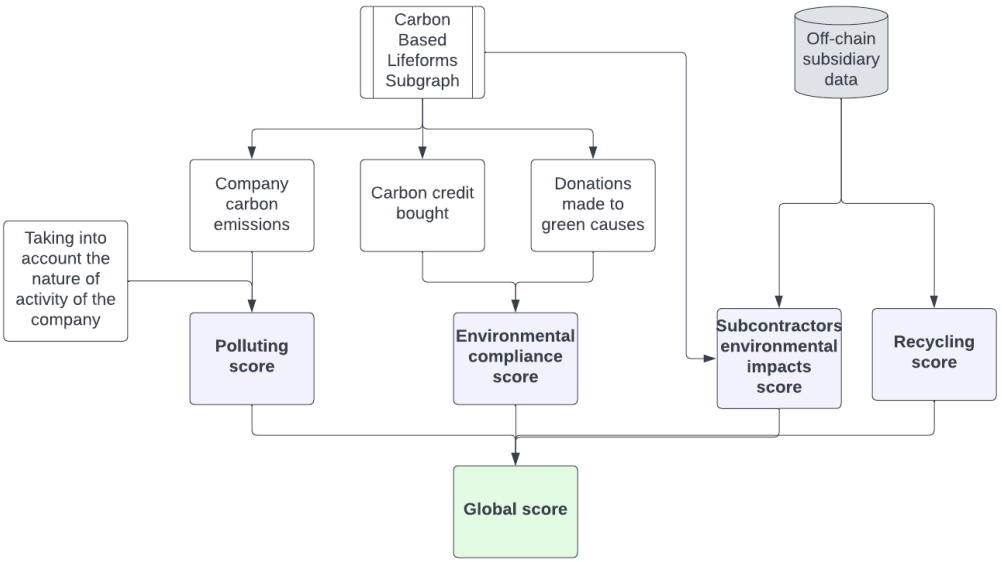
Grow their visibility and their environmental representativity among the consumers

Through company ranking, Green betting as well as the bounty-hunting and self employment missions, the client company created a viable environment economy with the company's image at its core. Indeed that economy enables community growth and brand representativity inside of that community. This is our magic formula and our major innovation in the marketing field to say that we succeeded to have a marketing & communication impact, and effective environmental positive impact at the same time.



Company ranking

1) The subgraph collects three types of data: company carbon emissions, carbon credit bought and donations made to green causes
2) A mitigation coefficient is given to each company given the nature of its activity whether it is easy or not to reduce their carbon footprint (e.g airlines, agriculture, livestock, fashion,...)
3) Carbon credit bought and donations made to green causes determine the environmental compliance score
4) The recovery of subsidiary data allows the DAO to compute the subcontractors environmental impacts score and the recycling score
5) The polluting score is calculated thanks to the company carbon emissions retrieved in 1) and coefficient in 2).
6) The global score is computed thanks to 3) 4) and 5) and that score evolves over time, setting the foundation of a dynamic ranking and competition between companies.

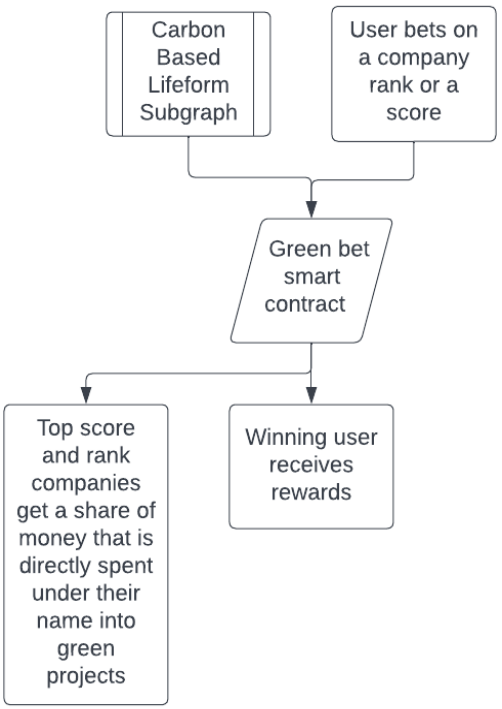


Green betting

In the continuity of applications like Civic Dash our users will be able to give their opinions about the actions and strategies that are carried by the different companies then bet on the efficiency of those measures. We will create more challenges to animate our community and reward the best companies.

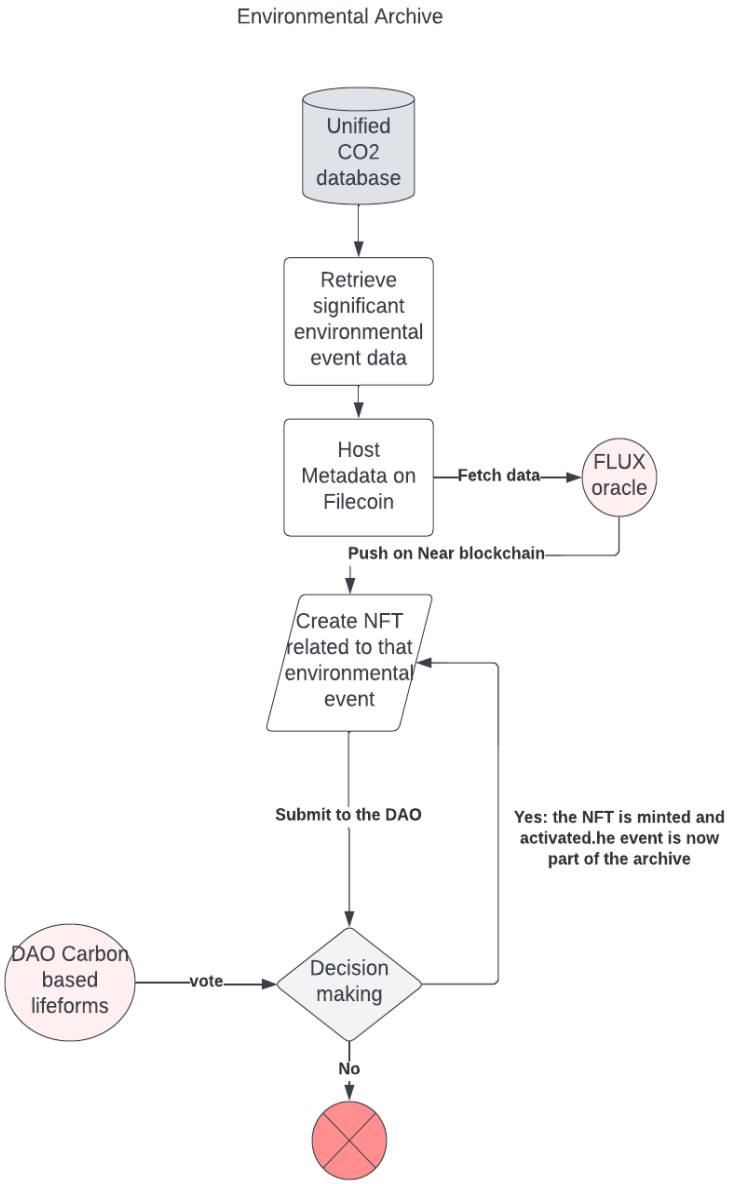
Process to announce winners of the bet:

1) The "carbon based lifeforms" subgraph and the bet made by the user on a company generates a green bet smart contract
2) The smart contract rewards winning bets
3) The smart contract gives a share of the profits to companies so that they invest directly and sustainably in green projects



Environmental Archive

1) Creation of a unified database of all high impact environmental event images
2) Metadata for these images are hosted on Filecoin
3) Filecoin fetches data to the FLUX oracle
4) FLUX oracle pushes the data onto the Near blockchain
5) Creation of an NFT related to that environmental event
6) The NFT is submitted to the DAO for voting
7) If the NFT is accepted, it is mined and activated and becomes part of the archive
8) If the NFT is not accepted, nothing is done



Interesting use case: this makes it possible to open on-chain insurance use cases that can be based directly on the available archive data to release funds directly from the blockchain without needing to send some experts on geographic area.

B) Environmental marketing events

Create a long-lasting relationship with their consumers in creating consumer experience and a viable environment economy

Each year on climate-relevant dates (i.e the climate day December 8th), a green festival will take place to reward the best-scored companies and highlight their practices during the event. We can use many products created by these companies to organize and promote their impact. The aim is to raise awareness among consumers in their daily lives and to consume sustainably. The profits from the green festival are used to fuel our environment community-based economy. With the aim of making the data more reliable, for example by further expanding our bounty-hunting program.

V) BUSINESS MODEL

How we create economic value

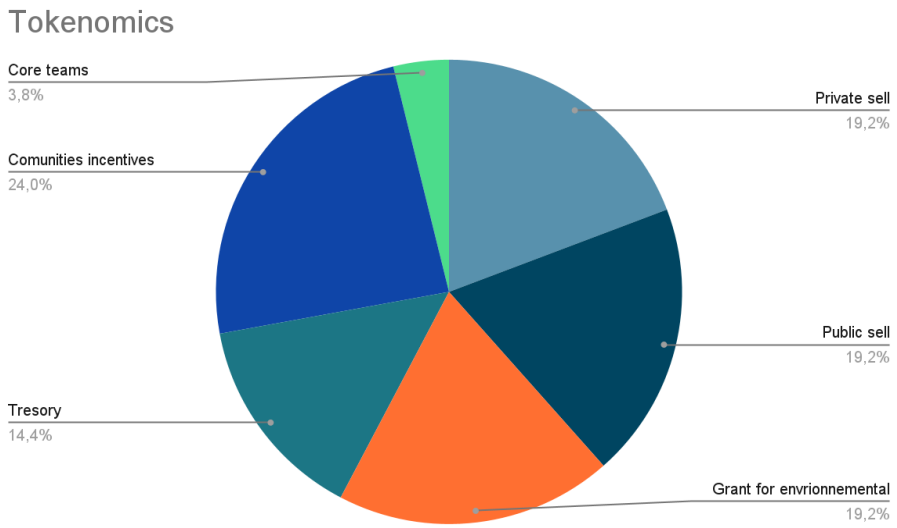
1) Company environmental marketing strategy: Companies come to us for their marketing campaigns and must use our token to purchase our services.
2) Organization of multiple events like the festivals that can generate profit and feed our community (bounty hunters…)

Use of funds collected

1) Bounty hunters rewards: when bounty hunter receives an approval of their submission by the DAO, they will receive a reward previously collected by our protocol
2) Self employment open missions to monitor company activity, spot leakages, establish the client environmental mitigation insetting carbon strategy
3) Financing real action to reduce the impact of these companies via projects such as Open Forest, with whom we are already in contact
4) Creation of various other marketing events

Token Economics (CBL token)

Through the creation of CBL tokens, we establish the following distribution:



Firstly, the tokens will be marketed in 3 phases, the private sell, the public sell and the first incentive programs. These different injections of cash will allow us to start building the community and to organize the first events.

In addition to the cash flow from our customers, our economic ecosystem also has several reserves such as the treasury and incentives budget for the community to ensure that our members are always rewarded for their contributions without jeopardizing the reserves of our protocol.

Potential Partnership

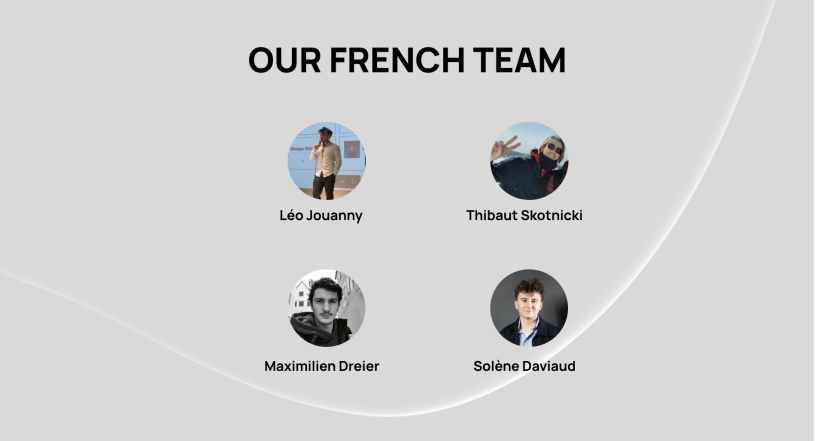
The Open Forest Protocol (OFP)

Near participates in The Open Forest Protocol (OFP). It's a blockchain-based platform that denominates a crypto-economic ecosystem for communal measurement, verification and reporting of forestation data. The OFP is built on top of an existing L1 blockchain (NEAR Protocol) and provides the following parameters for the ecosystem:

-A standardized validation and governance model for uploading, verifying, and managing data on the network
-A georeferenced system for quantifying and recording plots of land being forested based upon minting a Non-Fungible Token for each project;
-A crypto-economic model for securely managing the upload and validation of forestation data;
-An open-source application and management dashboard for the collection of data surrounding forested zones;
-Developer tools for integrating with existing software and IT solutions and for developers and entrepreneurs to build new solutions on top of the protocol;
-A robust governance infrastructure built around a communally operated OFP DAO.

VI) OUR TEAM

The team is composed of various profiles (from math to dev to business) allowing us to challenge and analyze the ideas, create a strong software architecture, and to have a quick implementation on the market. We are young French students, ranging from 20 to 24 years old, and all very passionate about blockchain.



VII) CONCLUSION

Within those 48 hours we were able to imagine, analyze, research and develop an innovative tracking C02 tool that would provide data, that would allow us to build communities and a complex environmental Dapp.