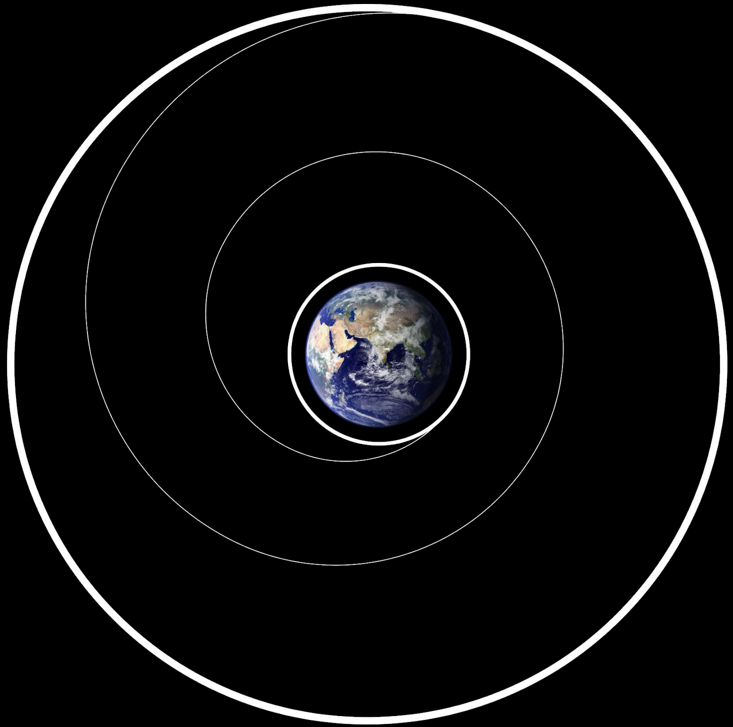
OPENEARTH
FOUNDATION



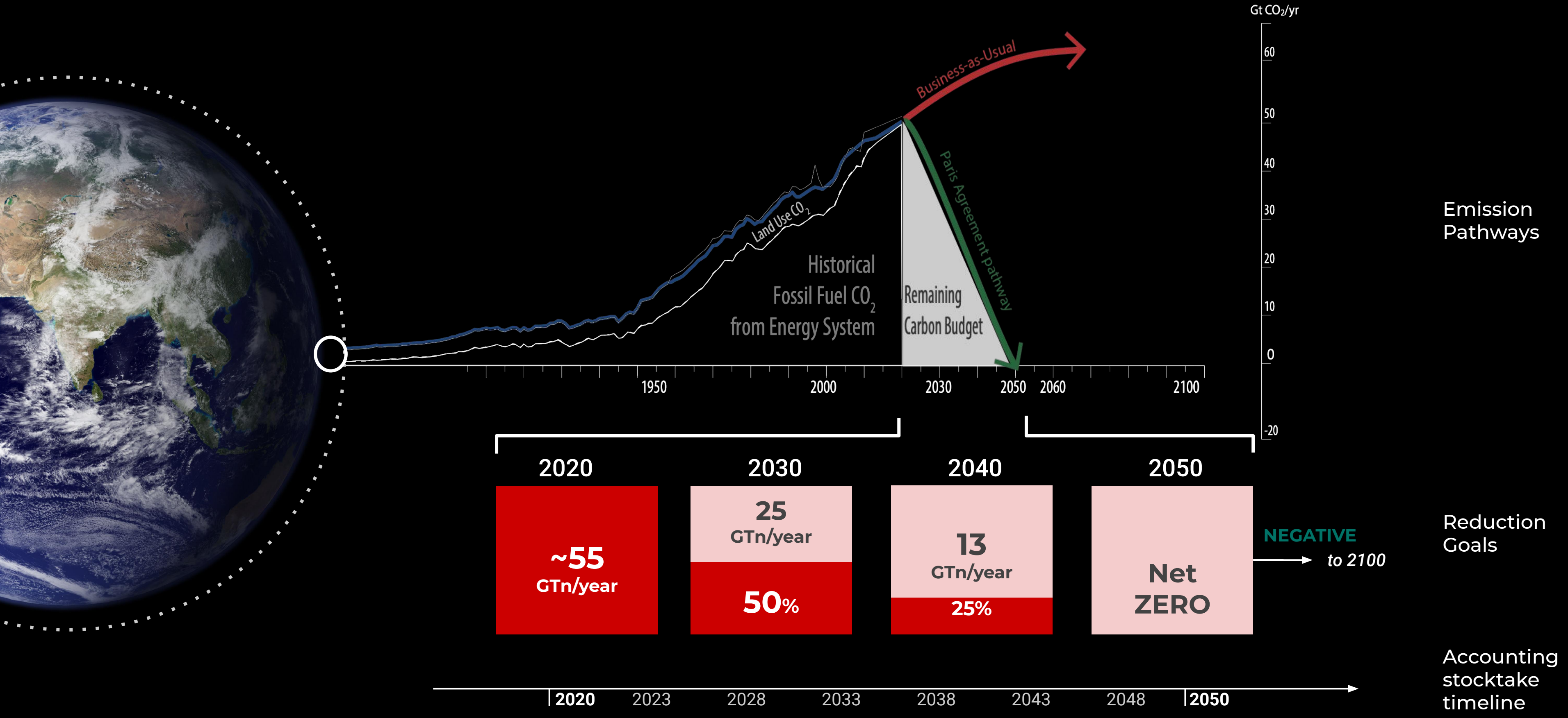
OPEN**EARTH**
FOUNDATION

We develop open digital infrastructure with emerging technology and radical collaboration tools to scale transformative Earth-systems solutions.

www.openearth.foundation

Open Earth is a 501(c)3 nonprofit registered in California.

Our most pressing project is building digital infrastructure for global climate accounting and finance to achieve the Paris Goals

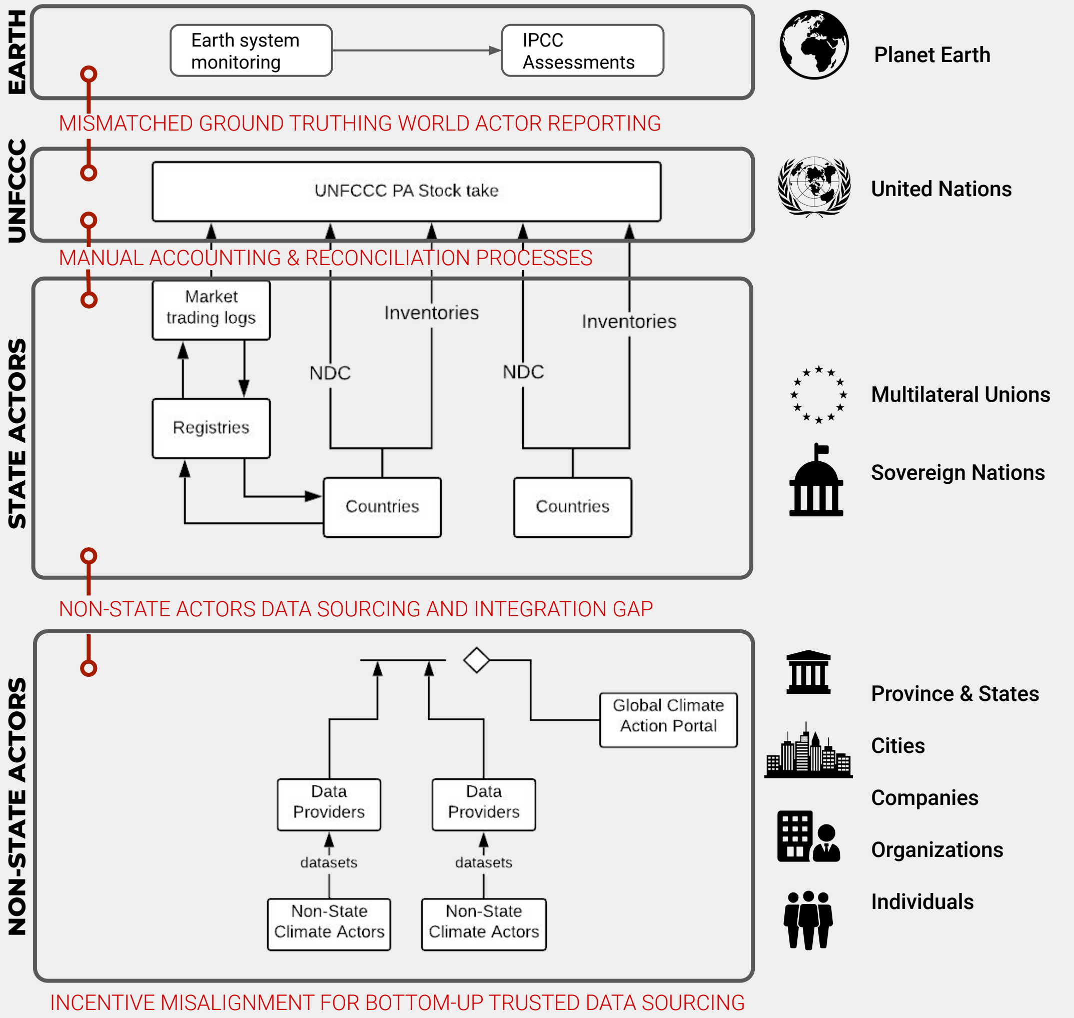


The first global climate accounting stocktake to negotiate commitments of the Paris Agreement is in 2023.

With the current fragmented reporting infrastructure, data consensus is expected to take 3 years and cost over $1B.

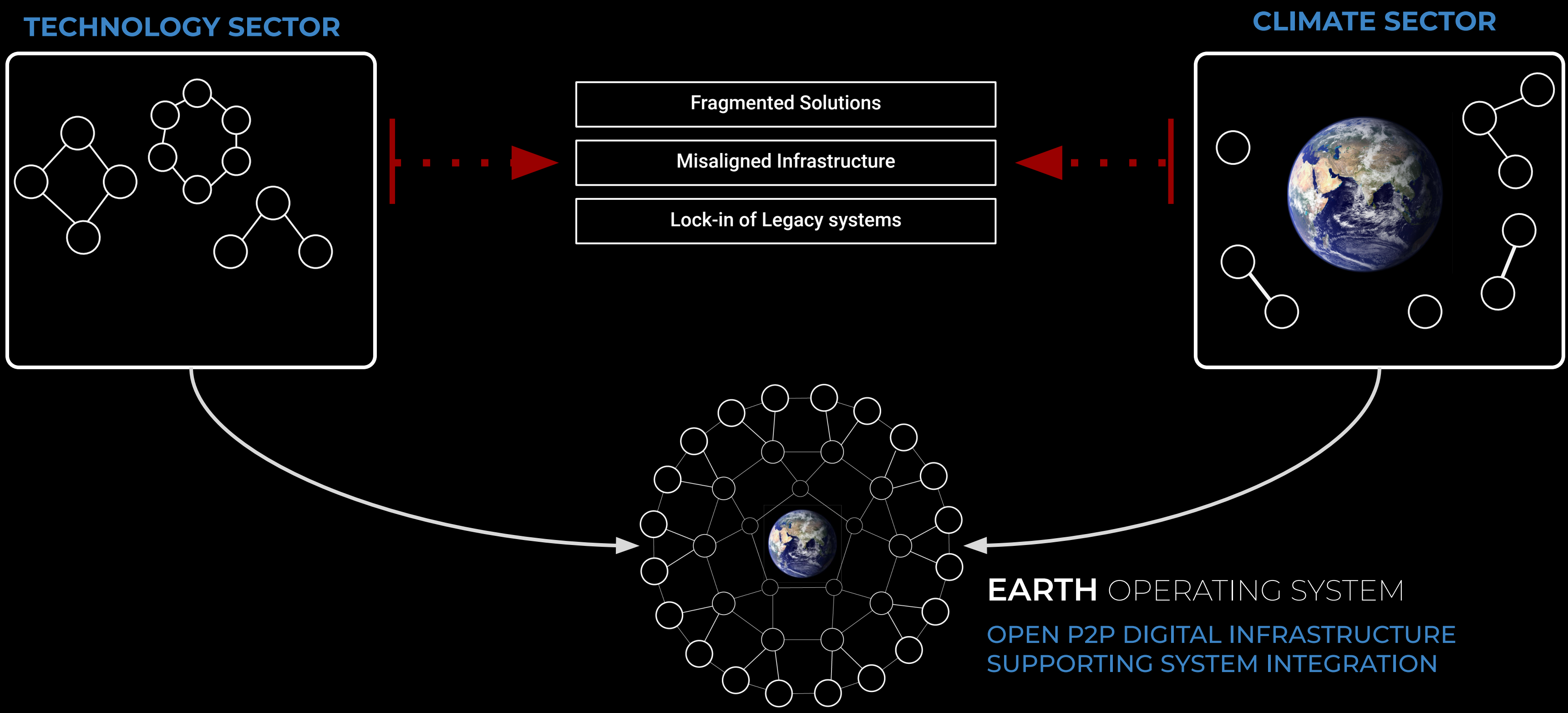
By digitally integrating and nesting all data trails and actors using distributed ledger technology, consensus could be achieved in near real-time and at virtually no cost once a digital public good network is laid out.

GLOBAL CLIMATE ACCOUNTING INTEGRATION GAPS



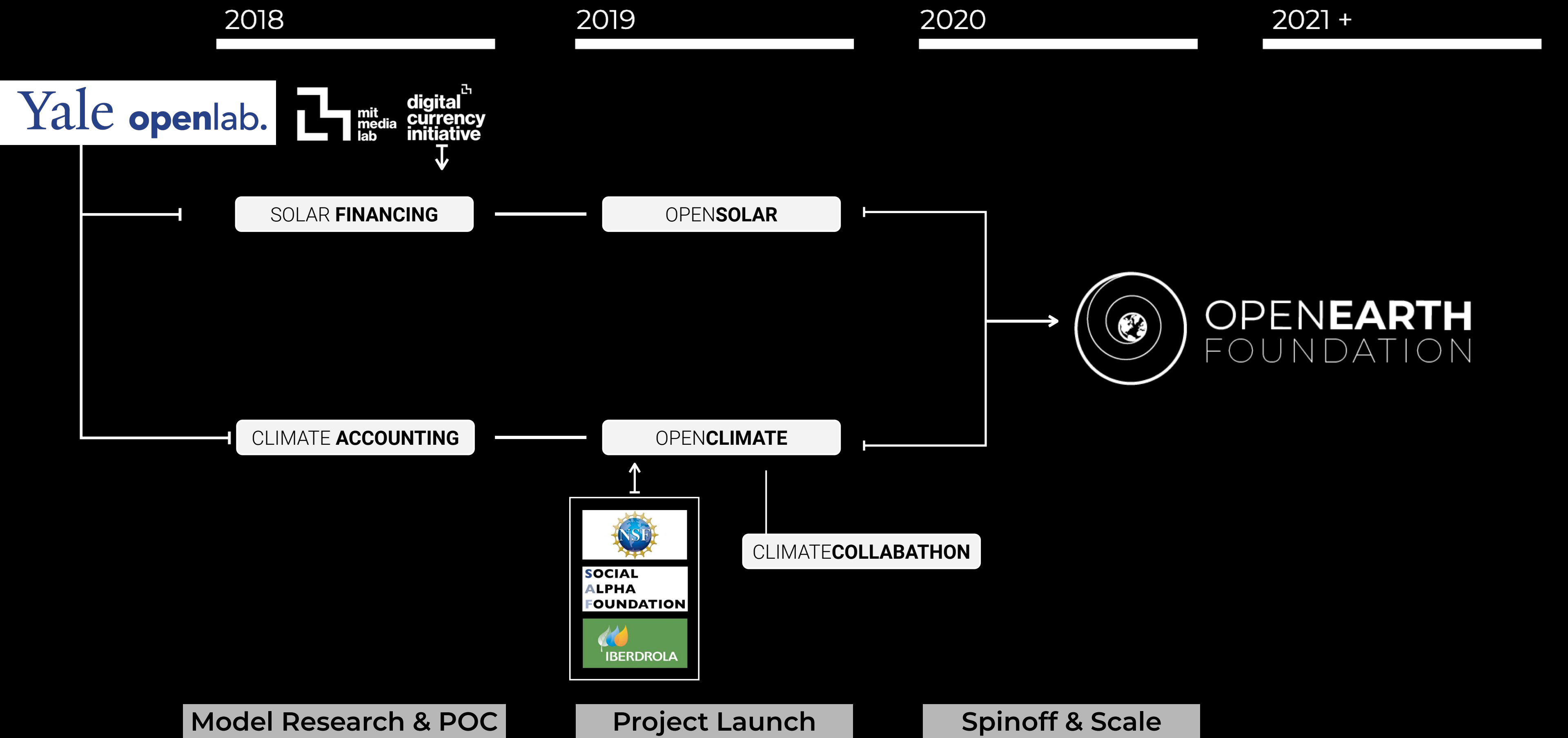
Lack of digital integration for climate is an example of the underlying problem: *misalignment between the tech sector and a global Earth preservation policy network*

CORE PROBLEM

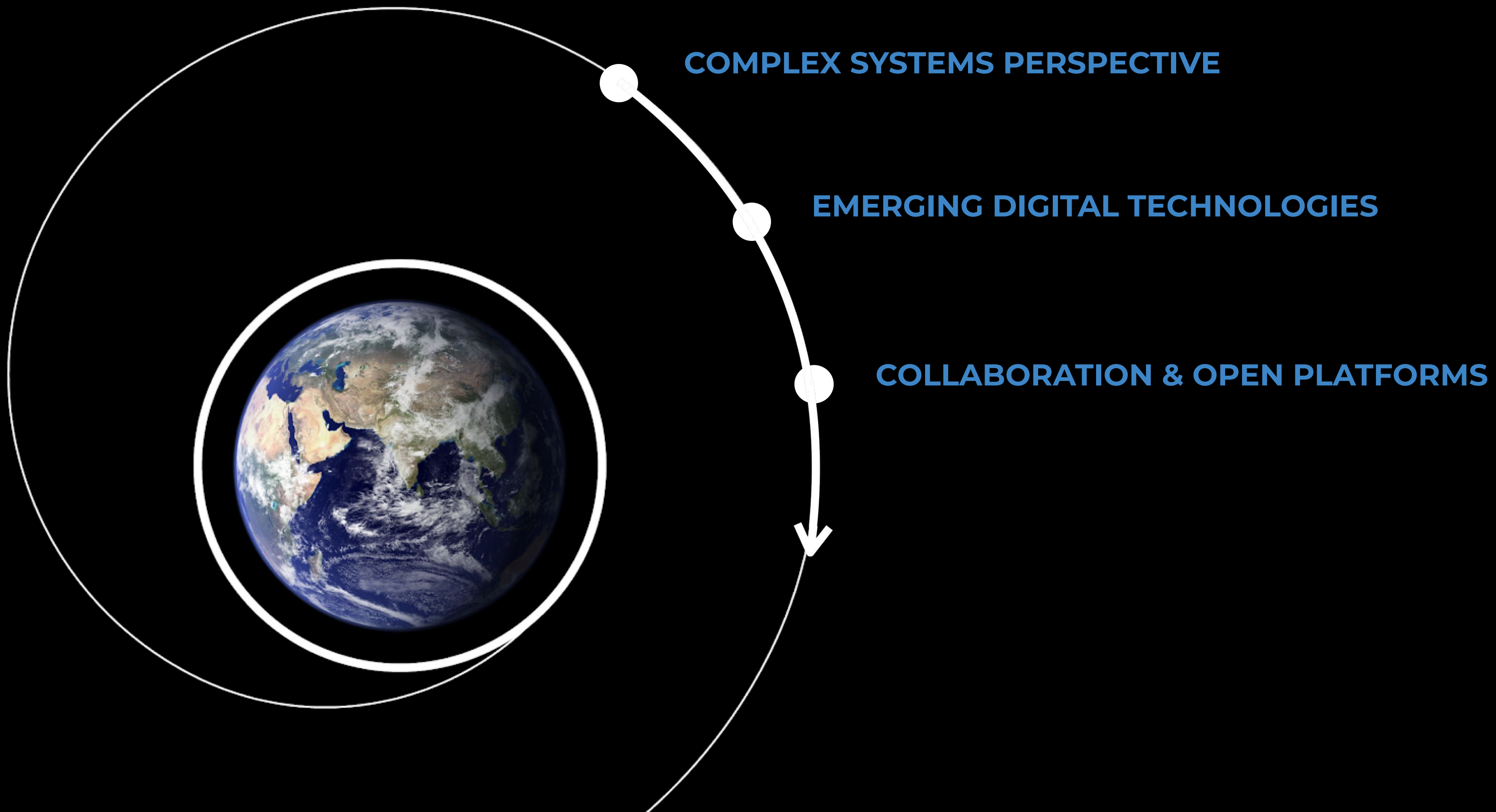


OPPORTUNITY

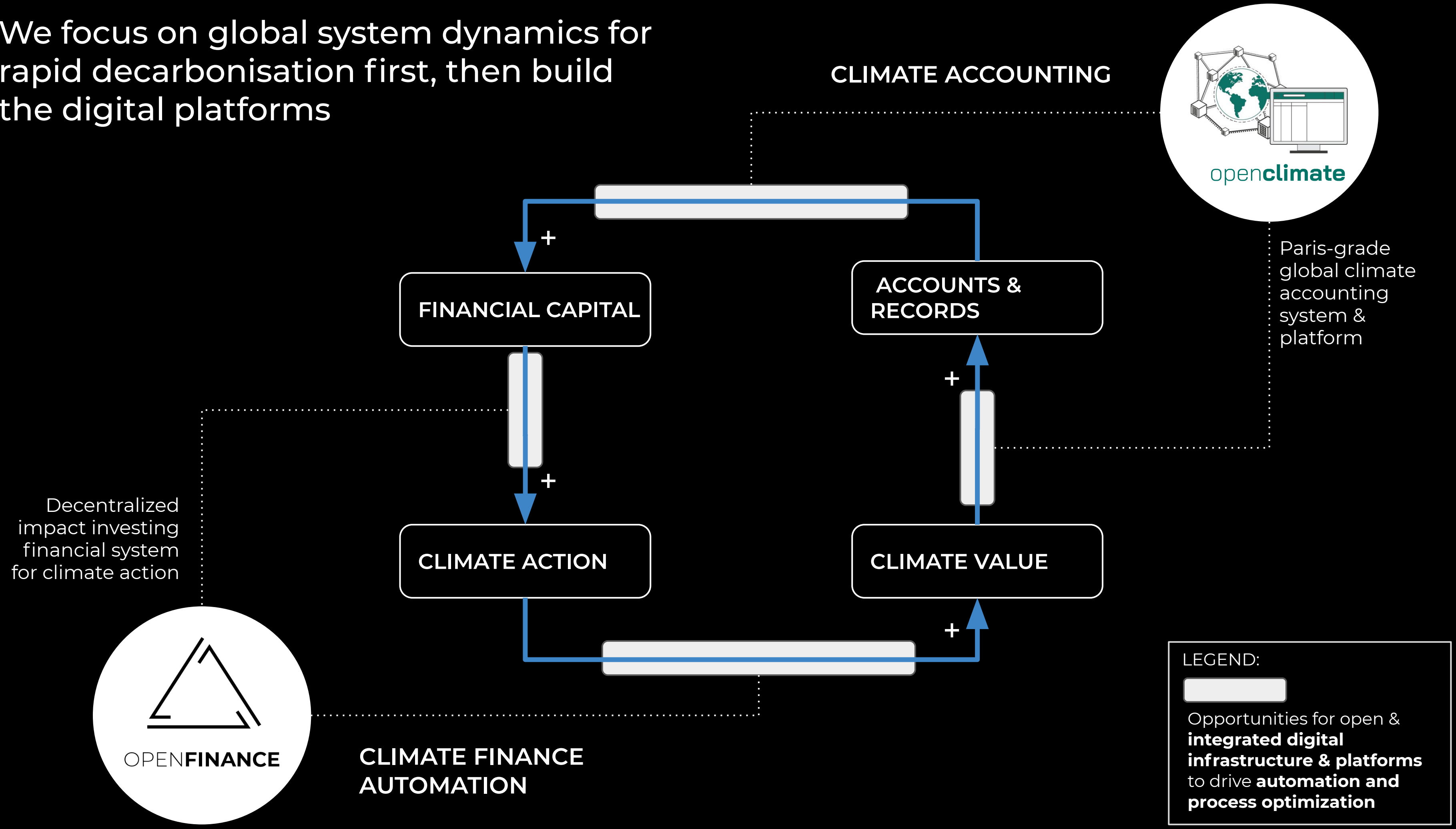
We've been incubating at top institutions, a disruptive open innovation model for climate change over the last 3 years. Open Earth is conceived to scale these efforts.



Our unique work is driven by three core inputs:



We focus on global system dynamics for rapid decarbonisation first, then build the digital platforms



Open Earth acts as the umbrella institution, holding the legal foundation, the lab that drives our systems research and deployment approach, and the project subsidiaries

OPEN**EARTH**
FOUNDATION

INSTITUTIONAL UNITS

- FOUNDATION
- NETWORK
- LAB

VERTICALS

Intervention sectors

CLIMATE ACCOUNTING

CLIMATE FINANCE

OTHERS (2022+)
(EG. BIODIVERSITY, EDUCATION)

PLATFORM PROJECTS

Open Digital Infrastructure

OPEN**CLIMATE**

OPEN**FINANCE**

PILOT INITIATIVES

Multi-stakeholder implementations

NORTH AMERICAN **ENERGY CERTIFICATION SYSTEM**

GREEN NEW DEAL **COMMUNITY SOLAR + BONDS**

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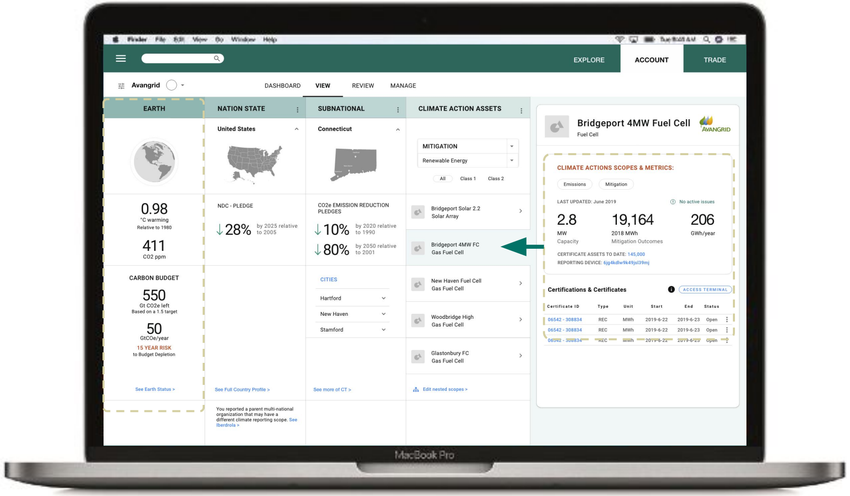
APPENDIX

Incubated platform project details

openclimate

A DIGITALLY INTEGRATED CLIMATE ACCOUNTING SYSTEM



SUMMARY

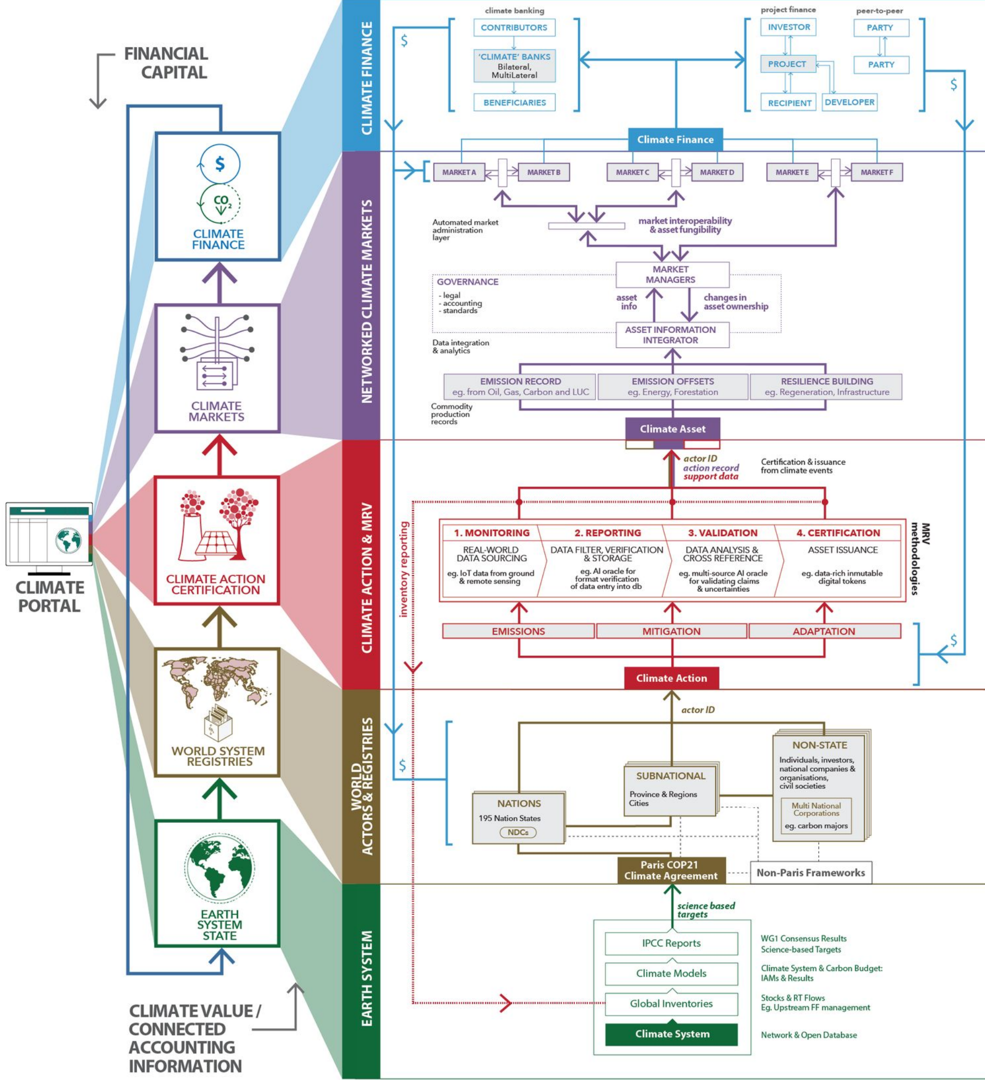
To address the underlying complexity of integrating private sector climate data into public sector reporting at scale, the open climate project leverages emerging digital technologies in three key aspects. First, its core research adopts an architecture based on nested jurisdictions, using spatial web protocols to geographically tag data records. Second, it uses artificial intelligence to automatically clean and reconcile data records. Third, it applies cryptographic tools for actors to report sensitive climate records whilst retaining data privacy. Furthermore, the system is designed to prevent double counting in the certification and trading of mitigation outcomes and allow contractual automation in climate finance mechanisms.

openclimate

THE OPEN CLIMATE FRAMEWORK...

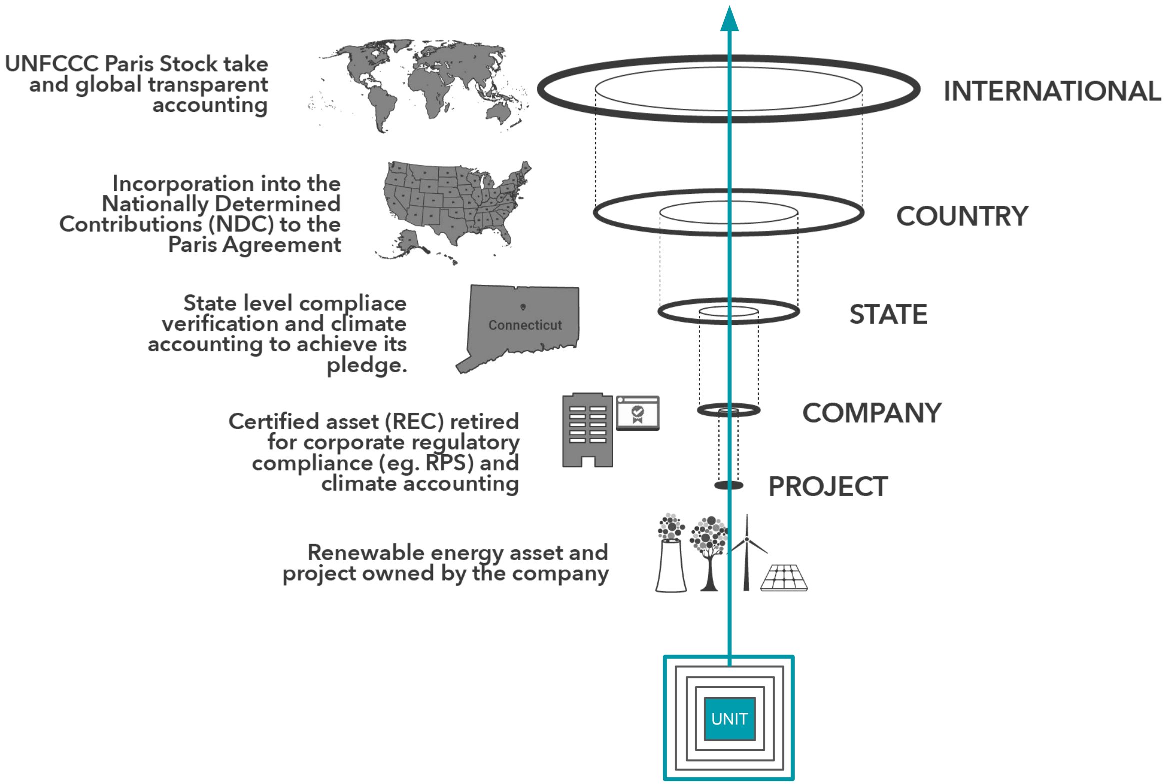
...weaves the consensus on the physical state of the planet, the role of world actors and their registries under the Paris Agreement, the process of digitally certifying climate actions, its linkage to markets and the trigger to scalable finance.

WHITEPAPER
Wainstein, M. (2019) Open Climate: Leveraging blockchain for a global, transparent and integrated climate accounting system



KEY INFRASTRUCTURE FEATURE

1. NESTED CLIMATE ACCOUNTING



Capture the collective climate efforts, integrating **PUBLIC** (National and Subnational) and **PRIVATE** entities while preventing **double counting**.

Key partners and frameworks:

SPATIAL WEB FOUNDATION

VERSES

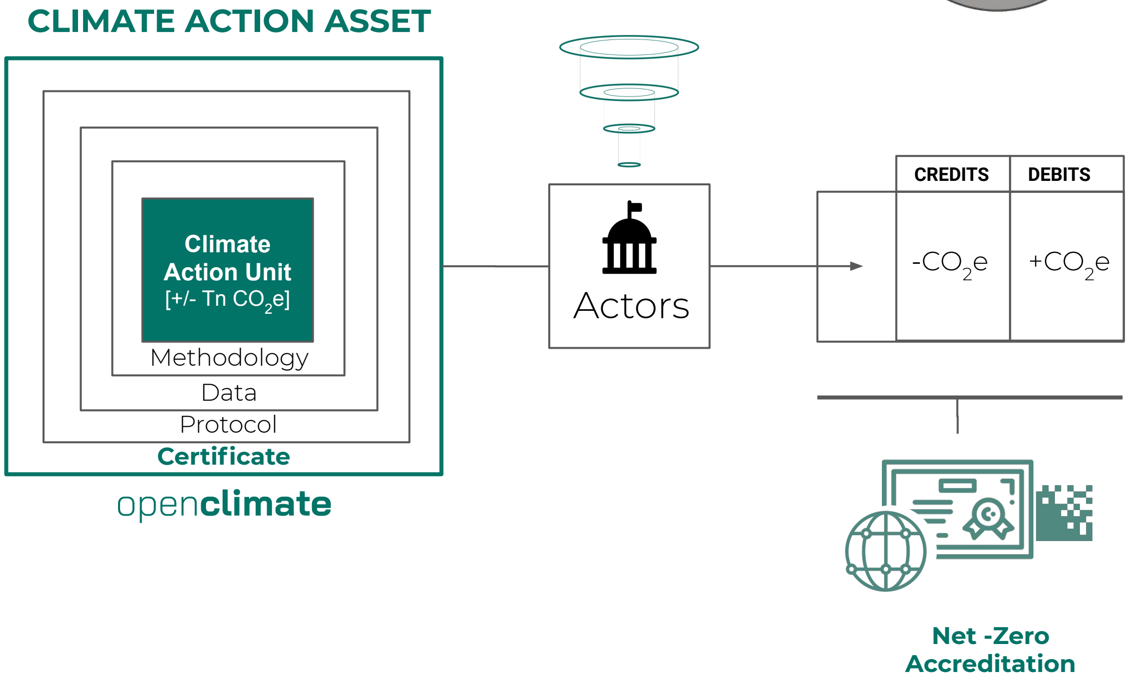
esri

IEEE

2. INTEROPERABLE CLIMATE UNITS

CLIMATE
STANDARDS & PROTOCOLS

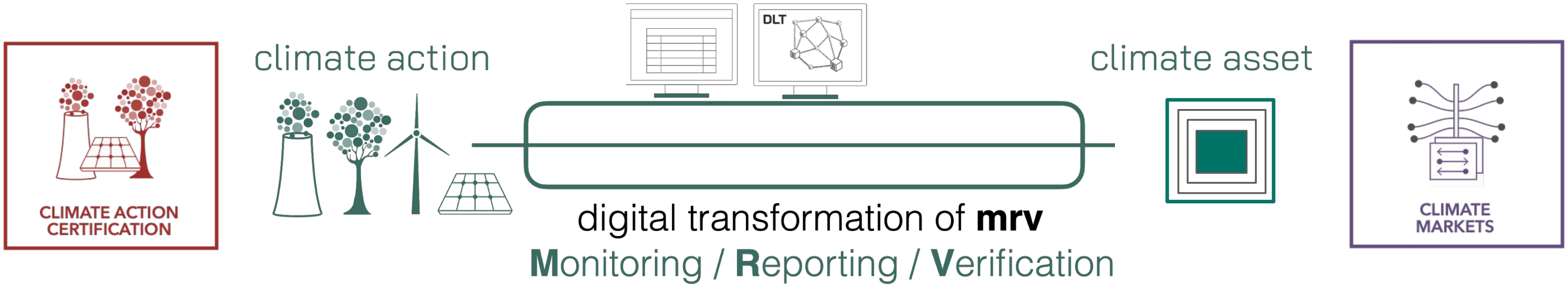
A common language to describe climate actions



Key partners and frameworks:

HYPERLEDGER INDY · HYPERLEDGER ARIES · TRUST Over IP FOUNDATION · THE LINUX FOUNDATION · InterWork Alliance

3. NETWORKED CLIMATE MARKETS



Key partners and strategic position:

openclimate → *Informing the architecture of:* → Climate Warehouse → *A blockchain simulation project of:* → THE WORLD BANK → *To shape Art. 6 market decisions at:* → United Nations Framework Convention on Climate Change

OUR MAIN OPPORTUNITY IS TO PROVIDE THE TRUSTED OPERATING SYSTEM FOR THE GLOBAL CLIMATE ECONOMY

Ave ETS price

$28

Per tonne

EU ETS (Emissions Trading Scheme) ranges from $1-2 to $150+ with an average of $28.

Global CO2 emissions

55

Giga-tonnes

Global emissions of CO2 + CO2 equivalents were 55 giga-tonnes in 2019.

Global C02 Cost

$1.4

Trillion

Multiply ETS price by total global output giving an estimated annual global 'cost' for CO2.

CO2 "priced" market

$216

Billion

In 2019, the capitalization of the 'priced' market for CO2e via ETS and tax schemes globally

Forecasted Market

$4

Trillion/yr

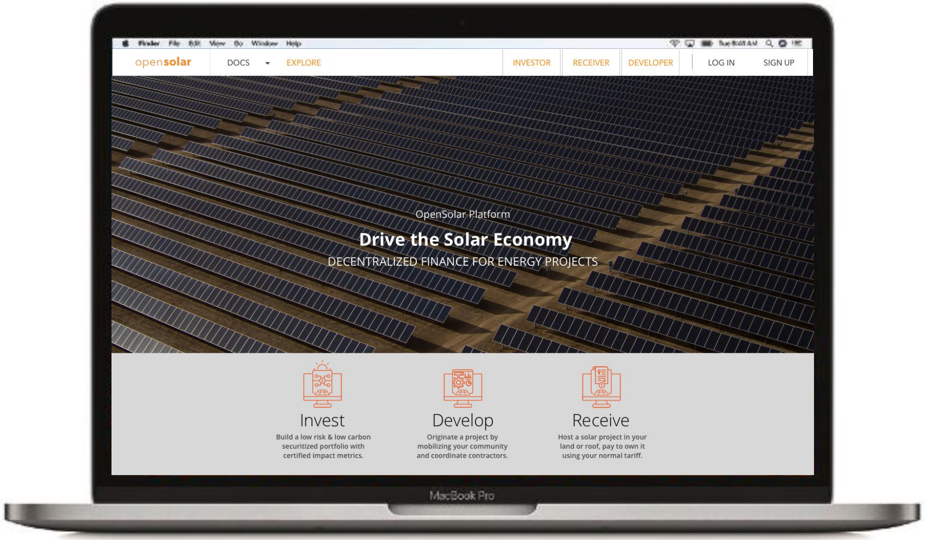
As the price of CO2 emissions rise, the total annual ETS market will grow.

OPEN**FINANCE**

SECURITIZED PROJECT FINANCE AUTOMATION VIA SMART CONTRACTS AND DIGITAL CURRENCIES

open**solar**

www.demo.openx.solar



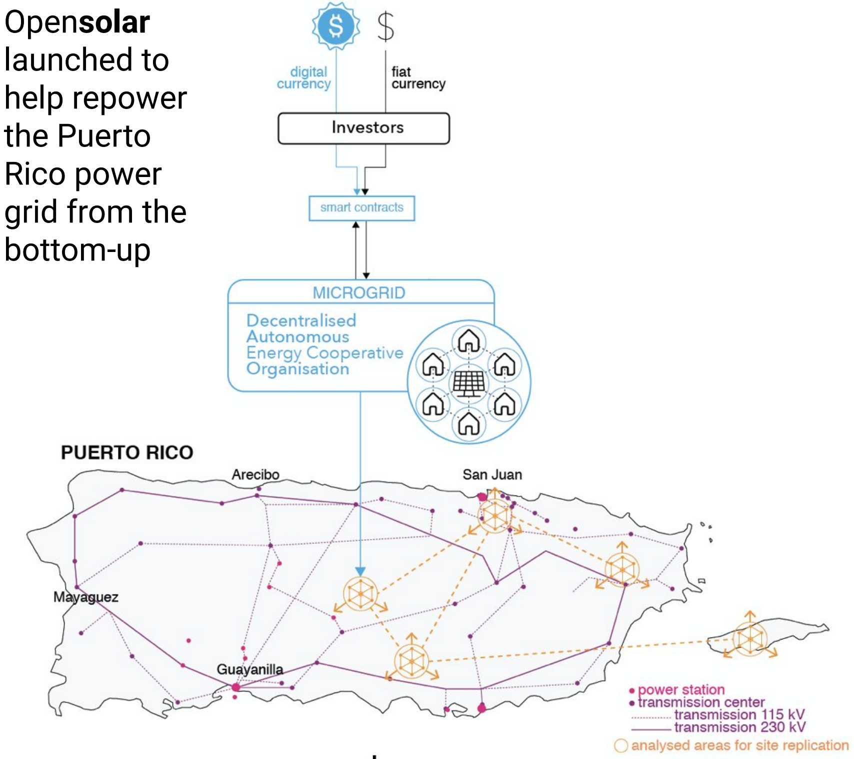
solar financing platform & marketplace

SUMMARY

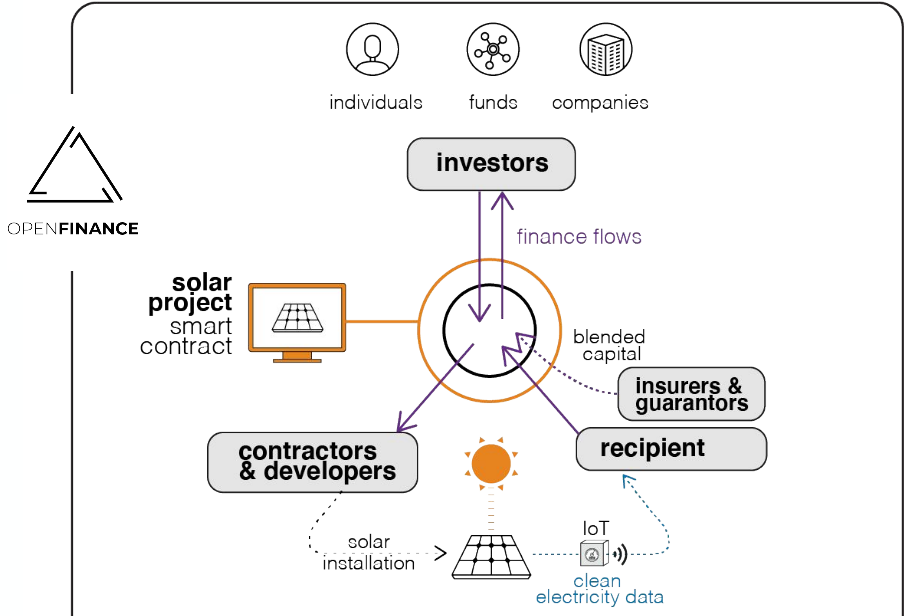
The Open Finance/OpenSolar project focuses on removing transactional frictions from the aggregation of multiple community-based projects under common financial instruments in order to facilitate large-scale capital deployment. This ensures job opportunities for local communities whilst collectively moving the needle on emissions level. The digital framework harnesses sensor data, smart contracts and digital currencies to remove cross-border inefficiencies and drive automation into securitized projects.

By orchestrating IoT, blockchain and financial technology, we can significantly advance contractual automation and reduce the costs in energy project origination and finance.

Open**solar** launched to help repower the Puerto Rico power grid from the bottom-up



digital currency initiative | mit media lab

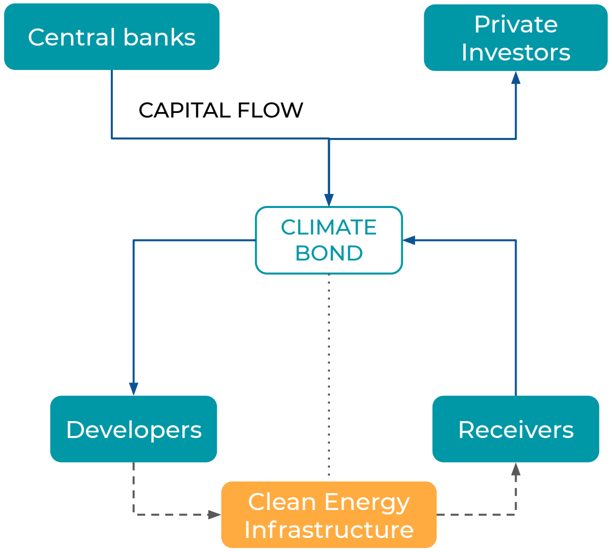


IoT data + oracles execute smart contracts for:

Payments (Digital USD per kWh)
Certificates (Tokenized"Climate & Impact Assets)
Ownership change (Transfers ownership of the solar asset through a pay-to-own debt model)

Built on: Stellar

END-TO-END CLIMATE INVESTMENT AUTOMATIONS



TOP-DOWN Climate Bond Automation & Blended Finance

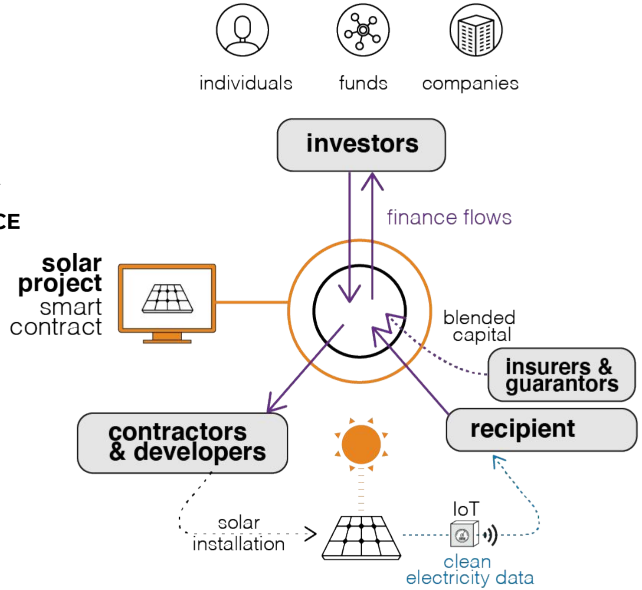
Top-down scaling approach by aggregating multiple projects under a common financial instrument, such as a climate bond.

Bottom-up approach to create a pipeline of investable projects by training project originators and simplifying their process with digital templates.

BOTTOM-UP Community Project Finance Automation

OPENFINANCE

CLIMATE BOND MODULE — ***Produces a stream of investment capital***



IoT data + oracles execute smart contracts for:

Payments (Digital USD per kWh)
Certificates (Tokenized"Climate & Impact Assets)
Ownership change (Transfers ownership of the solar asset through a pay-to-own debt model)

ORIGINATION ENGINES — ***Produces a pipeline of investable climate action projects***

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