Climate-KIC
Decision Metrics and Finance
Climate-KIC started in 2010...

Climate-KIC is the EU’s largest public private partnership addressing climate change.

**Mission:** bring together, inspire and empower a dynamic community to build a zero carbon economy.

**Vision:** to enable Europe to lead the global transformation towards sustainability.

We drive innovation in climate change through creative partnerships large and small, local and global, between the private, public and academic sectors.
Blockchain for climate and finance

- Support of 5 innovation cases as part of Climate Ledger Initiative

**Climate-Blockchain Innovation Call-out (CBC)** - bringing climate and blockchain communities for innovation to emerge

**Clean coin** - climate implications of cryptocurrencies and developing prototype tools to calculate and mitigate emissions generated

**LET Chain** - software architecture for designing efficient and transparent mobility policy solutions for governments and businesses.

**REDD Chain** - innovative monitoring, reporting, and verification (MRV) service linking finance to REDD+ (UNFCCC/LULUCF)

**Carbon Cockpit** – making corporate carbon management (carbon tracking, reporting, target setting and identification of mitigation options) easier, cheaper and more effective through blockchain.
Clean coin

Carbon footprint comparison

<table>
<thead>
<tr>
<th></th>
<th>Bitcoin</th>
<th>Costa Rica</th>
<th>Ethereum</th>
<th>Namibia</th>
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</tbody>
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Carbon footprint distribution

- China 71.02%
- EU 43.91%
- US 15.03%
- China 41.06%

Total carbon footprint

- Bitcoin: 7,721,083.27 tCO₂e
- Ethereum: 3,113,448.8 tCO₂e
The Solution

- Proof of Stake could be a much more energy efficient alternative to the Proof of Work system now used.
- If cryptocurrency and other Blockchain technology users become aware of the problem – changes can be made.
- Green labels can be developed for cryptocurrency miners and Blockchain technologies that are driven by renewables or use more energy efficient systems.
- Carbon offsetting options for cryptocurrencies can be developed – the cost for the offsetting would be much lower than the value of the coins.
REDD Chain
REDD Chain

We want to protect the forest and receive funding for it!

We want to invest in forest protection measures!

Smart contract: a contract written in code

Let's determine the conditions for a payment in a smart contract.

Remote sensing

Spatial data carbon accounting

Blockchain

Smart contracts

<table>
<thead>
<tr>
<th>Plot ID</th>
<th>Time ID</th>
<th>Meta-Data</th>
<th>Carbon content</th>
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<tbody>
<tr>
<td>1</td>
<td>t1</td>
<td>Owner, etc.</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>t2</td>
<td>Owner, etc.</td>
<td>3</td>
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<td>...</td>
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if delta Cstock is > 2t C: authorize payment X to Y
else:

…
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