



Challenge

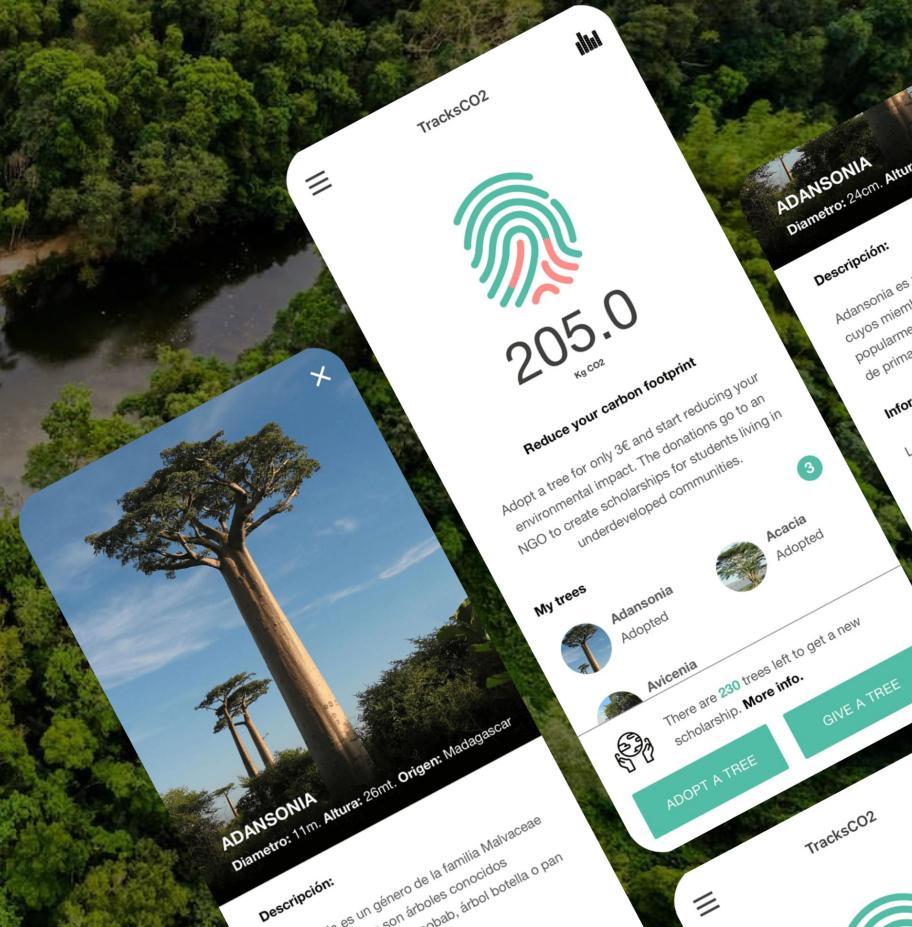
Emprenedoria i Innovació

Ciència i Enginyeria de

Dades

September 2021

Presenter: Saul Garcia





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- The background of the slide features a high-resolution photograph of the Earth from space, showing the blue oceans, green continents, and white clouds against the black void of space.
- 01** Company introduction
 - 02** Problem statement
 - 03** Challenge proposal
 - 04** Business opportunity
 - 05** Additional resources



01

Company introduction



innovation pioneers

**Over the past 15 years
we have always been
pioneers in innovation.**

Here is a few highlights of the technologies
that have used in our projects.



2012

AR Technologies
Virtual Assistants
ML Technology

2010

First internal
start-up based
on video tech

2008

Face Recognition on
mobile devs

2006

Own video-streaming
technology on mobile devs

2004

Mobile first

2014

Creation
of our own
Venture builder

2016

Blockchain
start-up

Investigation on
Graphene
Batteries

2018

Investigation on
magnetic energy
transference.

2020

Generative
Adversarial
Networks

**What's
next?**

Our startups



StageinHome

AI automatic decorator using style transfer by means of GANs



TrackCO2

CO2 fingerprint in real time. Adopt a tree to compensate your emissions.



PinRoute

Smart hike tracking app. Collaboration with FEEC 90k users.



Vodity

VoD platform for cultural contents. Your B2B VoD platform.



Boompi

Dating app with smart chat technology. 400k downloads. 1M funding.



Dada

1st Job Smart Seeking. AI Talent map tech. 500k funding.



Bibulu

Canine lodging in trusted owners. Fusion with Rover, the biggest player worldwide.



Climbista

Smart tracking for climbers.



Earthdas

Graphene batteries development. Agreements with CSIC 300k funding



Magnetika

Resonant magnetic energy transmission. Agreements with UPC 300k funding.



Wappa

Real time video-chat. Enjoy good moments with your friends.



Smart Pythoness

AI pythones with natural language.



Virtual Astros

Use Machine Learning to create your personal astral chart.



Family Networks

P2P platform to send children to study abroad.



Beeo

Smart electric scooters Exploring the urban mobility ecosystem.



01.01

Areas of *expertise*

The Napptilus team is specialized in several areas of expertise.



Software development

Technical Architecture
Implementation Design.
Performance Optimization
iOS, Android, Windows native Apps.
Hybrid development (React Native)
Unity development.
Web Apps.
Back-end Architecture
Middleware Solutions
Systems Integration
API & SDK Development
Server Development
Cloud Computing Solutions
QA Test Plans
Regression Testing
A/B Testing
Pull Request



Industrial Design

Hardware Design
Schematic Design
Interactive Experiences
Rapid Prototyping



Design

User Experience
Multi-platform interface design
Wireframe prototyping
Concept development
Visual Design
Interaction Design
UX & UI Design
3D design
2D animation
3D animation
Video production



Management

Market Research
Product Analysis
Product Roadmapping
Business Analysis
Process Optimization
Technology Auditing
Deployment Strategy
Analytics & Reporting



01.02

Intellectual property

Napptilus develops their own IP's in a wide range of technologies



Communication and multimedia IPs

Live Video Broadcast ENISA 2009

Live Video Chat CDTI 2012

Video upload protocol ENISA 2012

Multimedia cloud management & content sharing CDTI 2008

VoD Platform AVANZA 2012 / EMPLEA 2014

P2P Social Platform

Social Discovery

XMPP Chat (Erlang)

Tracking & Location RETOS 2014

Development IPs

User clustering & tracking (AI) CDTI NEOTEC 2009

Prediction Engine (AI) EMPLEA 2014 / TORRES QUEVEDO 2014

Virtual Assistants dynamic behaviour and dialog management AVANZA 2014 / ENISA 2015 / EUROSTARS 2018

3D Reconstruction USA Patent Pending IP / AVANZA 2012

Gesture & motion tracking

Face detection and tracking CDTI PID 2012

Face recognition AVANZA 2012

Machine Learning UPC Collaboration / Synthetic room decoration

Augmented Reality

Virtual Reality

Physical technology IPs

Graphene technology (shared with CSIC)

Magnetic energy transmission



01.03

Professional services



Web Expertise

Our engineers and designers have to be aware of a wide range of different platforms, adapting their know-how in each case to give the best solution to our customers.



Mobile & Tablets

iOS, Android, React Native, Ionic, Flutter, etc..



Wearables

Apple Watch, Android Wear, Fitbit, etc.



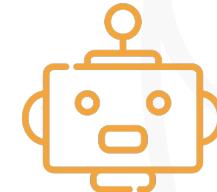
Web

React, Angular, JavaScript, Java, etc.



Smart TVs

Apple TV, Android TV, Samsung, etc.



Assistants

Google Assistant, SIRI, Amazon Alexa, etc.



Bespoke Consultancy & Engineering

We provide to our customers a set of high quality services to finally develop a solution that completely fits to our customers needs:



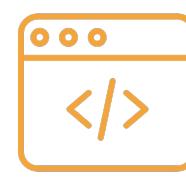
Market primary
research



Technical
advise



Smart
prototyping

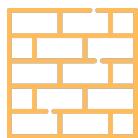


High quality
development



UX/UI & Rapid Prototyping

Our UX/UI experts follow the 5 design basics:



Consistency

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Affordance

Lorem ipsum dolor sit amet, consectetur adipiscing elit.



Predictability

Lorem ipsum dolor sit amet, consectetur adipiscing elit.



Feedback

Lorem ipsum dolor sit amet, consectetur adipiscing elit.



Learnability

Lorem ipsum dolor sit amet, consectetur adipiscing elit.



our clients

ADOLFO
DOMINGUEZ



CLÍNIC
BARCELONA
Hospital Universitari

SECURITAS
Direct

Telefónica

Naturgy

accenture

yahoo!

iati

ferrovial

 Microsoft

INDITEX

Massimo Dutti



02

Problem statement



Climate Change, an urgent big problem

BBC BBC

Climate change: Europe's 2020 heat reached 'troubling' level

Earth's greenhouse gases were the highest on record Despite the global pandemic that slowed economic activity, the major atr

Hace 2 semanas

The Guardian

Biden surveys Hurricane Ida damage and warns 'climate change was here' – as it happened

Such was the level of interest in her as a newborn victim of the twin towers s' 20/20 was present in the ...

Todayuknews

Climate Change Risks Triggering Catastrophic Tsunamis, Scientist Warns - Todayuknews

Sign up to myFT Daily Digest to be the first to know at news. The world is underestimating the geological con

Hace 20 horas

CBC.ca

Good news: Some climate change impacts are 'reversible.' Here's what that means

The good news is that some impacts, such the warming of the Earth's surface, can be reversed by removing carbon from the atmosphere — at least ...

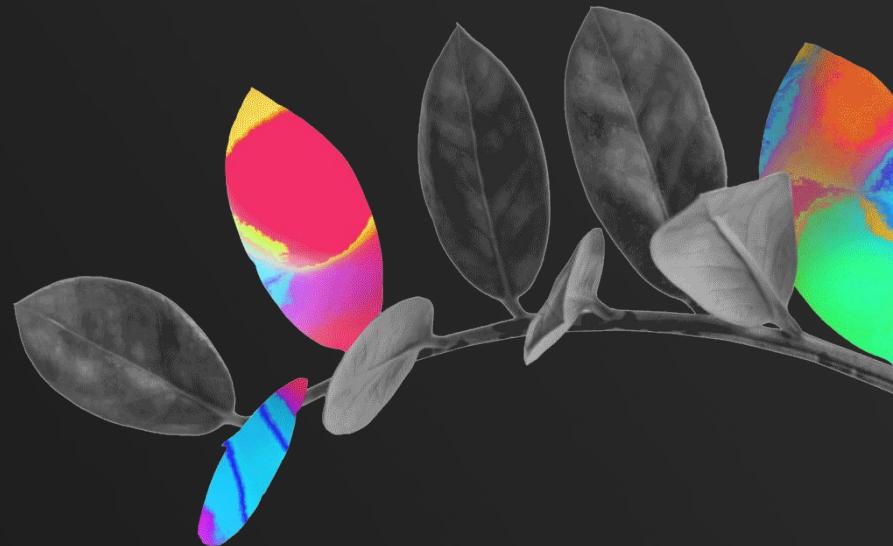
Hace 1 mes



“

I don't want your hope. I
don't want you to be
hopeful. I want you to
panic... and act as if the
house was on fire.

Greta Thunberg





And she's not the only one worried about climate change...

“It’s important for me to have hope because that’s my job as a parent, to have hope, for my kids, that we’re not going to leave them in a world that’s in shambles, that’s a chaotic place, that’s a dangerous place.” (James Cameron, Film Director)

“I’ve starred in a lot of science fiction movies and, let me tell you something, climate change is not science fiction. This is a battle in the real world, it is impacting us right now.” (Arnold Schwarzenegger, Actor & Former Governor of California)

We don’t have time to sit on our hands as our planet burns. For young people, climate change is bigger than election or re-election. It’s life or death.” (Alexandria Ocasio-Cortez, US Politician & Activist)

“By polluting the oceans, not mitigating CO2 emissions and destroying our biodiversity, we are killing our planet. Let us face it, there is no planet B.” (Emmanuel Macron, President of France)



Consequences of the Climate Change

- Melting ice caps
- Ocean acidification
- Continuous heat waves
- Massive greenhouse gases release
- Marine ecosystems destruction
- Destruction of fauna and flora

More frequent and intense drought, storms, heat waves, rising sea levels, melting glaciers and warming oceans can directly harm animals, destroy the places they live, and wreak havoc on people's livelihoods and communities.

0,3°C

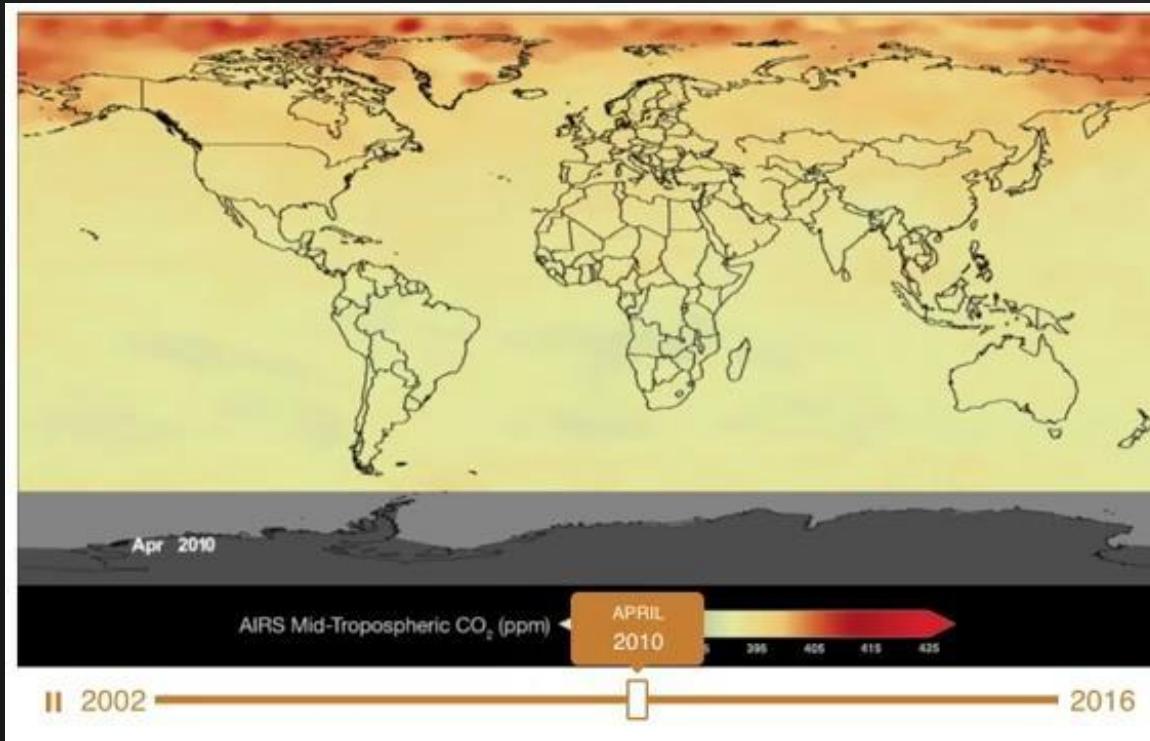
... is what remains to reach the maximum of critical 1.5°C of global warming.

The biodiversity loss we would suffer through an increase of 1.5°C would be catastrophic, but if the rise were to be in the order of 2°C, the problem would be completely irreversible due to the disappearance of plant, animal and insect species, including the death of practically all coral reefs.





We must reduce emissions by 7.6% annually by 2030 so as not to exceed 1.5 ° C of global warming.





03

Challenges proposal



We want to tackle this **HUGE** problem from both micro and macro perspectives...

1. MICRO DATA (INDIVIDUALS)

Analysis of individuals data gathered from TracksCO2 app to meet the challenge of quantifying the individual footprint accurately

Eventually compare user footprint vs geographical threshold to decide to reward (or not) the user for having a lower footprint compared to his geography. This can be certified using blockchain technology (NFTs)

2. MACRO DATA (PUBLIC SOURCES)

Exploration of existing public data sources to infer CO2 emission volumes of groups of population from a given cities, regions or countries.

Develop monitoring dashboard with relevant data that helps decision-makers to take action both reactively by means of predefined alarms, but also proactively using forecasting techniques to anticipate to these high risk situations



... to eventually think of merging both projects...

- TracksCO2 as starting point to track. The developed app tracks users' CO2 footprint
- Revamp the existing tracking system by adding and / or modifying how the footprint is tracked
- Consider existing and publicly available data to calculate dynamically the CO2 offset to neutralize
- Use NFT technology to certificate the CO2 footprint per user, allowing us to trade them afterwards with big corporations (carbon credits)
- Therefore there is a market opportunity to take advantage of the CO2 NFTs certificates, to eventually adopt trees involving both individuals and corporations
- Brainstorm and provide your own uses cases that could improve the final solution, the sky's the limit!... We can even think of a new name / branding!!!

“Save trees, save the world”



... and aiming to follow a win-win-win approach!

1. Users will be rewarded with a certain amount of “greens” if they have eco-friendly behaviours. The tonnes of reduced CO₂ from users’ adopted trees will turn in carbon credits.

2. Large corporations will have the possibility to buy those carbon credits in order to reach their emission reduction goals and make sure the users see them as eco friendly corporations.

3. Once companies buy these carbon credits, the money earned by TracksCO2 will be used to pay the users’ fictitious credits with the advantage that users will be able to know which company is indirectly paying for those credits.





Win-win-win



Individuals,

- Be aware of their impact of their CO₂ emissions and be more eco-friendly.
- Monetize the efforts of millions of users to reduce their own carbon footprint by adopting trees in underdeveloped areas (e.g., Africa).



Corporations/ Governments,

- Simplify the effort of the company to compute their global carbon footprint, while improving their brand image and build customer loyalty.
- Employees can take action on their corporate-related emissions

... and the planet!



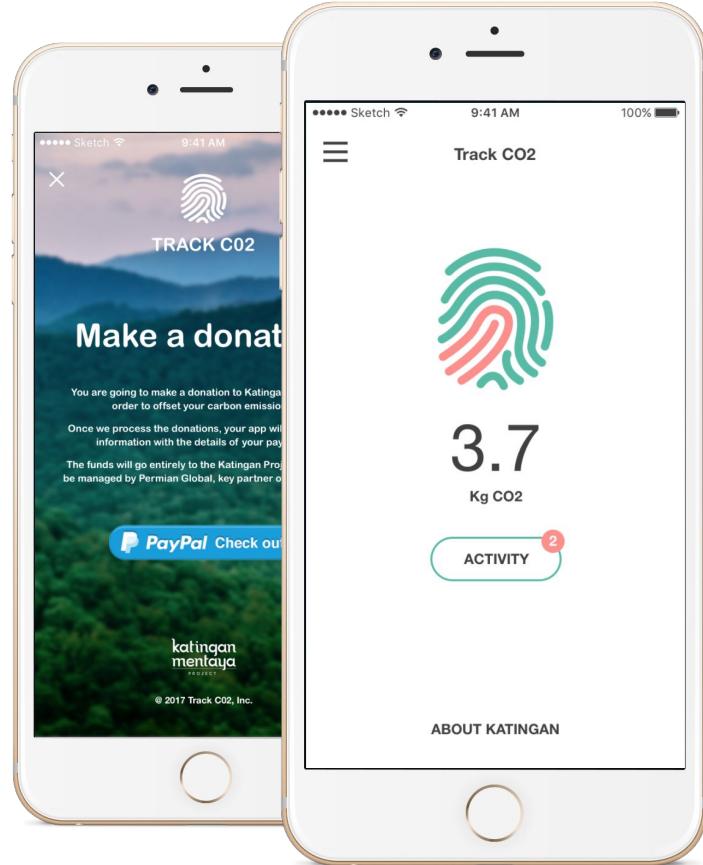


03.01

Individual CO₂ footprint



Track individuals carbon footprint to eventually reward users while fighting climate change, using blockchain technology as enabler for tokenization.





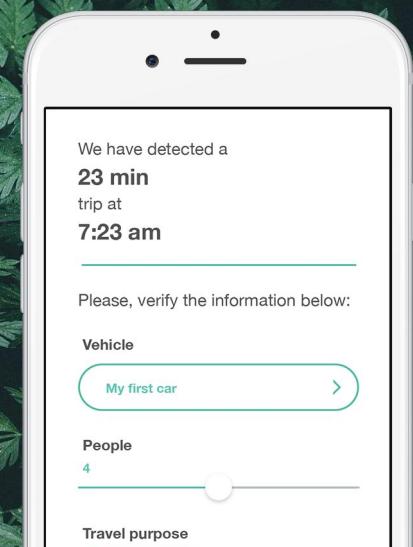
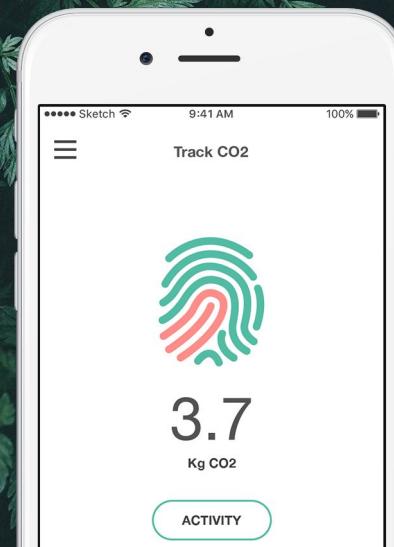
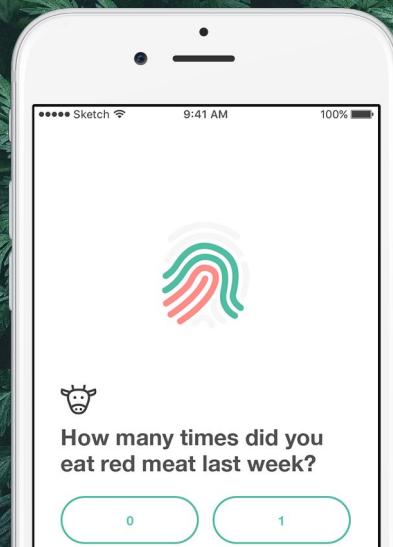
How we discover your carbon footprint

We check the 3 main causes of the human carbon emissions

Register your habits of
**Nutrition, transport and
Heating**

Our **efficient algorithms** keep
track on your travels without
draining your battery

You simply get notified about
your tips: **Time schedule,
vehicle, emissions...**



Analyze your personal carbon footprint



After enough information has been provided and gathered, Tracks CO2 will:

- Help you understand which habits have a bigger impact on your carbon footprint
- Provide tips to change some of your daily habits and how to decrease your footprint
- Promote ecological behaviours by giving rewards and building community

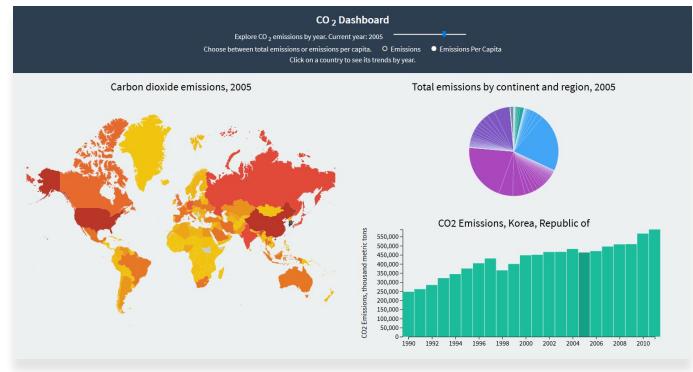


03.02

CO2 near-real-time monitoring



Calculate CO₂ carbon offset monitor per city, region, country on a near-real-time basis, available via dashboard to governments, corporations to take actions to reduce emissions accordingly



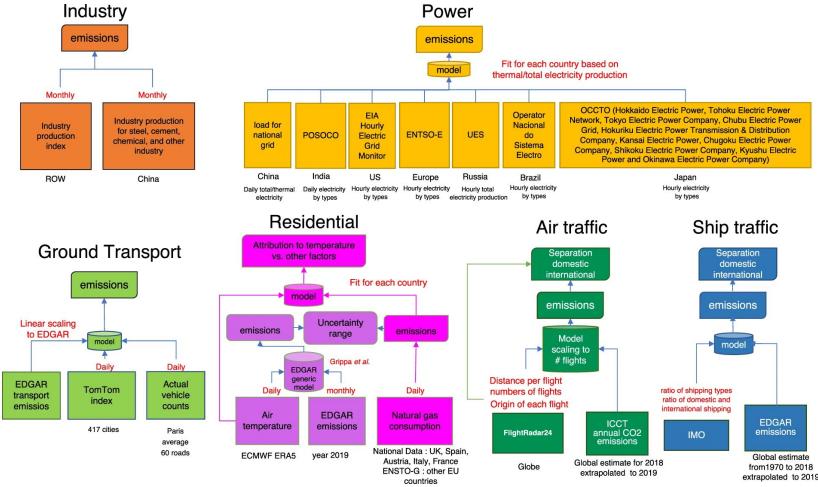
<https://github.com/GK-Hynes/d3-data-dashboard>



Some initial efforts: Governments and academia

- Ajuntament de Barcelona,
[https://ajuntament.barcelona.cat/qualitat
aire/ca](https://ajuntament.barcelona.cat/qualitat aire/ca)
- Carbon Monitor,
<https://carbonmonitor.org/>





<https://www.nature.com/articles/s41597-020-00708-7>

Using different data sources, the platform should be able to,

- Provide an aggregated / disaggregated picture of the overall CO₂ emissions per city, region, country and provide relevant KPIs for decision making
- Infer missing key data from other publicly available sources to provide the most accurate values
- Provide a near-real-time monitor of current CO₂ emissions but also create forecast based on recent data to trigger alarms for our potential clients



04

Business opportunity



How big is this market?

McKinsey Sustainability

The Taskforce on Scaling Voluntary Carbon Markets [...], estimates that demand for carbon credits could increase by a factor of 15 or more by 2030 and by a factor of up to 100 by 2050. Overall, the market for carbon credits could be worth upward of \$50 billion in 2030.

<https://www.mckinsey.com/business-functions/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge>



Global carbon offsets market could be worth \$200 billion by 2050

<https://www.spglobal.com/platts/es/market-insights/latest-news/natural-gas/051320-global-carbon-offsets-market-could-be-worth-200-bil-by-2050-berenberg>

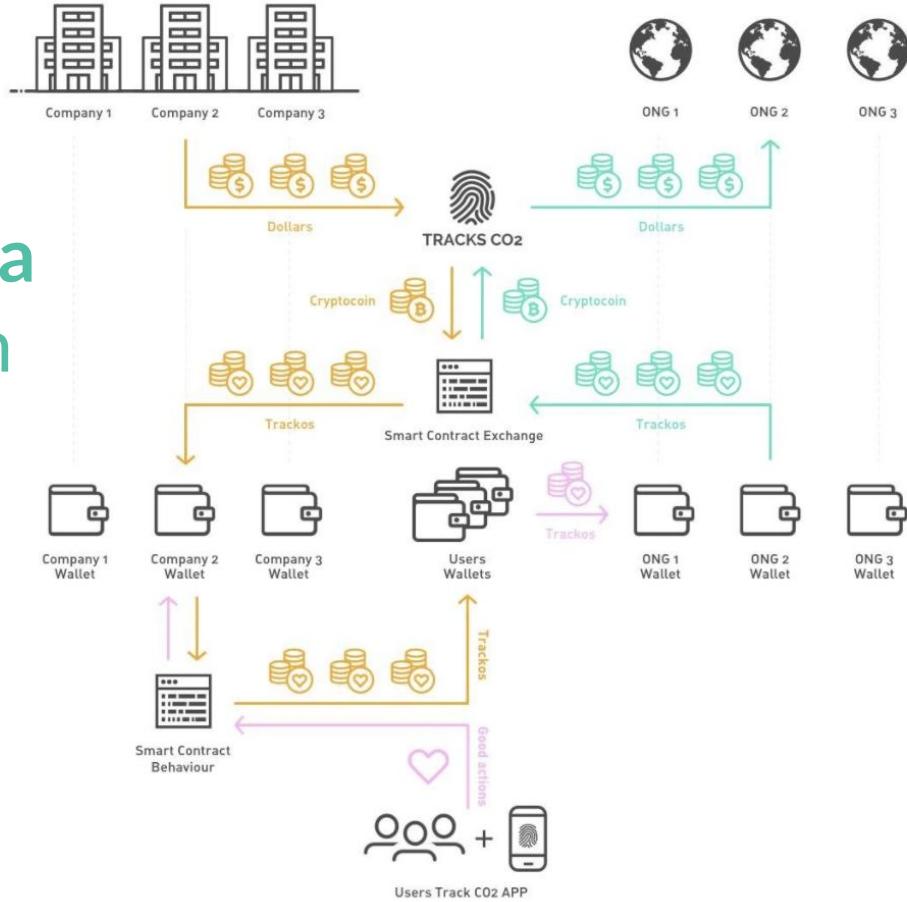
Forbes

Carbon Offsets Are About To Become A Huge Market

<https://www.forbes.com/sites/robday/2021/04/29/carbon-offsets-are-about-to-become-a-huge-market/>



The aim is to become a pivotal point between both users and companies with the common goal of fighting climate change





05

Additional resources



Further information

- <http://tracksco2.com>
- <https://napptilus.com>
- <https://climate.nasa.gov/>
- <https://www.forest-trends.org/publications/state-of-the-voluntary-carbon-markets-2020-2/>
- <https://www.nature.com/articles/s41597-020-00708-7>



Thank you!