AUC Block-A-Thon 29-6-2022
Second Report

Teams

Three teams formed out of the Blockathon:

RECYCLE Token:

Blockchain Tokenomics Incentive system for Recycling Water Bottles

Environmental Aspect: Recycling Projects serve different UN SDGs including goals 3, 11,12, 13,14, and 15 of good health and well-being (plastic wastes can be found in our food and water), sustainable cities, responsible consumption and production (of plastics and consumables in general), climate action (recyclable plastics are destroying environments by increasing ocean temperature), life below water, and life on land (because plastics are destroying habitats)

UN, Governments, and NGOs want to incentivize recycling to solve previously described issues for the good of their people.

Ardy

A land-dead on-chain management system.

Language Exchange

A student services exchange that helps students teach themselves.

In the following section, each of the projects is outlined.

RECYCLE Token: Blockchain Tokenomics Incentive system for Recycling Water Bottles

Proposed by:

Kareem Kassab

Omar Osman

Problem Discussion:

Environmental Aspect: Recycling Projects serve different UN SDGs including goals 3, 11,12, 13,14, and 15 of good health and well being (plastic wastes can be found in our food and water), sustainable cities, responsible consumption and production (of plastics and consumables in general), climate action (recyclable plastics are destroying environments by increasing ocean temperature), life below water, and life on land (because plastics are destroying habitats)

UN, Governments, and NGOs want to incentivise recycling to solve previously described issues for the good of their people.

Technical Aspects: for incentive and points systems, there may be issues related to:

- People wanting to spend tokens on different things (most probably these are used as a customer retention either way). Tokenomics can allow these to be used/swapped to other ecosystems where people can be **truly incentivised** to recycle

- Fairness and security. If we want action to happen, we want incentives to have the power to move people, aka become valuable, and if digital things become valuable, blockchains would be best to **sustain a token economy** that is fair in distribution and secure for all public users.

Business Plan & Tokenomics:

Stakeholders:

- UN
- Governments and NGOs
- Plastic bottle manufacturers
- Customers

Project Sustainability:

For the project to prosper we need all stakeholders to gain some kind of value.

- **The UN and governments** will participate with funding in exchange for keeping their world/countries/areas clean and saving money on curing environmental disasters.
- **Water bottle manufacturers and plastic factories,** currently buy the empty bottles for their recycling either way and can participate with part of the funding in exchange for getting plastic back already classified by customers
- **Customers,** can get back some money for giving other stakeholders value by getting points that they can actually use for things they like.

Main Funding: governments, NGOs, companies.

Marketing Plan:

Mainly around universities, clubs, sport hubs, and places with high water bottle consumption that can act as collection hubs.

Code Development Plan:

- Random code generator for bottles
- Scanning a code to ensure unique bottle insertion
- Validating the code belongs to the group of valid bottle codes
- Requesting user address
- Calling a smart contract with the consumer wallet address+ water bottle code as inputs.

Future Insights (Business):
Business can later be extended to:

- Recycling other products

- **Future Insights (code):**

Features can later be extended to:

- Scan other forms of code (bar code, QR code, etc..)

Project Code

Frontend repo:
https://github.com/omariosman/casper-frontend

Backend repo:
https://github.com/omariosman/casper-backend

Smart Contract repo:
https://github.com/omariosman/Casper-Hackathon

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RECYCLE

a Blockchain Tokenomics Incentive system for Recycling & Refilling Water Bottles

2

Problem

Why do we need to Recycle/Refill?

Unclean/sustainable cities
overconsumption without recycling will lead to garbage management issues

Danger on human health
Plastic ends up in our food and water

Destroying marine life
plastic increases ocean temprature destroying marine life

3

Problem

What are probable incentive strategies challenges?

lack of system security if points are of value

unswappable points limiting user received value

4

SDGs

Adressed

5

Solution

A token incentive system where users get tokens whenever they refill/ return their empty bottles.

Casper

Built on Casper Making it **Fast, Secure, and cheap**

Simple Process and token tracking

Swappable tokens act as a true incentive

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How it works

let collection/refilling machine **Scan Code** on bottle to ensure validity

add bottle to machine/ refill your bottle from machine

Input wallet address to the machine/ scan QR to read your address

Receive RECYCLE tokens to your wallet

Spend tokens on whatever you like

Note: Scanning QR on plastic bottles ensures its not any other QR. scanning QR on valid refillable bottles ensure nobody is refilling something else.

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Partners

Casper

The Casper Network
the project is built on. this is **the main enabler** of the project, providing the blockchain, the support, and the infrastructure.

Universities and clubs
Venues that act as centers of change

Govs and NGOs
Parties that care about having cleaner cities and socities.

Factories/Companies
that Buy Plastic back to recycle.

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Values

(end user)

swappable tokens can **buy whatever** the user wants
(a true incentive)

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Values

(Governments / NGOs)

More **Sustainble** and **Cleaner** Cities

saving Energy on Garbage Segregation

more **Aware** and **responsible** communities

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Values

(Companies)

ready **segregated** garbage

plastic clean of biological wastes **ready for grinding**

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BMC

Key Partners

Casper Network

Governments
NGOs
Universities

Plastic Companies
Recycling Companies

Key Activities

Code maintenance
Code Upgrades

Key Resources

Code

Partnerships (with Universities/companies/gov)

Casper Network Support

Value Propositions

Secure system
Easily Traceable

Simple Process
offers True incentive

Helps in segregating plastic
Keeps recyclable plastic clean

Customer Relationships

Long Term

Channels

Vending Machines
Website
App

Customer Segments

Water bottle customers
Water drinking customers
Students
Atheletes

Cost Structure

Code maintenance
'Marketing
Network Fees

Revenue Streams

Money from Partners
Money From Plastic Companies

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Future Insights

Extend to other Products

Improve System Security (other parts around blockchain)

Extend Partnerships & Increase Adoption

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The Team

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Ardy
Mohamed Yasser
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Problems

Contracts are often inconsistent

Contracts are vulnerable to manipulation

Ease of doing business index

70% of the global population lacks legally registered land

Potential Solutions

Contracts are often inconsistent

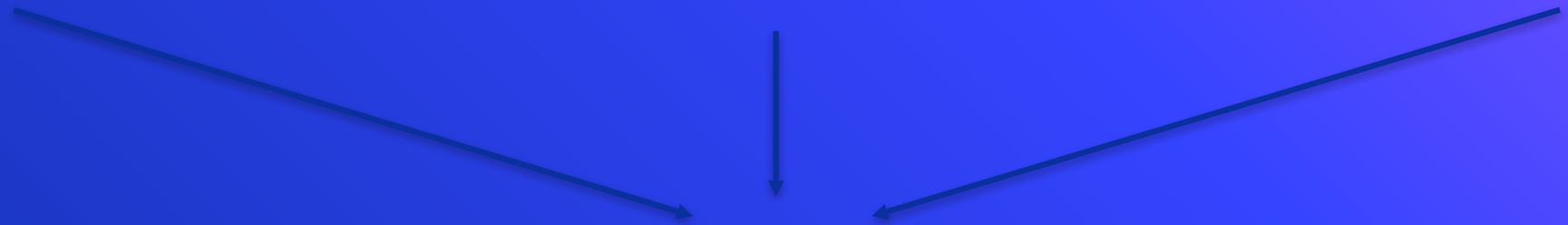
Easy Verification between nodes

Contracts are vulnerable to manipulation

Secure access privileges

Ease of doing business index

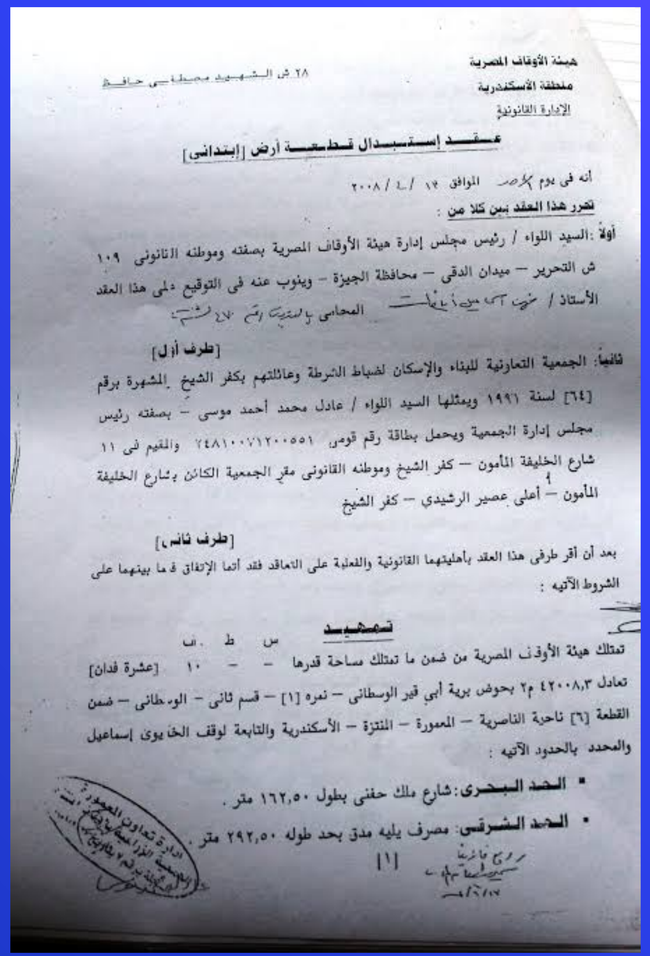
Ability to securely process contracts



70% of the global population lacks legally registered land

Past

Present



هيئة الأوقاف المصرية
منطقة الإسكندرية
الإدارة القانونية

٢٨ ش الشهيد محمد ناصر حافظ

عقد إستبدال قطعة أرض [إبتدائي]

أنه في يوم [illegible] الموافق ١٧ / ٤ / ٢٠٠٨

تحرر هذا العقد بين كلا من :

أولاً :السيد اللواء / رئيس مجلس إدارة هيئة الأوقاف المصرية بصفته وموطنه القانوني ١٠٩ ش التحرير – ميدان الدقي – محافظة الجيزة – وينوب عنه في التوقيع على هذا العقد الأستاذ / [illegible] المحامي بالمديرية رقم [illegible]

[طرف أول]

ثانياً: الجمعية التعاونية للبناء والإسكان لضباط الشرطة وعائلتهم بكفر الشيخ المشهرة برقم [٦٤] لسنة ١٩٩١ ويمثلها السيد اللواء / عادل محمد أحمد موسى – بصفته رئيس مجلس إدارة الجمعية ويحمل بطاقة رقم قومي ٢٤٨١٠٠٧١٢٠٠٥٥١ والمقيم في ١١ شارع الخليفة المأمون – كفر الشيخ وموطنه القانوني مقر الجمعية الكائن بشارع الخليفة المأمون – أعلى عصير الرشيدي – كفر الشيخ

[طرف ثاني]

بعد أن أقر طرفي هذا العقد بأهليتهما القانونية والفعلية على التعاقد فقد أتما الإتفاق فيما بينهما على الشروط الآتيه :

تمهيد

س ط .ف

تمتلك هيئة الأوقاف المصرية من ضمن ما تمتلك مساحة قدرها – – ١٠ [عشرة فدان] تعادل ٤٢٠٠٨,٣ م٢ بحوض برية أبي قير الوسطاني – نمره [١] – قسم ثاني – الوسطاني – ضمن القطعة [٦] ناحية الناصرية – المعمورة – المنتزة – الأسكندرية والتابعة لوقف الخديوى إسماعيل والمحدد بالحدود الآتيه :

- **الحد البحري:** شارع ملك حفني بطول ١٦٢,٥٠ متر .
- **الحد الشرقي:** مصرف يليه مدق بحد طوله ٢٩٢,٥٠ متر .

١١

Future

ArDy

Viability

Results in the Republic of Georgia:

BEFORE	AFTER
1–3 DAYS To register property	**<3 MINUTES** To register property
UP TO $80 Cost of transaction	**$8 NEW TRANSACTION** Cost reduction
10 DAYS For property transfer	**ONLINE** Property transfer
RISK OF DATA LOSS Or modification	**DIGITAL CERTIFICATE** Stored on public blockchain

KEY OUTCOMES

300 000	3 min	90 %
Transactions processed	Per transaction	Cost optimization

1: "Use Case: Blockchain Land Registry" - The Bitfury Group

Process

1. Encode the lands' data to our NFTs data.

2. Upon transaction, locate the borders of the purchased land:

3. Hash the land borders to get its digital signature on the NFT:

4. Transfer the corresponding part of the NFT to the receiver using Casper network:

Sample UI


Ardy
Mohamed Sharaf
الشهر العقاري- موظف
الصفحة الرئيسية
طلبات التوثيق
التقارير
الإعدادات
عدد العقود
HOUR
DAY
WEEK
MONTH
YEAR
5K
4K
3K
2K
1K
2633
SUN
MON
TUE
WED
THU
FRI
SAT
اماكن العقود

شكرا

Th*nk You!

Language Exchange

Malak Elmessiry, Zeina Basiouny, Ziad Basiouny

Needs and Problems in the Status Quo

1. Facilitating language tutoring and learning organically through social interaction
2. Offering proofreading services where individuals native in a given language can proofread translations of texts in their native language
3. Creating non-fungible certificates of membership for clients, tutors, and translators

The Solution: Language Exchange

In an increasingly globalized and multilingual world, Language Exchange is a Caspar enabled platform that will facilitate language tutoring and proofreading services

Implementation

Three different users:

1. Clients
2. Tutors
3. Proofreaders

- Upon signing up for the platform, an NFT will be generated for the user
- This NFT will be generated on the Caspar network
- Certifications after a certain number of proofreading and tutoring sessions will be generated as NFTs

Summary of Language Exchange

- Purpose: Incentivise individuals who are fluent in a given language to proofread writing in that language or translate written texts into that language.
- Implementation
  - People join our platform, some sign up as proofreaders and tutors
  - Proofreaders and tutors receive tokens for taking up proofreading jobs, can attain certification after a certain number of proofreading jobs
- What sets us apart?
  - Creating accessible job opportunities for individuals to use their fluency in one language and strengthening the quality of writing
- Future directions
  - Adding reward system for other types of reviewing (example: scientific)
  - Adding reward system for other types of tutoring (example: academic tutoring)
- Any Questions?

Thank You!