

REGULATION-COMPLIANT VFA TOKEN OFFERING



Ecoingot

Building the Internet of Carbon

WHITE PAPER v1.0

15th October 2018

Official website: <https://ecoingot.com>

Official contribution site: <https://egt.coincierge.io>



DISCLAIMER

The purpose of this white paper is to present the Ecoingot project to potential contributors. The information given in this document is not comprehensive and doesn't mean any contractual obligations. The purpose of this document is to provide potential contributors with useful information needed for further understanding of the project and decision-making in regard to the purchase of EGT tokens. None of the paragraph of this Whitepaper can be considered as prospect of emission or investment agreement. The initial offering of EGT tokens is not a proposition to buy or sell securities of any jurisdiction. We do not offer the purchase of EGT tokens to citizens and legal entities of the United States or North Korea, as well as to individuals who do not possess a sufficient legal ability or ability to participate in an ICO and purchase tokens under the laws of countries in which such legislation may be applicable. This document is prepared without regard to any legislative or regulatory acts of any jurisdiction designed to protect investors. All statements, calculations, and financial indicators in the following white paper are forecasted and preliminary. While developing the document both, known and unpredictable risk factors were taken into account. Thus, the final results may significantly differ from the forecasted information, mentioned in the document. Your participation in the ICO is based solely on a voluntary basis. Participation in the Token Sale can only be allowed after accepting the Ecoingot Terms and Conditions Please read them carefully before participating in the ICO, and make sure you understand the described risks and conditions.



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ABSTRACT

Ecoingot's infrastructure assigns a carbon impact value to everyday activities and purchases which can then be offset by spending EGT tokens.

Transparency for the offsetting will be managed by the blockchain which immutably records both the token usage and the offsetting events.

EGT tokens will be launched from within Malta as regulation-compliant Virtual Financial Asset tokens and as such will be in compliance with the legal framework for distributed ledger technology Assets (DLT Assets) of the Virtual Financial Assets Act¹ (VFA Act) and will be registered with the MFSA in accordance with the VFA Act.

Ecoingot Ltd has 7 million Natural Capital Credits (NCCs) in place for the sale, to facilitate the initial issuance of up to 7 billion EGT tokens.

NCCs are carbon offsets representing 1 tonne of CO₂e and enable the offsetting capabilities of EGT Tokens. NCCs are subject to a rigorous independent validation and verification process under ISO 14064-3 and ISO 14065 guidelines and only after satisfaction of complying with all requirements are issued by the Natural Forest Standard²

Each EGT token will be released with an assigned carbon value of 1kg CO₂e.

KEY FEATURES

- Asset-matched tokens with assigned carbon value for simple and effective carbon balancing
- Unique carbon data gathering and analysis methodology developed by world-leading carbon impact experts
- Comprehensive carbon impact data layers, creating the Internet of Carbon
- Creation of the ECOSISTM enabling the on-demand calculation of the carbon impact of everything
- Efficient AI/ML carbon data capture tool, via bespoke algorithm application
- Data analytics regarding app usage from offsetting trends of users
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VIRTUAL FINANCIAL ASSETS

Ecoingot Ltd (a Malta-registered company with company number C-88748) will be the issuer of EGT tokens. EGT tokens will be launched from within Malta as regulation-compliant Virtual Financial Asset tokens and as such will be in compliance with the legal framework for distributed ledger technology Assets (DLT Assets) of the Virtual Financial Assets Act (VFA Act) and will be registered with the MFSA in accordance with the VFA Act.

The EGT token has been subject to the Malta Financial Services Authority (MFSA) Financial Instruments Test, conducted by our lawyers Chetcuti Cauchi, to determine the category under which the EGT token falls. This test concluded that the EGT token is determined as a Virtual Financial Asset.

Ecoingot Ltd will avail of the transitory provision and shall be complying with all MFSA and MDIA current and future requirements that the laws and regulations impose.

TOKEN SALE

Name:	Ecoingot
Symbol:	EGT
ERC20 Token?	Yes
Token Sale Base Price:	\$0.01 per EGT
Total Token Supply:	7,000,000,000 EGT
Soft Cap:	\$3,000,000, or 390,000,000 EGT (including Pre-Sale bonus)
Pre-Sale Start Date:	16 th October 2018
Public Sale Start Date:	17 th November 2018



TOKEN SALE MANAGEMENT PLATFORM

Our token sale management platform provider, Coincierge.io, has created a solution for Ecoingot and all of our contributors to provide a secure, streamlined and compliant token sale with in-built, unrivalled, high-level security features.

Coincierge provides the utmost flexibility for our contributors to participate in our token sale, allowing us to accept contributions in over 100 different crypto currencies and fiat. They have also implemented high security features to ensure that we know every contributor.

The token sale management platform uses the most advanced KYC/AML process possible and has in-built strict guidelines to ensure every contributor has to complete a quick and efficient step-by-step procedure to contribute.

The processes and procedures set in place within the platform ensures that Ecoingot can complete the auditing process quickly and efficiently, resulting in tokens being distributed to all contributors within 10 days of the token sale closure.

The ICO Runner will be used for both pre and public sale.

TOKENOMICS

Ecoingot will initially issue up to 7 billion EGT tokens. This corresponds to the number of NCCs that Ecoingot has in place for the launch.

Each 1,000 EGT tokens is the equivalent to one NCC. This association will be fully visible and verifiable on the blockchain.

EGT tokens will be sold at \$0.01.

New EGT tokens will only be issued after at least 37% of the EGT tokens in circulation have been burned.

EGT tokens can only be issued if the associated NCCs are available.

Additionally, new EGT tokens will be issued at market rate only if raised funds are sufficient to create a viable issuance of the associated NCCs.

If the current market price of EGT tokens is below the amount required for issuance, then no further issuance will take place.



SOFT CAP

The soft cap for the Ecoingot token sale is \$3 million or (390 million EGTs with pre-sale bonus). This will allow sufficient funding for the Phase 1 operations of Ecoingot and achieve the MVP.

BONUS INCENTIVES

Stage	EGT Allocation	Bonus, %
Pre-Sale Stage	300 million EGTs (90 million bonus)	30% Bonus
Public Sale Bonus Stage 1	1 billion EGTs (200 million bonus)	20% Bonus
Public Sale Bonus Stage 2	1 billion EGTs (120 million bonus)	12% Bonus
Public Sale Bonus Stage 3	1 billion EGTs (60 million bonus)	6% Bonus
Public Sale Bonus Stage 4	2.7 billion EGTs	Zero Bonus

BOUNTIES, REWARDS & FOUNDERS

530,000,000 EGT tokens (7.6% of total token supply) will be held for allocation of bounties, rewards and founders. These will be proportionally distributed according to the contribution levels achieved during the token sale.

UNSOLD TOKENS

Unsold tokens will be held in reserve by Ecoingot with the option to be sold. These reserve tokens will not be sold for less than the ICO price of \$0.01.

TOKEN DISTRIBUTION

EGT tokens will be distributed within 10 days of the token sale closure. This will include all bonus tokens earned at the appropriate bonus stages.



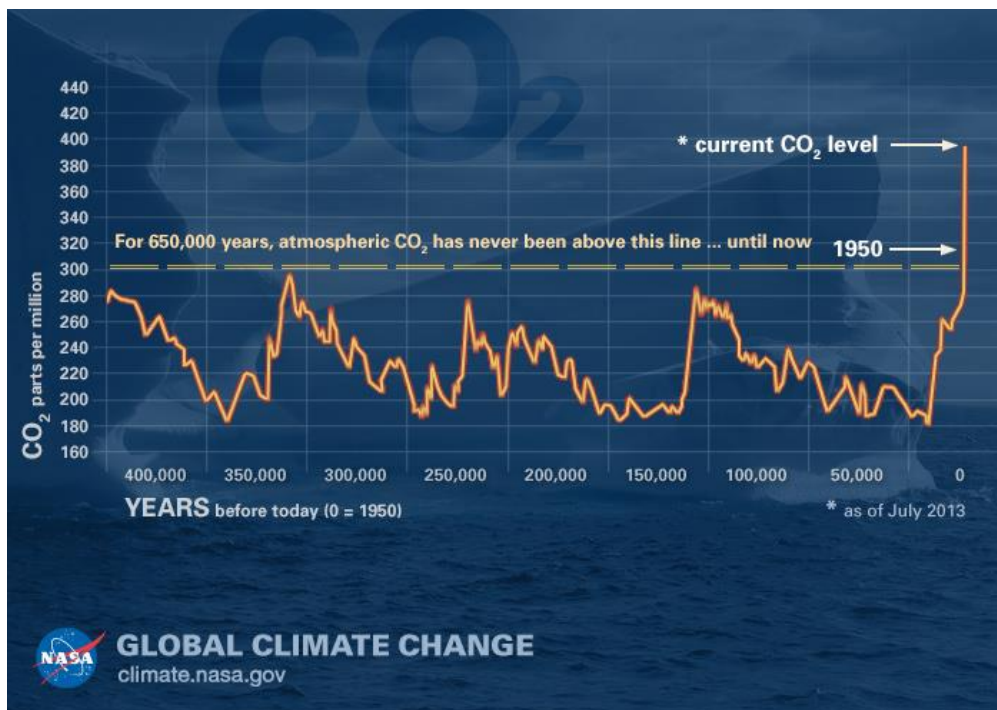
INTRODUCTION

We are all responsible for emitting carbon into the atmosphere, and we all know that's not good for the planet. Just living our usual, everyday lives, we perform several tasks that directly (or indirectly) cause some level of impact on the environment.

SETTING THE SCENE

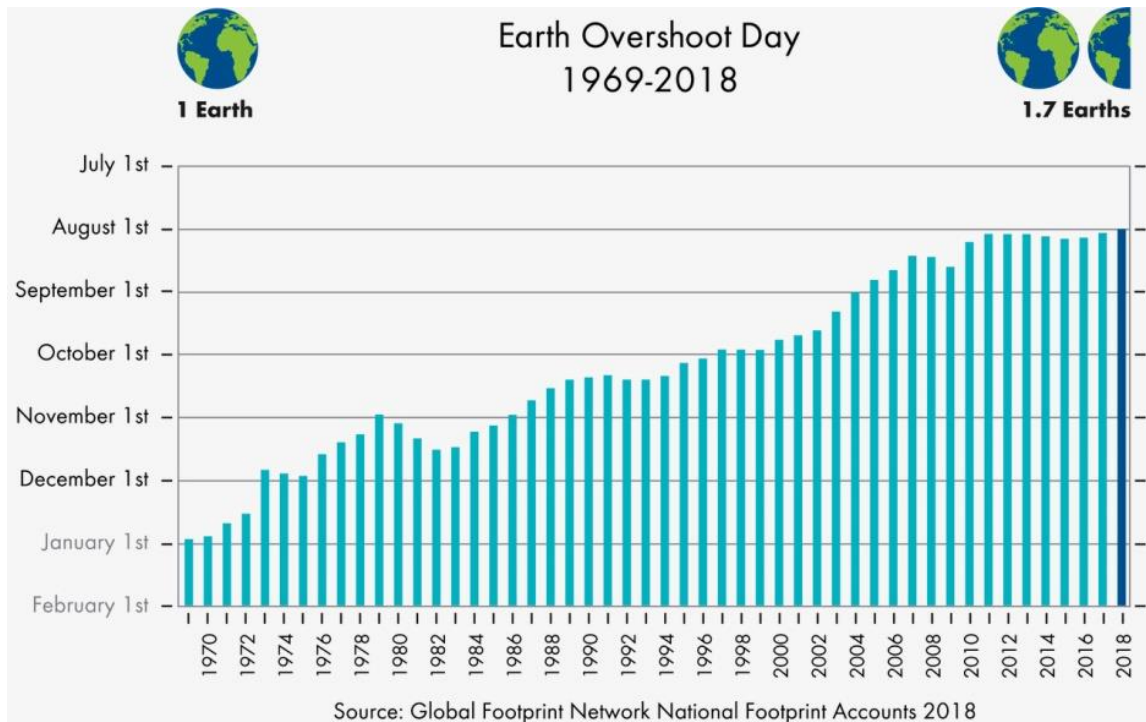
Despite the Paris Climate Agreement³, increases in the use of renewable energy and governmental pledges to reduce their climate impacts, we have still seen an increase in carbon levels in the atmosphere.

As recently as April 2018 the CO₂ concentration in the atmosphere exceeded an average of 410 parts per million⁴ – the highest level for the first time in our history.



Source: https://climate.nasa.gov/climate_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/

Earth Overshoot Day⁵, marks the date when we (all of humanity) have used more from nature than our planet can renew in the entire year. In 2018, this was 1st August (in 2017 it was 2nd August).



Source: https://www.overshootday.org/content/uploads/2018/06/2018_Past_Overshoot_Days_Eng.jpg

THE WORLD CAN'T MEET ITS TARGET WITHOUT CHANGES BY INDIVIDUALS

An IPCC Special Report on Global Warming⁶ (published on 8th October 2018) contains a list of actions that individuals can take, and adds that the world cannot meet its target without the involvement of individuals and their actions. Co-Chair of the IPCC, Dr Debra Roberts, said that lifestyle changes can make a big difference and that this is a “**very empowering message for individuals**” and that “**everyone is going to have to be involved**”.

IT'S NOT THAT WE DON'T CARE, BUT WHAT CAN WE ACTUALLY DO?

In reality we all want to do our bit towards reducing our impact, but we also want to live our best lives and want to make certain lifestyle choices that aren't exactly “planet-friendly”.

So how can we do this? Where can we get the information we need to make informed choices? Where can we take positive actions towards balancing those carbon emissions we are responsible for? And how can we make it relevant to our everyday lives?



ECOINGOT IS THE ANSWER.

We are reinventing the stereotype of being “green” by making it simple, relevant and on-trend to take environmental responsibility.

We are all about throwing away the rule book, challenging the status quo, breaking with tradition... however you want to put it, we are revolutionary.

We are doing for the environment what the internet did for information sharing and what social media did for connecting people – using technology to bring the outside world closer to you in a meaningful way, and this time it's for the future of the planet.

We are about small gestures achieving big things; turning individual actions into a collective power to make the biggest impact possible.

INNOVATIVE TECHNOLOGY

Ecoingot is taking the latest advances in blockchain & DLT, smart contracts, AI, Machine Learning and app development and combining them with an innovative environmental metric that will make carbon impact information as readily available as nutritional information on your favourite ready-meal.

We are a team of individuals who are all experts in our relevant fields and all have our reputations on the line here, but we have a shared vision and wholeheartedly believe we are the disruptive force that will transform the world of carbon offsetting.

We will take offsetting from being inaccessible, complicated (and to be honest pretty inconvenient) into being a must-do, a compulsion, and even the world's latest obsession – think of us as your environmental fitness tracker.

SO HOW ARE WE DOING THIS?

We are creating an asset-matched token – the EGT. Our EGTs will carry a carbon value that you can spend to offset* that inevitable impact you're having on the planet.

**Offsetting is where you take a positive action against a negative environmental impact; it's like the environmental version of Newton's third law, (for every action there is an equal and opposite reaction) karma (cause and effect) or yin and yang.*



Our 360° platform will provide everything you need to do this and more, by providing the data, the calculations and the ability to offset all in one convenient place.

You'll be able to do all this within our app to start with, but we will also be integrating our platform into connected devices and the Internet of Things.

And all this will be available on-demand, with just a few clicks or taps from you.

OUR APPROACH

We are creating a system with the ability to calculate the carbon impacts of everything.

We are creating algorithms that will be powered by AI & Machine Learning to gather the data we need.

By gathering all this data we are creating the Internet of Carbon.

We need an engine to power the machine that will process the data, do the calculations and give us all the information we need – we are creating this and it's called ECOSISTM.

We have expert tech guys taking care of all the backend stuff like creating our smart contracts, disruptive technology solutions (utilising blockchain and distributed ledger functionalities) and creating our algorithms and apps.

Professor Mike Berners-Lee (the world leading expert on carbon footprinting and author of the "How Bad are Bananas?") is working with his team to create the unique carbon calculation model.

And to top it all off, we already have the offsets in place to make the whole thing work.

So, by combining the latest technologies with globally-relevant environmental metrics, we will be creating the Internet of Carbon and making offsetting the next big thing (without any of us having to turn vegan, wear sandals or hug a tree.... unless you want to of course!)

ECOINGOT: THE COMPLETE ECOSISTM FOR BALANCING CARBON IMPACTS

There's no other platform out there that can do all this (and more) in an all-in-one, one-stop-shop, one-size-fits-all kind of way.

So that's us. Welcome to our world.



MARKET DEMAND

There is an immediate and significant market opportunity for the Ecoingot platform to be embraced on a global scale. With the recently published IPCC report highlighting that lifestyle changes and individual actions can contribute to massive change and saying “this problem is too big for me” is not an option.

Collective power (and therefore collective action) is crucial to making a difference. With increasing demand upon (and from) individuals to take action against environmental impacts, there has never been a more pertinent time to provide an accessible and effective platform to these individuals to empower them to make this difference.

ECOINGOT CAN DELIVER WHAT IS DEMANDED, TO THE VOLUME OF PEOPLE DEMANDING IT

Even before this recent report, there has been increasing demand from consumers for environmentally responsible purchasing, as well as an increased desire to actively protect the environment.

In research carried out by the World Economic Forum⁷, climate change was ranked as the most serious concern among 18-35 year olds for the 3rd year running, and 78.1% stated that they are willing to change their lifestyles to protect the environment.

In the 2017 Deloitte Millennial Survey⁸ 59% said they felt “accountable” for protecting the environment; 38% said they felt “influential” over protecting the environment; and 31% said they are “personally concerned” about the environment.

Just focussing on the millennial demographic alone will provide a significant market penetration opportunity for Ecoingot to deliver what is demanded by the environmentally-savvy consumer, as well as engaging with the casual environmental bystander.



CARBON IMPACTS METHODOLOGY DEVELOPMENT

The development of the methodology is the starting point for creating our entire Ecoingot system.

ABOUT CARBON IMPACT MODELLING

There is no denying that carbon impact calculation is complex, which means that with the best will in the world the results can never be more than best estimates. Nonetheless, we have gone to a great deal of trouble to make those estimates as accurate as we can, and to be transparent about how they were derived. To aide in this, we have enlisted Professor Mike Berners-Lee and his team at Small World Consulting and the University of Lancaster to develop the Ecoingot carbon methodology that will form the basis of our unique environmental metric and the basis of our ECOSISTM.

The methodology provides the framework for carbon impact data gathering and quantification and details the criteria required to ensure the consistency, reliability and credibility of the underlying data. This is designed to utilise existing data sources where available and algorithmic data gathering via AI/ML, where existing data is insufficient or non-existent.

All our carbon impacts and emissions factors are drawn from one of two core methodologies or a blend of the two. Each of these core techniques has its own strengths and weaknesses, so combining the two into a hybrid approach can often give us the best of both worlds.

'BOTTOM UP' METHODS

The first method is process based life cycle analysis (PBLCA). This can be thought of as a 'bottom up' approach. It involves mapping out all of the processes that are involved in producing a product or service, quantifying the emissions that take place at each stage, proportionately attributing the emissions to the product in question, then adding them up to give an estimate of the total impact. This approach is the most popular and the most widely understood.

In our beta dataset we have drawn and combined data from several of the more credible, transparent and publicly available datasets that already existed, as well as compiling our own datasets from PBLCA's that are in the public domain. In more detail, these include:



- Department of Business, Energy and Industrial Strategy (BEIS), (and formerly Defra) publishes emissions factors for a range of fuels, electricity sources, transport modes, utilities and waste. These are mostly UK-specific and do not take account of full supply chains. We use them where we can but supplement with additions for the missing supply chain pathways.
- The University of Bath produces the Inventory of Carbon and Energy (ICE), a publicly available data set of carbon emissions factors for hundreds of materials, mainly relating to the construction industry, up to the factory gate.
- Small World Consulting's food LCA database which has been refined over a period of a decade through the course of our work for supermarkets, food producers, restaurants and chefs. We also include emissions factors for manufacture and use of household appliances and electronic goods drawn from many different LCAs.

'TOP DOWN' METHODS

The second core method is called environmentally extended input output analysis (EEIO). This is based on macro-economic modelling and can be thought of as a 'top down' technique. It looks at the carbon flows between sectors of the economy as they trade between each other and uses this to estimate the carbon impacts associated with the outputs of each sector. In other words, it allows us to take into account the way in which the activities of one industry trigger activities and emissions in every other industry. This approach captures these ripple effects entirely.

The EEIO model used in our beta dataset was created by Small Word Consulting with Lancaster University and has been tested and refined over a 10-year period. The methodology has been subjected to academic peer review and the realism of the results tested against other EEIO models, and found to deliver the most realistic results. This model is used by BT and Microsoft and many other companies in their supply chain carbon assessments. It draws mainly on data from the UK's Office of National Statistics and is based on a 2017 picture of the UK economy.

A key weakness to this approach is that it treats imports as though they have the same carbon intensity as domestic production, whereas in reality they are usually more carbon intensive. This mostly applies to transport and energy emissions factors, and these are be adjusted for where possible through the development of our hybrid method, which we will go onto now.



HYBRID EMISSIONS FACTORS

Our dataset contains many hybrid emissions factors, in which both PBLCA and EEIO are used to deliver a result that is both specific to a particular product or service, and has the system completeness of EEIO.

Examples where the hybrid approach has been used within the datasets includes:

- Emissions factors for electricity that benefit from the bespoke analysis that lies behind the BEIS studies but has been extended using EEIO to include all the supply chain pathways of the electricity industry.
- Estimates of the full carbon impact of road transport by car that take account of both the tailpipe emissions and the per-mile depreciation of the embodied emissions in the vehicle itself, maintenance and road maintenance.
- Emissions factors for foods at the checkouts, where supermarket indirect operational emissions have been estimated using EEIO and added to PBLCA's that would otherwise have omitted these components.

TRANSPARENCY

For all the care and attention that has been put into the development of this dataset, there will always be a certain level of uncertainty. This is the nature and reality of carbon impact estimates. However, on balance the use of this dataset will lead to a current best estimate understanding of relative carbon impacts and improved carbon management. The good news is that most of the time, this level of accuracy is sufficient to help those who want to manage their carbon to make 'good enough' carbon conscious decisions.

With all carbon metrics, and especially carbon footprints, transparency is a key principle. Ecoingot is ensuring such details are contained in the full 'Carbon Emissions Factors Detailed Methodology' document which will be made publically available.



ECOSISTM

The internet changed the way we were able to share and access information; giving us a global information society. Our uniquely designed ECOSISTM allows us to create the globally applicable carbon information system, which forms the basis for the carbon impacts of everything.

By gathering the data required to calculate the carbon impact of everything and using customised algorithms, we are creating the “Internet of Carbon”.

The ECOSISTM is the heart of the system and is the machine that will process the data, do the calculations and give us all information we need and is the powerful, data-driven engine that enables carbon impact calculations to be generated on-demand.

The data layers within the ECOSISTM are all based on the parameters set within the methodology framework, to ensure a consistent output.

By combining the environmental metric with the 8,000+ foundation datasets we already have, the ECOSISTM will be capable of evolving and broadening its scope rapidly. This will be through the AI and ML algorithms being programmed to identify commonalities throughout the data gathering system. This will allow the ECOSISTM to supply updated and additional information to the apps and APIs on a constant basis.

Data and knowledge gathering are two significant benefits of the ECOSISTM. It makes it simple to identify patterns and trends in the demand for EGT usage for offsetting, and predictions can be established as to the rate at which offsets will need to be supplied.

THE ECOINGOT APP

We are creating slick, user-friendly apps that will bring everything you need, directly to your phone, where you can offset the impacts of everything you do, buy or eat without the need to lift a finger (well... you'll need to lift a finger, but that's all). It will also give you great hints, tips and advice on how to reduce your impacts as part of your daily life.



CARBON IMPACTS ON-DEMAND

The Ecoingot app will provide the core interface between the user and the background technology solutions. It delivers the on-demand carbon impact calculations and offsetting capabilities.

The app will deliver demographically-appropriate and intelligent data to users. The user experience can be streamlined and personalised based on their preferences and usage.

The app will be free to download; the ability to balance environmental impacts will require the ownership of EGT tokens.

The Ecoingot app will provide:

- Relatable and engaging carbon impact information
- Educational/tips on ways to reduce environmental impacts
- On-demand carbon impact information retrievable from the integrated ECOSISTM
- Simple, in-app offsetting using EGT tokens

Our target launch date for the full app is 22nd April 2019 - Earth Day.

The simplicity of the UI/UX system can be summarised by the following steps:

1. A user performs an activity (e.g. takes a taxi ride)
2. The user enters the relevant information into the user interface
3. ECOSISTM system calculates the carbon impact of the activity in the background
4. The user can then simple offset the impact of this activity by spending/burning an equivalent amount of EGT tokens

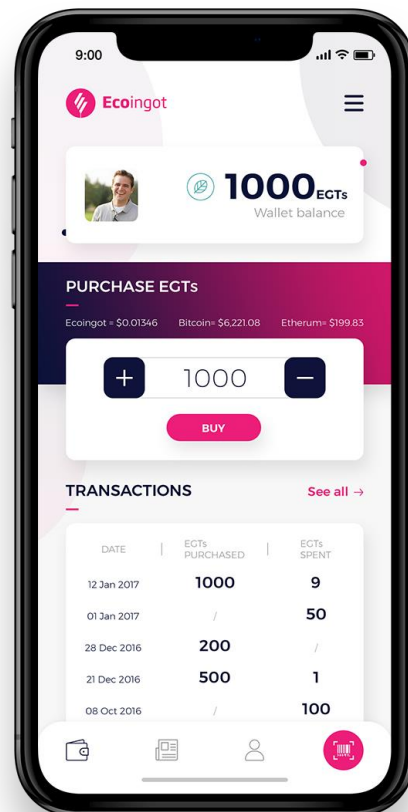
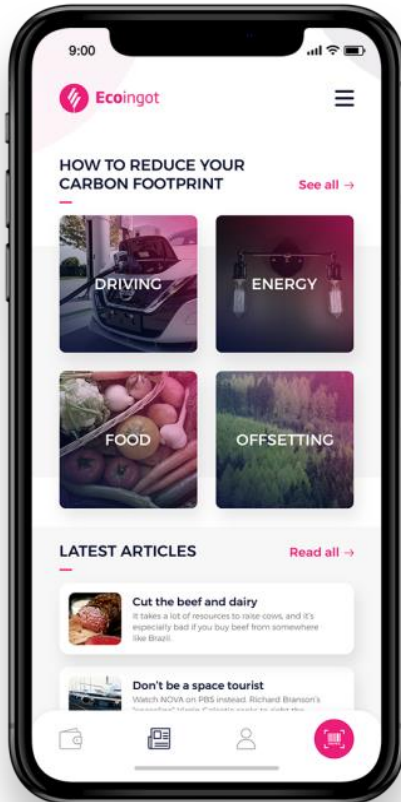
From a consumer point of view, there is not much more information that needs to be provided.

The major element for the success of our platform is the integration of carbon impact calculations using the datasets of ECOSISTM into a simple user interface that seamlessly provides the ability to offset carbon impacts without introducing any additional complexity.

Below are some User Interface examples from the Ecoingot app in development:



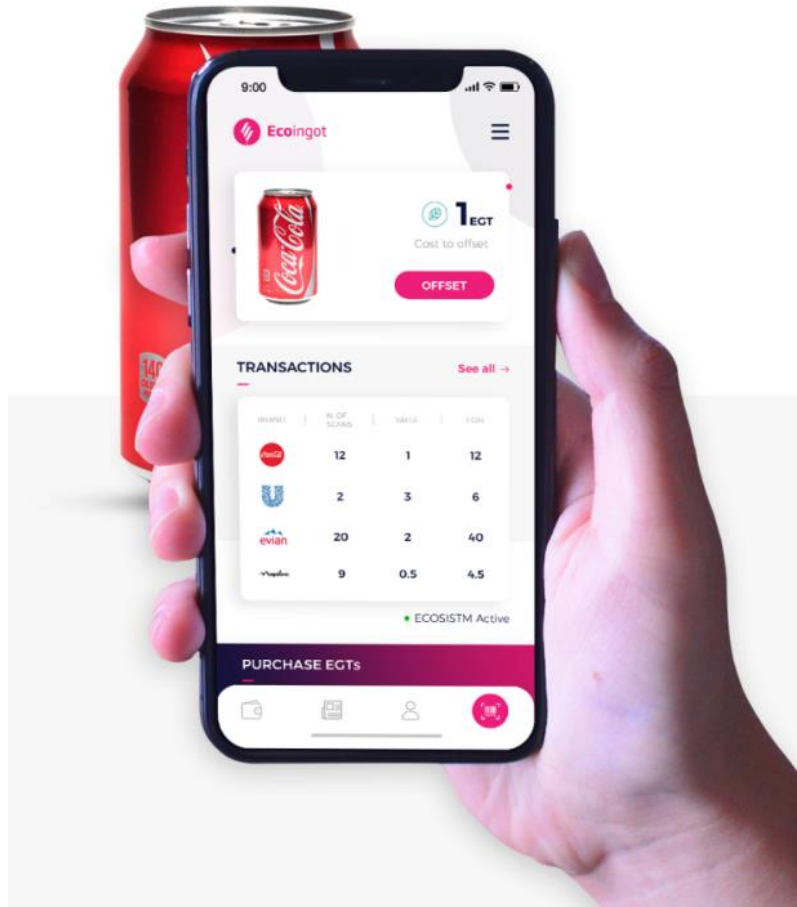
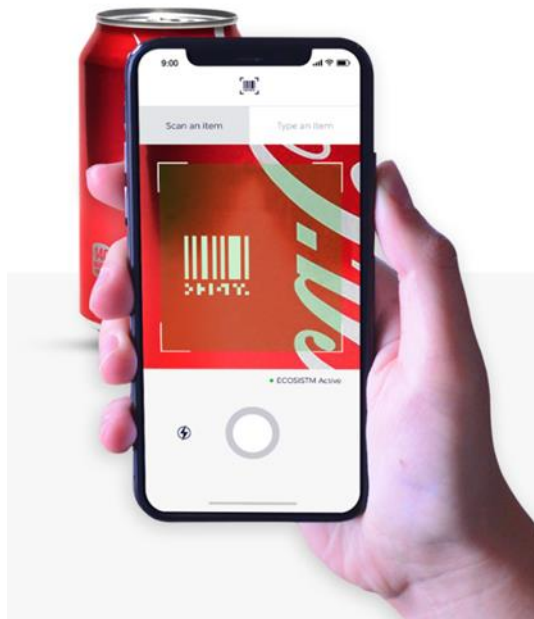
Ecoingot



ECOINGOT APP - USER INTERFACE PREVIEW 1

The initial interface screen provides the hints, tips and suggestions for reducing your impacts and simple lifestyle choices displayed in relevant categories.

The second screen displays a simple UX to view their current EGT balance, buy additional EGT tokens, and list their previous transactions.



ECOINGOT APP - USER INTERFACE PREVIEW 2

This interface allows users to either scan an item or enter the details of a purchase or activity to generate the carbon data powered by our ECOSISTM.

They are then presented with the opportunity to offset the impact with their EGT tokens to balance the environmental impact,

This example shows the simple process of scanning an item, which then provides its EGT carbon value. By pressing the “call to action” button the user can offset (or balance) the carbon impact. POLITE NOTE: Please don’t forget to recycle the can 😊



BARCODE INTEGRATION

We intend to ultimately achieve integration into UPC & EAN barcodes providing the carbon impact information of every product with a barcode globally.

This would be achieved by embedding the carbon impact within the barcode information itself. This integration would allow for scanning directly within our app or providing the carbon impact data on the receipt at point of purchase. As an example of the scalability of this, the [barcodelookup.com](https://www.barcodelookup.com) database has more than 106 million products listed.

THE TOKENS

EGT tokens are capped, mintable ERC20 tokens, which will live on the Ethereum blockchain and are deployed via Ethereum smart contracts.

Each EGT token has a corresponding carbon value, which is denoted as 1 EGT = 1 kilogram of CO₂e. This assigns the EGT holder the rights to offset their environmental impacts by spending their EGT tokens. The assigned carbon value is made possible due to each EGT being matched to an offset within the offset pool.

EGTs are asset-matched tokens that provide:

- Assigned carbon offsetting rights
- Relevant micro-offsetting capabilities
- Incentives for app users such as referral rewards and social media recognition bonuses

7,000,000,000 EGT tokens will be minted, each assigned with the carbon value, using innovative blockchain technologies to achieve high transparency and secure tracking of the offsets.

EGT TOKEN LIFECYCLE

EGT tokens have the ability to be held, traded or spent. When an EGT token is ultimately spent (i.e. used to offset or balance carbon impacts) it is sent to a specific burn address (known as an “offsetting event”). The burned EGT and corresponding carbon value are represented within a merkle tree that contains the transaction IDs of all the burned EGTs.



Our system will seamlessly and continually listen for offsetting events. Whenever the completed offsetting events using EGT tokens collectively reach the equivalent of 1 tonne of CO₂e (1,000 EGTs equivalent), Ecoingot will retire one carbon offset certificate immediately and immutably and publish proof of its retirement with all related provenance.

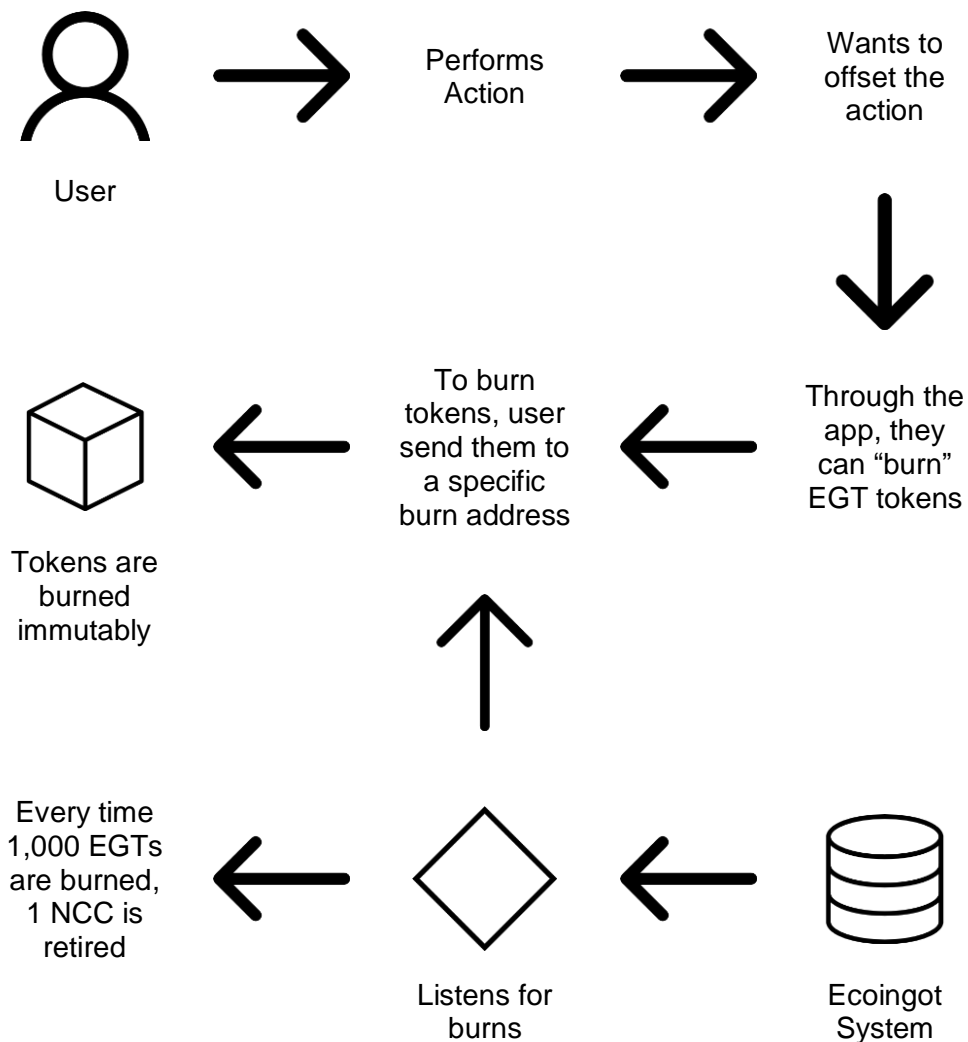


Diagram 1: Flow of EGT Token Lifecycle

Creating the EGT tokens in this way provides a number of benefits and opportunities to maximise the value, utilisation and growth potential of the system and its tokens. The value of EGTs will be proportionate to the demand created for the EGT model within the system and enable its organic growth. It is also our intention for EGT tokens to be listed on third party exchanges.



OFFSETS

The strength of the Ecoingot system is reinforced by already having the required number of Natural Capital Credits (NCCs) in place in readiness for the launch (rather than having to source the relevant number of offsets post-launch). These offsets are fully validated and verified with documentation and provenance. They originate from a specific project in the Brazilian Amazon which protects 1.3 million hectares of at-risk rainforest from deforestation, provides socio-economic benefits to the 10,700 inhabitants in the project area and also ensures biodiversity conservation within this area.

These benefits result in a net positive impact on the environment and help to negate the damaging effects of climate change. As a result, all EGTs provide genuine, direct and proven positive impacts on the environment, through the direct ratio of tokens to offsets.

Ecoingot has the ability to acquire a significant annual issuance of offsets from this project and from additional sources as demand increases and out-performs the projects offset issuance capabilities. In the event that NCCs are not available in the quantities required, or do not achieve the expected carbon and social benefits, Ecoingot reserves the right to source alternative offsets, so long as they meet the essential quality requirements.

OFFSET LIFECYCLE

The offsets themselves are finite in their lifecycle, as once they have been used to balance an environmental impact they are immutably retired and are no longer available to be used against any further impacts.

An immutable record of all offsets (and their retirement) will be held within the blockchain to ensure transparency and singularity of use.

ECOINGOT USE CASES

There are a number of use cases for applying the Ecoingot system. These include:

- Product labelling
- APIs and plugins for integration in ecommerce, ticketing, logistics or booking sites
- Smart device integration with ability to calculate real-time carbon impact data



Every product has an environmental impact and in an ideal world the information relating to that impact should be visibly and freely available. Just as product descriptions, ingredients, and nutritional values are clearly displayed, so too can the environmental impact of products, through applying the Ecoingot inseting model and therefore providing the consumer with environmental impact information that is as important to them as the fat content or country of origin.

Opportunities for integrating our ECOSISTM are numerous and examples include, electricity usage; a taxi ride, getting a takeaway delivered... It could also be integrated into making point of sale purchasing decisions in the supermarket across a whole range of products.

This information could be displayed in a way that can be easily understood and in a meaningful and comparable way. This will enable people to take positive actions towards their environmental impact and purchasing decisions, giving consumers the ability to make informed decisions.

TECHNOLOGY

The main objective of the Ecoingot system is to bring a simple and effective platform to the public, to bring them information regarding their environmental impacts and familiarise them with the concept of balancing the carbon impacts of their daily lives.

The key to any successful technological system is simplicity and ease of use. Offsetting (or balancing) carbon impacts should be an intuitive process that does not require any particular knowledge of the concept.

At the very basic level, a user should be able to know their environmental impact caused by a particular purchase or activity, have the information to reduce that impact, and the means to offset that impact in an understandable, convenient and very user friendly way.

We live in an era where the entry level to access useful data is very low and yet there is no adequate framework that will allow us to track our carbon impacts, let alone in a simple and efficient way.

We are fully aware of the absence of such a system and thus we believe we can utilise contemporary technologies to create a system that based on network effects can achieve high popularity and increase the velocity of the existing offsets.



With this in mind, the system we will design and build will:

- Use innovative blockchain technologies to achieve high transparency and secure transfer of the offsets.
- Adopt social media strategies that will allow users to engage and contribute to the conversation surrounding environmental awareness, impacts and actions.
- Support intuitive user interfaces that will allow even non-tech-savvy users to understand and use.
- Integrate with existing services and increase the exposure of the technology to multiple areas.

TECHNICAL REQUIREMENTS

The main objectives of the platform in both its design and solution are:

1. It will be reused across various platforms.
2. It will be technology agnostic. It is impossible to integrate our solution into each and every existing service, thus we will design a common protocol that can be seamlessly adapted by the current systems.
3. It will be modular so that it can adapt to changes in the technology and can easily integrate any new improvements in a seamless way to the end user.
4. Last but not least, it will be highly secure system and utilise, as much as possible, the underlying cryptographic primitives of blockchain technologies.

SCALING

It is a strict requirement that the system gains traction and becomes popular through network effects. To make that possible we have to design a system that overcomes the shortcoming of the existing technologies and adapts a somewhat hybrid approach.

BLOCKCHAIN AND DLT TECHNOLOGY

The EGT is an ERC20 token that lives on the Ethereum blockchain. At the point of writing, the Proof-of-Work consensus model of Ethereum is quite restrictive for the performance requirement we have set above. The number of transactions that can be processed per second is very limited and it cannot support the velocity we want to achieve.



HYBRID LEDGER APPROACH

The plan to overcome this issue is based on a hybrid approach whereby we use the Ethereum blockchain as the immutable ledger that maintains the truth about the EGT holders. At the same time, we will utilize an auxiliary blockchain that will mirror the ERC20 ledger and will be the first entry point for EGT transfers.

The rationale behind this decision is quite obvious. There needs to be a ledger that can accomplish high transaction speeds. This should be comparable to the experience users get from Visa transactions across the existing systems. To gain the traction we need to build a system that does not deteriorate the experience users have been enjoying in the pre-blockchain era. At the same time we want to use a public blockchain fully capable of supporting Smart Contracts and allow us to add additional business logic that can be controlled by a decentralized network of nodes. At the moment, Ethereum is arguably the only mature public blockchain that can provide us with that functionality.

KEEPING OURSELVES AGILE

There is a lot of research happening around scaling public blockchains. Several new projects have introduced concepts that will allow us to experience high speeds comparable to the traditional IT systems that have been around for ages. Our goal is to design the Ecoingot system in such a way that we can retrospectively adapt it and utilize the latest technologies in the Blockchain space. Ultimately, we will manage to accomplish and meet the requirements of our system by using a single scalable decentralized ledger and thus minimize any off-chain processing that our hybrid approach might introduce. It is an important fact to realize that the decentralized ledger technologies are still in their infancy; thus, any system designed today, needs to follow proven software engineering practices that will allow future integration and transition to other alternative technologies.

HYBRID TRANSFER

The first thing we need to design is the integration of the offsets to the application layer. A user will not and should not have any knowledge of the underlying mechanism for transferring the offsets. They should however, be provided with a modern and easy to use user interface that will allow them approve the transfer of their EGT via the offsetting process.



The ideal scenario would be to use a decentralized application (DApp) that will directly trigger an ERC20 transfer event on the Ethereum blockchain. We have described the nuances of this approach above. To resolve this issue, we will use a middleware layer with a fast public blockchain that will sit between the Ethereum network and the application layer.

The application layer itself should have a minimal technical friction and should not modify or extend any of the existing business logic. We can design a service that will listen to all offset requests and trigger the transfer of the mirrored EGT tokens within the fast public blockchain. At any point the fast blockchain will maintain the updated version of the balance sheet that will be ultimately reflected on the main source of truth for the EGT tokens (i.e. the ERC20 smart contract on Ethereum).

DLT TECHNOLOGY

By combining a mature Smart Contract platform with an auxiliary blockchain capable of achieving high transaction speeds, we can create a system that can operate in a secure way and allow users to seamlessly offset their EGT in a very user friendly way.

We are conducting a pilot project for the hybrid ledger approach with the team at ChainZy.

ChainZy Smart Ledger is a bare bones blockchain featuring simple networking with a small footprint and low operating overheads with speeds typically well in excess of 500 transactions per second. It comprises of 3 components:

1. **Transmitters** that accept permitted application data and compute and transmit the blockchain.
2. **Receivers** that accept transmitted blockchains, validate the received blockchain and store it.
3. **Filters** that are the ChainZy programs that consume receiver output (blockchains) and provide rowlinks keyed to UserID or to the hash of UserIDs.

OFFSETTING EVENTS

Traditionally, a single carbon offset has a value of 1,000kg (1 tonne) of CO₂e and could only be offset as a whole. This has previously been a significant limitation and has made it hard for people to offset everyday actions and has contributed to the inefficiency of providing a relevant and solid solution for people to take positive actions against their environmental impacts.



The Ecoingot solution aims to allow everyone to offset even the smallest event, by assigning a more relevant value of 1kg of CO₂e to each EGT, which will allow users to offset events down to the smallest portion of it.

The flow of an offsetting event will be as follows:

1. A user performs an activity (e.g. attends a live concert)
2. The user enters the relevant information into the user interface
3. The ECOSISTM system calculates the carbon impact of the activity
4. The user sends the number of EGTs equivalent to the CO₂e effect of their activity to a specific burn address
5. The Ecoingot system is continually listening for burn events
6. Every time the burned EGT tokens reach the equivalent of 1 tonne of CO₂e (1,000 EGTs), the Ecoingot system will retire one carbon offset and publish immutable proof of its retirement.
7. The proof will be composed by two parts:
 - i. The legal proof of Ecoingot retiring the carbon offset certificate
 - ii. The offset ID that is derived by a merkle tree of all the transaction IDs that participated in reaching the 1,000 EGT cumulative balance

Thanks to these simple steps, it will be now to offset even the smallest everyday action.

ARE YOU LISTENING?

Our system will seamlessly and continually listen for offsetting events. Whenever the completed offsetting events using EGT tokens collectively reach the equivalent of 1 tonne of CO₂e (1,000 EGTs equivalent), Ecoingot will retire one carbon offset certificate and immediately and immutably publish proof of its retirement with all related provenance.

PUSHING OFFSETTING EVENTS

We would need to create utility functions will receive the offsetting events we described above and trigger a transfer on the fast blockchain.

In theory, we have everything we need to perform the token transfer. However, hitting the public Ethereum blockchain (to perform the token transfer) for each of this event is



infeasible. Instead, we need to employ the idea of transferring tokens in chunks at frequent intervals.

An intermediary step will use those events and send signed transactions that will make the transfer on the fast blockchain. At this point, we can record all transfers in a very performant manner. However, we cannot treat the transfer as completed. It will have effect once we update the ledger maintained by the Ethereum blockchain.

BATCH TRANSFER

Finally, we would have to reflect the offset transfers on the public Ethereum blockchain, which is the single source of truth for the EGT tokens. Essentially, we are talking about a typical ERC20 token transfer which will need to happen in an efficient way.

To that end, we will employ the idea of a batch token transfer using a Smart Contract on the Ethereum blockchain. There will be a cron job running on frequent intervals. The process will sign a transaction and will send it to the blockchain. Once the transaction is mined and the token transfer is confirmed, we can update the ledger that is maintained on the consortium blockchain.

PROVENANCE AND IMMUTABILITY

To mitigate risks and moral hazards, Ecoingot will provide the user interface with all the relevant provenance documents stating the ownership of the carbon offset certificates and also immutable evidence of each carbon offset certificate retirement event.

Furthermore, each carbon offset certificate that is retired will be represented with a merkle tree that contains the transaction IDs of all the user's burned EGTs that participated in reaching the 1,000 EGT total.

Owing to the merkle tree capabilities, users will be able to verify that their offset transactions were genuinely used in a specific retirement event through a specific user interface of the decentralised ledger that is transparent and accessible.

FUTURE IMPLEMENTATION

Blockchain technologies are extremely promising for our future. They are still at an early stage but are developing at a steady pace.



One of the most promising improvements we will be following is “sharding”; a technique that allows blockchain to scale by utilizing traditional techniques from classical database management systems.

In addition to that, sidechain technology and cross-chain communication protocols will facilitate the transfer and communication across various blockchains in a fully decentralized manner.

Finally, technologies such as state channels will allow users to perform micro-transactions at a very low granularity and support offline settlements which will massively reduce the transaction costs.

CYBER SECURITY & IT INFRASTRUCTURE

We will be drafting and implementing a GDPR compliant Cyber Security Framework which will include:

- Information and Data security roles and responsibilities
- Access Management Policy
- Sensitive Data Management Policy
- Threats Management Policy
- Business Continuity Plan
- Response and Recovery Plan

Our IT infrastructure will be located in Malta and shall ensure:

- Integrity and security of any data stored;
- Availability, traceability and accessibility of data
- Privacy and confidentiality
- All compliant with GDPR provisions



ROADMAP

An overview of our anticipated timeline is as follows:

2018	Q4	<ul style="list-style-type: none">➤ Launch of Public Pre-Sale➤ Launch of Public ICO Sale➤ Pilot Project with ChainZy
2019	Q1	<ul style="list-style-type: none">➤ Beta ECOSISTM launched➤ Beta Ecoingot App released➤ System integration Trial
	Q2	<ul style="list-style-type: none">➤ System integration completed➤ ECOSISTM full Launch➤ Major marketing strategy for app launch➤ Ecoingot App Launch
	Q3	<ul style="list-style-type: none">➤ Ongoing data gathering via AI/ML➤ Complete system audit➤ Initial API operational
	Q4	<ul style="list-style-type: none">➤ Environmental benefits audit➤ Annual environmental impact report

THE COMPANY

COMPANY NAME: Ecoingot Ltd

COMPANY NUMBER: C-88748

REGISTERED OFFICE: 60/2 Melita Street, Valletta, Malta



Ecoingot Ltd has been incorporated In Malta for the purpose of falling within the regulatory framework for Blockchain and DLT, the first jurisdiction in the world to have laws which comprehensively cover the treatment of cryptocurrencies, the launch of initial coin offerings.

As such, we will be complying with all requirements of the Malta Financial Services Authority (MFSA), the Malta Digital Innovation Authority (MDIA) and the VFA Act.

The company will be run in the manner of any reputable company, by way of record keeping, annual reporting and auditing. Ecoingot Ltd will also publish annual implementation reports on the positive environmental impacts of the project.

THE ECOINGOT TEAM

David Teo



David has more than 25 years in senior management roles at multi-national organisation such as Motorola, Nokia, McAfee and Keppel Offshore & Marine where he provided leadership to global teams responsible for the design and maintenance of systems and software for enterprise business applications.

With a background in Engineering, Accounting & Finance and Information Technology, David has overseen the alignment of technology-related decisions with business goals in these organisations.

He brings to the team valuable experience in planning, deployment and management of software solutions and technology.

Russell Young



A commercially trained lawyer and experienced business development consultant, Russell has more than 20 years' experience of acquiring, growing and managing a variety of high value businesses internationally, with specialism in the automotive and airline industries.



Ciaran Kelly



Ciaran brings over 30 years of international business experience and has accumulated a wealth of knowledge from a career that has spanned many sectors. He has long been a passionate environmentalist and firmly believes in the fusion between business and environmental solutions.

With Ciaran's visionary and entrepreneurial perspective, together with his passion for embracing the latest technologies it has led to him creating and developing this revolutionary and innovative approach to calculating the carbon impact of everything and challenging the norms and stereotypes that surround environmental responsibility.

Adrian Koh



A specialist in business strategy and optimization, Adrian has held senior regional leadership positions in global companies such as Caterpillar Remanufacturing, Solutia (now Eastman Chemicals), Almatris (Alcoa Specialty Chemicals) and Air Products.

He regularly volunteers for medical and educational mission trips to the interior of China and has a passion for helping those in need.

Adrian has a degree in Biomedical Sciences from Indiana University and an MBA from Birmingham University.

Daniel Teo



With 20 years' experience in global strategy, finance and corporate development, Daniel was CFO for Golden State, IML and BP US Atlantic. He was also VP Strategy, Planning and Corporate Affairs for BP Asia-Pacific and Suntech.

He has a BA and MA from Cambridge, MSc from Stanford and G.Dip AF (ACCA).



Jeremy White



With over 30 years in Senior Director/CEO roles, in the textile sector, leading strategic growth, product innovation, and supply chain development, Jeremy remains a champion of sustainability, environment protection and reparation, cultural diversity, and equality.

As a Fellow of the Chartered Institute of Marketing, he brings a wealth of understanding of consumer behaviour.

John Furukawa



John's professional background primarily consists of over 20+ years in investment banking. He started his career in San Francisco with Wells Fargo Investment Advisors which sold their business to Barclays Bank and was rebranded as Barclays Global Investors, when he was transferred to Japan to build out their trading floor to trade equities in Japan and countries part of the MSCI (Morgan Stanley Capital Index).

John then moved on to the sell side of the industry and became Head of Equity Trading at BNP Paribas Japan, responsible for the cash trading activities as well as derivative products such as swaps, futures and options.

Mohammed Ebrahim Al Fardan



Mohammed is an economist, ecosystem architect and expert in FinTech, Blockchain, and AI. He is a serial entrepreneur to many international firms and is also a global speaker, mentor and advisor. Mohammed studied Computer Science, International Business and investments and has more than 2 decades of ICT experience, having worked for IBM, Lexmark, Microsoft and other top ICT multinational firms.

He introduced the Venture Capitals concept to the Middle East region as well as Entrepreneurship, and managed acquisitions, created venture capitals, and attracted many ICT firms to the MENA region.

In 2014 he was awarded the Entrepreneur of the Gulf region and has created the concept, technical study and master plan for MENA ICT hub city, which is the first and only fully integrated smart city in the world.



Veera Sekaran



Veera is the founder and Managing Director of Greenology Pte Ltd, Greenologix Pte Ltd, Evology Pte Ltd and Vertivegies Pte Ltd. He is also an urban greening specialist in Vertical Greening, Interiorscapes, Urban Greening Consultancy, Urban farming and Green Intelligence.

Veera was one of the 5 Singaporeans featured in NDP 2018 and has won many awards and accolades including Singapore-Indian Entrepreneur Award, Overall Award, 2018 Ambassador for Passion Made Possible, STB-EDB National Campaign, 2017/2018, OCBC Emerging Enterprise Award, 2017, Spirit of Enterprise Award, 2017, Singapore Indian Business Leaders Award, 2016 and NUS Faculty of Science, Outstanding Science Alumni Award, 2014.

Florentinos Mela



Florentinos has an MSc in Water and Environmental Engineering and is soon to become a Chartered Engineer. He has worked with governmental departments and councils the UK and Europe, and has successfully implemented solutions to reduce environmental impacts on a significant scale.

With previous experience of effectively combining environmental engineering with innovative technology solutions Florentinos recognises the importance of utilizing blockchain technology for the good of the environment.

Thomas Hall



Tom is a chartered accountant with a passion for technology and is currently involved in digital transformation projects for a number of clients.

He is a self-taught programmer and has gained certification in blockchain strategy from the Saïd Business School at the University of Oxford.



Benjamin Beal



Ben has a 15 year background in the property sector, owning and managing a considerable property portfolio. Having worked with many established funds throughout Europe, Ben has an extensive network throughout the financial world, which in recent years he has expanded to include blockchain and crypto specialists.

His professional experience is combined with his passion for environmental issues and the benefits that blockchain can bring to both.

ECOINGOT ADVISORS

Mark Kirby



Mark is an investment strategy specialist and advisor who has worked alongside institutions, venture capitalists, HNW and UHNW. With a background that spans a number of sectors, he has gained invaluable experience of emerging markets and their opportunities.

As Director of Token Lounge, Mark joins our team to impart his knowledge and experience for our fundraising events and the unique Token Lounge investor pool.

Pavlos Polianidis

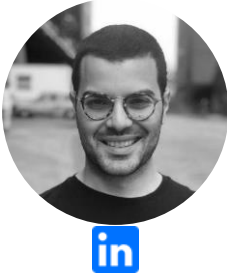


As a co-founder of Coincierge, Pavlos is a key member of our tech team. He has a Masters in Web Technology & Computer Science and has worked across several industries as a technology lead.

He is a blockchain enthusiast and is particularly focused on chain implementation and authoring smart contracts.



Valerio Leo



As a blockchain and software engineer Valerio has consulted and engineered for several projects both within and outside the crypto world. He has a deep knowledge of smart contracts, distributed ledger technologies and Lightning Networks.

As a co-founder of Coincierge, Valerio is instrumental in helping us to develop and deploy the runner for our ICO public sale.

CARBON DATA DEVELOPMENT

Professor Mike Berners-Lee



Mike is a Professor at Lancaster University and author of the books “How Bad are Bananas?” and “The Burning Question”.

He has extensive experience of developing carbon impact models and data gathering and has worked with a wide range of sectors, from supermarkets, to local councils to multi-national tech giants.

Renowned as a world-leader in carbon impact footprinting, Mike is an integral part of the development of our ECOSISTM and is developing the methodology that will be the foundation of our AI/ML-based data gathering.

LAWYERS



Chetcuti Cauchi Advocates is a Malta Law Firm and has been instructed to guide Ecoingot throughout all aspects of our ICO.

The company is experienced in ICO set-up and advisory and will be our lead legal team to ensure smooth registration under the Maltese Virtual Financial Assets Act and compliance with all MFSA and MDIA requirements.



Ecoingot

CORPORATE PARTNERS & ADVISORS





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