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# **EVZ** White Paper

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The Future of Electric Vehicle Charge Platform

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# 1. Abstract

Electric vehicles of different forms first appeared contemporaneously with gasoline powered vehicles, but it wasn't until the mid-2000's that the technological advancement of electric cars and their commercialization began to gain momentum. With the global community becoming increasingly concerned with environment issues, most notably Global Warming, many nations have introduced policies to increase the supply of electric cars and improve their market viability. However, this has consequently seen power consumption due to electric car charging increase 2 to 3 times per year and as this trend continues it will be necessary for power suppliers to be able to anticipate supply and demand for this market.

Experts predict that for every 100 electric cars on the road there will need to be 55 charging points but various difficulties have arisen in the process of installing new charging facilities as land owners and stakeholders clash over issues such as location and supply. These problems pose a practical challenge in transitioning from the use combustion engine based cars to electric cars.

The two main alternatives for electric car charging points are private-use and public-use. Private-use charging points offer low accessibility to the general public due to their location on private property which will lead to them being under-utilized. Public-use charging points in comparison, likely to be present in parking lots or at gas stations, can be difficult to manage as non-electric vehicles may obstruct them by parking in the spaces designated for charging, or alternatively owners may leave their vehicles charging for longer than necessary. In Korea, as well as other countries, governments have tried to mitigate these problems through laws and fines.

In addition, there are certain locations, such as apartment complexes, large hotels, and office buildings, which function as both private and public spaces. Installing charging points in these locations will enable shared access for owners, residents, visitors and other permitted users. By taking advantage of such spaces the needs of electric car users in busy city centers can be met. Over time, as the adoption of electric cars spreads from inner-city dwellers to people living in the outer suburbs a gradual expansion of charging points to these areas will naturally coincide.

Currently, the various operators of charging points have adopted different methods of providing their services, in many cases inconveniently requiring users to register as members. Operators also face their own inconveniences, being required to install a wide range of new equipment for various purposes such as payment processing and communication, with set-up, operating and upkeep costs combining to increase prices. Due to this, investment and operation costs are steadily increasing and recharging costs are rising in unison.

To date the various manufacturers of electric car charging technology have developed their own operating systems for their products, meaning that different providers are becoming familiar with competing systems. To solve this potential obstacle, manufacturers and service providers are seeking to develop an industry standard utilizing Open Charge Point Protocol (OCPP).

However, the present reality is that countries and providers differ from each other in the use of various features such as processing payment and additional charges, and this complication cannot be easily overcome. More specifically, with a wide range of providers

to choose from, an electric car user, when encountering an incompatible system, may first need to determine the specific technology that is used at the charging point they are at, then register with that service. Frequently dealing with this kind of cumbersome system is a huge inconvenience to the customer. Eventually, in the interests of increased expansion of the electric car industry, improving the ease of use for people who choose these environmentally friendly vehicles needs to be compulsory. To achieve this, the main focus for charging point businesses is ensuring that customers who register for electric car charging can access all providers through the single registration.

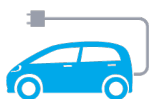
This would require the adoption of a “roaming service”. A roaming service platform needs to be simple enough to be easily adopted by all providers will optimizing the current infrastructure to allow smooth and precise exchange of user data.

Another issue with electric cars is the continuing debate about whether it is reasonable to truly label them as environmentally-friendly emission-free vehicles. This controversy stems from the fact that the manufacturing and powering of these vehicles utilizes nuclear and fossil fuel. Accordingly, there are some limitations in being able to position these cars as eco-friendly “green vehicles”. To overcome this, the market needs to increase the importance of producing energy from clean sources, such as solar, wind and geothermal power. With the inherent difficulty of controlling the supply of clean energy, it is important to find ways to ensure that the supply can always meet demand. One potential solution is the storage of excess energy during times when supply is greater than demand.

Electric cars can be considered as both means of transportation and storage batteries. Their engines are suitable to function as power storage systems, so through using them in this form we can create a virtuous cycle where building more electric cars encourages the further generation of green energy which then demands manufacturing more electric cars to store the increased supply of energy.

To solve the variety of problems mentioned previously and to help quickly establish eco-friendly electric cars as mainstream, we propose the usage of blockchain technology to create a linked system. In the following section we will discuss 4 visions of the application of the EVZ Platform (“EVZ Platform”) and the EVZ coin.

## VISION / Electric Car Charging Platform



Solve Lack  
of Charger



Solve Occupation  
Problem



Roaming for  
Charger Platform



Encourage  
Clean Energy

The first vision is a solution to the shortage of charging points in the community. Expansion of charging facilities will be encouraged through the application of the EVZ Platform to transform private-use charging points into public-use points. At the same time, we will develop low-cost public-use charging points modeled on the private-use charging points.

Once both of these steps are fulfilled, anyone can easily install and operate their own charging points, encouraging the growth of a voluntary sharing economy.

The second vision proposes a way to prevent anti-competitive behavior or users abusing the system through occupying charging points for excessive periods. This can be achieved through developing a token economy which disperses financial rewards or penalties to incentivize positive participation in the ecosystem.

The third vision entails developing a platform that enables businesses to provide roaming services for the customers that use their charging services. To achieve this it is necessary to ensure that various businesses synchronize their systems as close as possible to increase accessibility.

The fourth vision involves the alternative use of electric vehicles as storage batteries to both use energy more efficiently and promote the use of clean energy. Being able to function as both energy chargers and dischargers, the batteries can be fully charged prior to peak times and then transmit their energy back into the grid to reduce the load during times of high energy usage.

In conclusion, increasing the utilization of existing infrastructure by enabling the sharing of private-use charging facilities (such as home-based chargers) is the core focus of the EVZ project. Through this, problems caused by incorrect usage of the charging stations, such as occupying the space for excessive time periods, can be solved with verification systems and penalties. By reducing such abuses, the convenience of users can be improved.

Users can also be encouraged to use green energy and to avoid accessing the power grid at times of high electricity usage.

Through these policies, the value of choosing this eco-friendly form of transportation increases, while at the same time emissions are decreased, directly contributing to the maintenance of the environment.

## 2. Background of Project

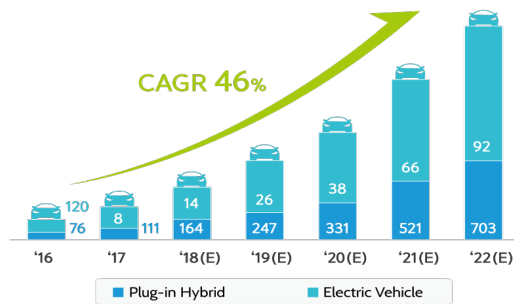
### 2.1. Current Situation

#### 2.1.1 Electric Vehicles – Present and Future

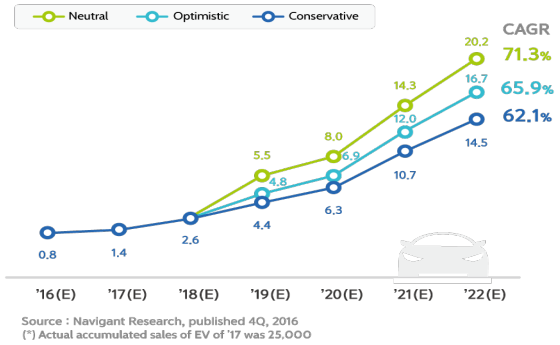
According to the data below, there will be a market of 1.9 million battery electric vehicles (BEV), including plug-in hybrid electric vehicles (PHEV), globally by 2022. In Korea, there is expected to be somewhere between 145,000 – 202,000 electric vehicles in use. The Government is targeting a total of 1 million of these vehicles by 2030, as they plan to push ahead with policies regarding energy measures and reduction of fine dust.

## Global EV Market Scale Outlook('17~'22) (Unit: 10k)

Global EV market size will likely increase



## EV Market Scale Outlook in Korea ('16~'22) (Unit: 10k)



According to the table below, when comparing BEVs available in the Korean domestic market in 2017 to the first phase of electric vehicles available in 2015, battery capacity had more than doubled and mileage per charge had increased 1.7 times.

As battery technology continues to develop, battery capacity is expected to increase by 72% from 2016-2022, as depicted in the figure below.

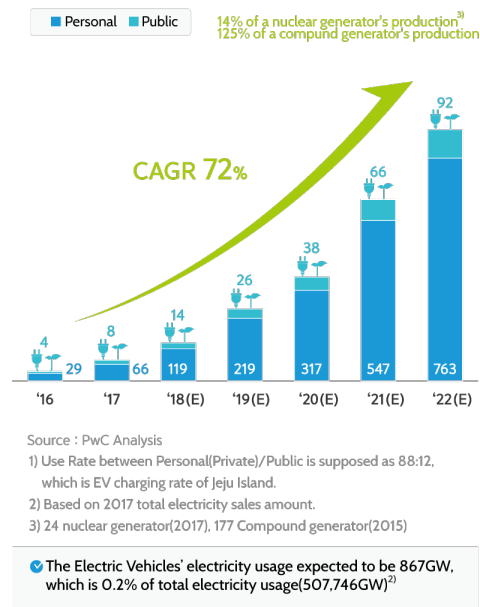
## Performance Improvement of Korean Brand EV

| BEV ('15)    |            | Average116km         |                       | Average19.5kwh |  |
|--------------|------------|----------------------|-----------------------|----------------|--|
| Manufacturer | Model      | Driving distance(km) | Battery capacity(Kwh) |                |  |
| Korean Brand | KIA        | RAY EV               | 91                    | 16.4           |  |
|              | Renault SM | SM3 Z.E              | 123                   | 22             |  |
|              | GM Korea   | Spark EV             | 135                   | 20             |  |

| BEV ('17)     |             | Average116km         |                       | Average19.5kwh |  |
|---------------|-------------|----------------------|-----------------------|----------------|--|
| Manufacturer  | Model       | Driving distance(km) | Battery capacity(Kwh) |                |  |
| Korean Brand  | Hyundai     | IONIQ EV             | 191.2                 | 28.08          |  |
|               | KIA         | SOUL EV              | 179.6                 | 30             |  |
|               |             | RAY EV               | 91                    | 16.4           |  |
|               | Renault SM  | SM3 Z.E              | 135                   | 26.64          |  |
|               | DaeChang MT | DANIGO               | 60.8                  | 7.25           |  |
|               | Semisysco   | D2                   | 92.6                  | 17.28          |  |
| Foreign Brand | BMW         | i3 94ah ('18)        | 208.2                 | 33.18          |  |
|               |             | i3 ('17)             | 132                   | 18.8           |  |
|               | Tesla       | ModelS 75D           | 359.5                 | 87.5           |  |
|               |             | ModelS 90D           | 378.5                 | 87.5           |  |
|               |             | ModelS 100D          | 451.2                 | 101.5          |  |
| OEM           | Nissan      | LEAF                 | 132.8                 | 23.76          |  |
|               | Renault SM  | TWIZY                | 60.8                  | 6.77           |  |
|               | GM          | Bolt EV              | 383.2                 | 60.9           |  |

## EVC Usage Outlook in Korea ('16~'22) <sup>1)</sup>



Electric power consumption per electric car is about 2,500kWh for one year, about 2,000kWh for private charging place and about 500kWh for public charging place. Based on Korea in 2017, electricity consumed in charging electric cars is 80GWh per year, of which about 88%- about 70GWh- was made by a home charger for personal use. There are 13,000 home chargers and 9,000 public chargers in Korea, and chargers are installed at 50 ~ 60% of the annual supply of electric cars.

With such an increase, the yearly electricity consumption by electric vehicles in 2022 is predicted to reach 867GW. Average consumption per car equals about 2500kWh per year, with 2000kWh recharged at private-use points, and the remaining 500kWh supplied by public-use points.

In 2017 total electricity consumption for electric vehicle charging domestically amounted to 80GWh, with 88% of this was consumed by home-based private-use charging points. Presently there are about 20,000 of these private-use chargers in Korea, with another 10,000 public-use charging points spread throughout the country. Of this combined total, 50-60% are fully installed and operating.

### 2.1.2. Perspective of the Charging Station Industry

Electrically propelled motion and the energy storage battery count amongst the core features of electric vehicles. Particularly now that the powerful lithium ion battery is installed in most vehicles, with its high energy efficiency and high performance relative to price, storage capacity has increased significantly. With the maximum total range from a full charge also advancing greatly in proportion to the increase in energy storage capacity, researchers are now considering how to balance the battery capacity to weight ratio of engines to get the optimal value out of the vehicle.

These developments are having an effect on the development of charging technology as well, which has also changed the charging habits of users. With the rise of “fast charge” technology (50kWh or higher), time taken to recharge vehicles fully has decreased significantly, and standard charging speeds now range from 100kWh to 350kWh.

Through the convenience of fast charge many people are recharging much more frequently than before which is subsequently leading to an increase in the amount of electricity used. This trend may cause a gradual increase in the demand for power, to the point where power shortages could occur.

Therefore, in the interest of maintaining a stable energy supply, an increase in the use of fossil fuels may follow. Given that a reduction in carbon emissions was one of the original goals of establishing electric vehicles as a preferred mode of transportation, this could potentially lead to an outcome opposite to what was intended.

To combat this unwanted side effect and consolidate protection of the environment, it may be necessary to modify the pace of expansion of charging point locations. At the same time, political backing should be sought to help improve user awareness of their power usage.

## 2.2. Recognizing Problems and Solution Pathways

### 2.2.1 Charging Point Shortage Problem

As the number of electric vehicles in existence grows, the supply of charging stations also increases at a faster and faster pace. Despite this mutual expansion, the constant mobility of vehicles makes it unlikely that charging stations can always be available at any time or in any place. To provide charging stations in sufficient quantity to avoid this reality would prove inefficient.

Paradoxically the success and failure of charging point operators will depend on the location where they are able to set up their equipment, and the potential to expand the facilities to meet supply and demand. Charging points will be most in demand in places which have

adequate parking spaces for potential customers but must also be able to provide a constant supply of electricity. There are difficulties in meeting both of these essential requirements; physical limitations of available land and the economic restraints of constructing and installing required charging facilities

In the case of Korea, among the 20,000 private-use charging points, about 70% are installed in locations such as apartment complexes and large buildings where they could easily be used as public-use chargers.

Presently, Korea is a society where most people are concentrated in large cities like Seoul. As a result, most charging stations are in the main districts and downtown areas of these cities. With a focus on major cities and centralization there is a limited spread of charging stations to the wider regions of the nation. To overcome this, rather than trying to hurry the construction of new sites, it is more important that existing facilities are optimized to be used as efficiently as possible, while at the same time building more charging stations at a manageable pace.

In certain areas where power supplies are limited existing resources must be maximized to be used as efficiently as possible, so that customers can access charging points whenever and wherever they wish. Focusing on such solutions will form the groundwork for overcoming the previously mentioned problems. Minimizing inconvenience and discomfort for owners of electric vehicles is a priority as the market grows. In their daily lives, drivers will mainly travel between home, work and local shopping districts, and within this range it is reasonable to expect that they will want access to charging stations in all of the mentioned locations to meet their changing needs.

It may be impossible to remove all the inconveniences faced presently by electric vehicle users but, it is possible to improve certain aspects through changing perspectives. One change to aim for is encouraging many private-use (household) charging points to be shared by their owners for public-use. To facilitate this, any burdens that may be placed on private owners such as requiring them to change operating systems or spend money, must be minimized. Indeed, inducing them to participate by simplifying the process and using their existing systems is the most rational way to succeed. Furthermore, private users who share their charging points need to be provided with personal compensation to ensure that a healthy sharing ecosystem arises.

To ensure users are not inconvenienced when using public-use charging stations it is necessary to provide a roaming service. Another essential is tiered pricing based on frequency of charging and time-usage per charge. These incentives are designed to increase the dispersion of charging points throughout the country.

## 2.2.2 Misuse of Space Problem

Inconvenience and annoyance can arise for electric vehicle users when they are prevented from charging their vehicles due to charging point inaccessibility. This can be caused by regular, non-electric vehicles using the space as a parking spot or by electric vehicles remaining in the space long after the time required to recharge. As the number of electric

vehicles increases, this issue is also occurring more frequently. Several countries, including Korea, have decided to impose fines for misusing the space in this way. While such measures are expected to quickly reduce the incidence of regular vehicles using the space, it will be harder to recognize when electric vehicle users are infringing. Therefore, charging point operators may need to implement fees based not only on quantity of electricity recharged but also on how long the vehicle occupies the space to recharge. Electric vehicle users must be made aware of the need to move their vehicles as quickly as possible once they've completed recharging; by levying them with additional fees users will quickly modify their behavior and charging stations will become more accessible. By changing the fee-paying structure of electric vehicle charging stations from a recharge based system to one that charges based on usage of space, the EVZ Platform will be able to solve several different challenges related to the misuse of space around the charging points.

### 2.2.3 The Complexity of the Charging Platform

A wide variety of shapes and types exist amongst the private-use and public-use charging points in Korea. Owners of electric vehicles generally find household chargers to have simple designs for straightforward usage and are comparatively much cheaper to use than public-use ones. On the contrary, public-use charging points tend to be equipped with much more features that make them bulkier and harder to operate. These additional features also contribute to the additional costs involved in using these charging points, as do management, maintenance and other administration expenses. If we also consider that customers will need to pay fees for roaming services, public-use charging points could become an expensive burden to electric vehicle users.

Presently many businesses have complex billing processes that employ third parties, which makes them waste energy on administration and paperwork. To try and simplify their own operations, these businesses may develop their own systems. This could cause many charging stations to no longer be compatible with roaming services and could lead to higher costs for development, operation and billing. Ultimately, this will all lead to increasing fees for the customers.

The EVZ Platform will be able to lessen the financial burden by transforming private-use chargers into public-use chargers and reducing the costs of establishing new infrastructure. Also, through the use of EVZ coins, the EVZ Platform's cryptocurrency, charging station operators can forego roaming services and instead process payments through blockchain. This would lead to a ground-breaking reduction in the costs of processing and billing expenses.

### 2.2.4 Lack of Incentive to Use Alternative Energy

In the 21<sup>st</sup> century one of the most important challenges faced globally is how to balance high energy demand with the need to generate cleaner energy. Despite this, many people remain ambivalent about the need to use alternative and renewable energy. In order to shift society's energy reliance towards natural sources such as solar, wind and geothermal power, we must reduce the dependence on fossil fuels and nuclear power to provide the bulk of our energy needs. Green energies need to offer a constant supply to convince the population, but unfortunately this is not something that can be controlled easily through

human will alone. Though output is irregular, there are times where natural energy sources can produce electricity in abundance and by finding ways to store this power for later use, we can begin to reduce dependence on nuclear and carbon energy. When supply exceeds demand, power grids can no longer store energy, but the battery housed within electric vehicles can provide a storage alternative to avoid this power being wasted. Storing excess energy in electric vehicle batteries can ensure there are still sources of energy at times of power grid instability. Once stored in the battery, the power can be fed back into the grid at times of peak demand through Vehicle to Grid (V2G) technology. This system will help increase the use of alternative energy sources and society will benefit as this form of power management becomes standard. Users participating in this kind of system should be offered rewards and incentives.

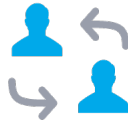
Currently, the commercialization of V2G technology has yet to be fully realized, but with the implementation of On Board Charger (OBC) technology it is possible to discharge from the battery through a charging device which can be connected to the power grid. What kind of features and fees need to be included in the V2G service has yet to be determined. From a functionality perspective, the technology and process of transmitting electricity in either direction between grid and battery is virtually the same, so it should be easy to include this as a standard in electric vehicles.

As demand for electric vehicle charging increases so does the demand for electricity. While the number of charging points is presently insufficient, there will also be a shortage of electric vehicles that will be equipped to store and discharge energy through these points. The EVZ Platform, by analyzing big data, will be able to predict the supply and demand curve and advise to people possessing electric vehicles with discharging capability when and what quantity they should supply back to the grid. The platform will also provide locating and reservation services to allow users to arrive somewhere where they can discharge to the grid. The convenience of this service will help maximize the economic efficiency of participating.

### 3. Blockchain-based EVZ Platform

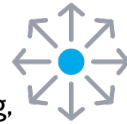
## Why Blockchain?

#### Sharing System



Transparent and Reliable Platform for Sharing and Roaming of Personal Charger

#### Decentralization System



In Sharing Economy of Charging, With EVZ Coin, each Individual can acts as a role of Charger Operator/User/Generator. Without Intermediary/Central Manager

#### 3.1 The Necessity of Blockchain

Blockchain is a technology where data is decentralized and recorded in chains of data blocks, which helps prevent forgery and alteration of private data. While the technology is easily accessible to anyone, it is not easy to modify so clarity and security are its key characteristics. Blockchain has also led to the emergence of the token economy, where users who create and verify new blocks can be rewarded with cryptocurrency.

The “smart contract” concept, delivered through the distributed ledger, provides a transparent contract process and allows contracts to be processed easily and securely while payment and remittance and a variety of other growing features can be offered.

Based on these features there are several trials occurring to use this technology in several current and future settings. New technologies like the EVZ project will continue to alter the paradigm of the motor industry and its relationship with the environment and energy market. Blockchain is a central part of the 4th industrial revolution, and its application will lead to the emerging electric vehicle industry to be more transparent and accessible.

There are two main reasons for the central importance of blockchain in the EVZ project. The first is sharing. With more than 100 years of development, electric vehicles had mostly vanished before their sudden resurgence in recent years. The growing consciousness that the future of infrastructure will require sharing has seen the market growing daily, but electric vehicle charging infrastructure is lacking and compatibility between services is poor. Governments have tried to solve this problem by constructing more infrastructure, but with so many private-use charging points already in existence it is clear that the most efficient way to solve the problem is by getting the private owners to share their infrastructure. This is one of the primary goals of the EVZ project. These owners must be enthusiastically encouraged to share their privately-owned infrastructure, with compensation and other incentives offered so they volunteer to participate.

To successfully allow all owners to share their infrastructure, EVZ will use BLE module and blockchain technology to connect all the charging point infrastructure to create a form of roaming service. With this technology, EVZ can guarantee security and transparency while providing a reliable billing system for people sharing their charging points to process payment.

Additionally, using blockchain, participants who share their private-use charging points will be able to earn compensation in the form of a cryptocurrency, EVZ coin, which will allow global integration.

The second is dispersal. Blockchain technology is based on transparency and gives all participants authority and benefits. This system will decentralize all the processes, giving any user the potential to profit from taking part.

The EVZ team will work on expanding the platform but will not actively participate or interrupt the ecosystem, allowing participants to independently choose what role they would like to play on the platform, be it business operator, service user, or developer for example. EVZ coin, the platform's cryptocurrency, will be used to promote a transparent sharing economy. Penalties and incentives in the platform will be determined based on circumstances, but it is anticipated that any illegal behavior or misuse of EVZ coin will lead to punishment.

### 3.2 EVZ Platform

The EVZ Platform is designed to make sharing electric vehicle infrastructure easy while solving shortage issues. EVZ will pioneer a new market where electric vehicle users can easily be matched with unused private-use charging stations for the mutual benefit of user and provider. The EVZ module can operate without any network connections, as a user can simply use a smart device to process payment and manage recharging through an application.

Charging stations must be set up to exclusively use the EVZ Platform. Pre-existing charging stations can easily be converted by removing the RFID card and installing the EVZ module. BLE-based IoT technology allows users to connect wirelessly to process payment via Bluetooth 4.0 or higher.

The EVZ Platform's unprecedented networking system for electric vehicle chargers provides a wide range of conveniences to users:

- Charging Market:

Allows private owners to profit from sharing their facilities. Groups or individuals who wish to participate can easily enroll and enjoy the open market system without paying monthly connection fees or management costs.

- Charging Location:

Any form of charging point, be it fixed format or even a simple power socket, can be networked to the EVZ Platform, meaning that minimal investment is required to rapidly expand and provide the service in unlimited locations.

- Openness: Billing problems, theft of electricity or people charging handheld devices from charging points are all problems that people face in the electric vehicle ecosystem. EVZ Platform will be able to integrate roaming service infrastructure and brand exclusive private networks to help combat these problems.

### 3.2.1 Platform Drive Model

The EVZ Platform can be connected to many forms of charging infrastructure. From the charging technology of leading companies such as Hyundai, BMW and GM to standard power outlets and Bluetooth modules. Owners and users will utilize EVZ coin to support an active economy integrating these various technologies.

With “unity” being a keyword of the 4th industrial revolution, the EVZ Platform will serve to represent that ideal by unifying blockchain with the developing businesses that are currently being nurtured by Governments to advance electric vehicle technology. Once introduced to EVZ, it is hoped businesses will begin using EVZ points for payment and billing and EVZ coins for purchasing a wider range of services.

Cryptocurrency is increasingly becoming an asset that can be used to purchase a variety of services and be used in daily life, and the eco-friendly vehicle market can now be part of this. Blockchain can help introduce new concepts such as recycling and decentralization to the related fields of energy, electricity and networking and will allow business, government and p2p transactions to occur more easily. The possibilities for cryptocurrency will continue to advance in unexpected ways.

The EVZ offers a straightforward charging process as follows:

1. Check charging point information.
2. Request Payment.
3. Transfer EVZ coins.
4. Begin charging as soon as coin payment is processed.
5. User receives electricity and provider receives coins.

By installing the blockchain optimized EVZ module, Bluetooth module, OPT encrypter, and EVZ coin validation device as well as removing the RFID card reader, the charging point is ready to connect to the smart device application where it can access the blockchain wallet, encrypted through OTP. This setup requires very few investment fees for private owners who wish to connect to the EVZ Platform and operate an electric vehicle charging business.

With the EVZ Platform, the owner can set their own fees and receive payment through EVZ coin (excluding certain minor service charges). As EVZ coins can then be used with various participating businesses it makes it easier to attract potential users who are already registered with this system. If this business model can help successfully transition the 20,000 or more domestic private-use electric vehicle charger into a fleet of eco-friendly government-approved public-use ones it will surely have a positive flow-on effect for the international shortage problem.

As cryptocurrency transactions are not limited by borders there are no limits to expanding this system internationally. In the future the technology can be utilized to provide various services, such as car pooling and sharing, and track car usage and carbon-reduction data.

### 3.2.2 EVZ Platform Network

The EVZ Platform network must be implemented based on the guidelines of the domestic Environment Ministry as well as following the development of international blockchain technology that uses standard protocol OCPP. According to these requirements, the structure of the EVZ Platform can be divided as described below:

1. Communication system available through an application that offers lowest level of service to any users.
2. An application for services and communication for A group users.
3. An application that allows A group members to network with B,C,D group users and provide connected services, basically functioning like a roaming service.
4. An application for businesses and infrastructure providers that connects them to all other users to provide their services.

The users group will be able to utilize the DApp (wallet app) through their smartphone and can search for charging locations, and process payment all through the encrypted EVZ Platform.

The user's data will be saved securely through blockchain's distributed storage. Using API and SDK, in the event of the EVZ module malfunctioning they can wirelessly record the data in the infrastructure layer.

The business group represents a wide variety of providers, from genuine business operators to private owners, but this system will act as a unification network that connects all these providers, effectively offering a roaming service.

The application of blockchain allows a more reliable service with high data transfer that can be transmitted without risk of data being lost, damaged or leaked. Data is stored safely in the blockchain and users can easily recall or renew data that they need to access.

For infrastructure-related businesses, a single network can connect all charging points and make their services compatible for smooth operation.

Using the Json type encrypted transfer any data transfers in the system are conducted with a security certificate and this process is made transparent to reassure users. The blockchain technology ensures all charging points connected to the EVZ Platform operate accurately and securely.

### 3.2.3 EVZ Platform Data System

In the current environment, there is no unified charging system, which is very inefficient for both businesses and users. To create an ecosystem that operates efficiently the EVZ Platform must be adopted. It will allow real-time tracking of all charging points, including dormant chargers and ones optimized to be dischargers as well. While Blockchain technology

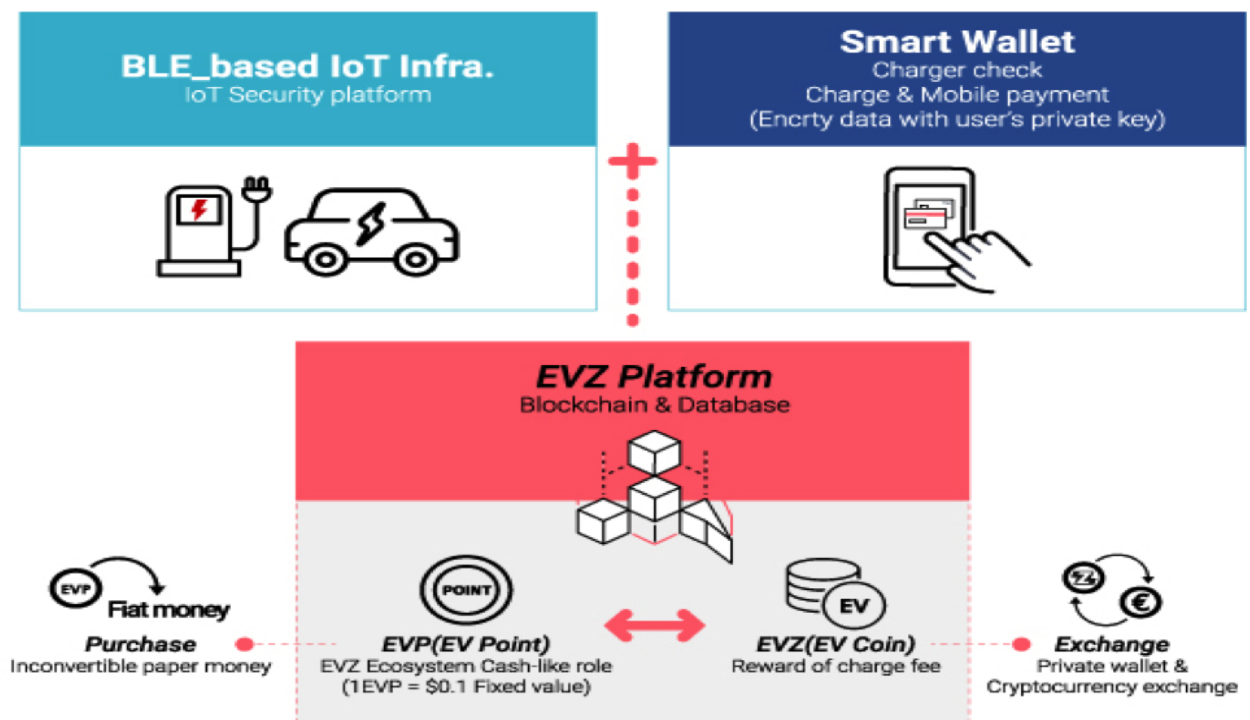
will ensure security, it will also allow data tracking that can assist in finding solutions to future problems.

There will be two kinds of data in the EVZ Platform. The first type of data is charging and payment data. This is publicly shared data that anyone can access, because it is inscribed on the blockchain. The second data type is personal data, which cannot be stored on the blockchain as it is private, it will be securely stored on a distributed database. Only the references that connect the data can be added to the blockchain. These references simplify the connection between data recorded on the blockchain and data spread through the separated file system solution and allow efficient recall. Important data should be recorded on the blockchain with related data in the separate data base.

Ultimately the EVZ Platform functions as a series of blocks of data connecting together in an organic structure. This helps to create an integrated P2P platform system.

### 3.3 EVZ Coin Blockchain Architecture

The IoT security platform employed by the EVZ module will ensure encrypted payment



processing. When connecting to charging points with the EVZ Platform, users will be able to exchange data without any risk of leakage. In real life, users will connect with their smart phone or other device to the EVZ network, check the status of the charging point and once making payment through an encryption system, begin to charge their vehicles. The blockchain-based encryption system allows transactions to be processed with EVZ points and EVZ coins. EVZ coins are one of the core features of the EVZ Platform made possible by the blockchain architecture.

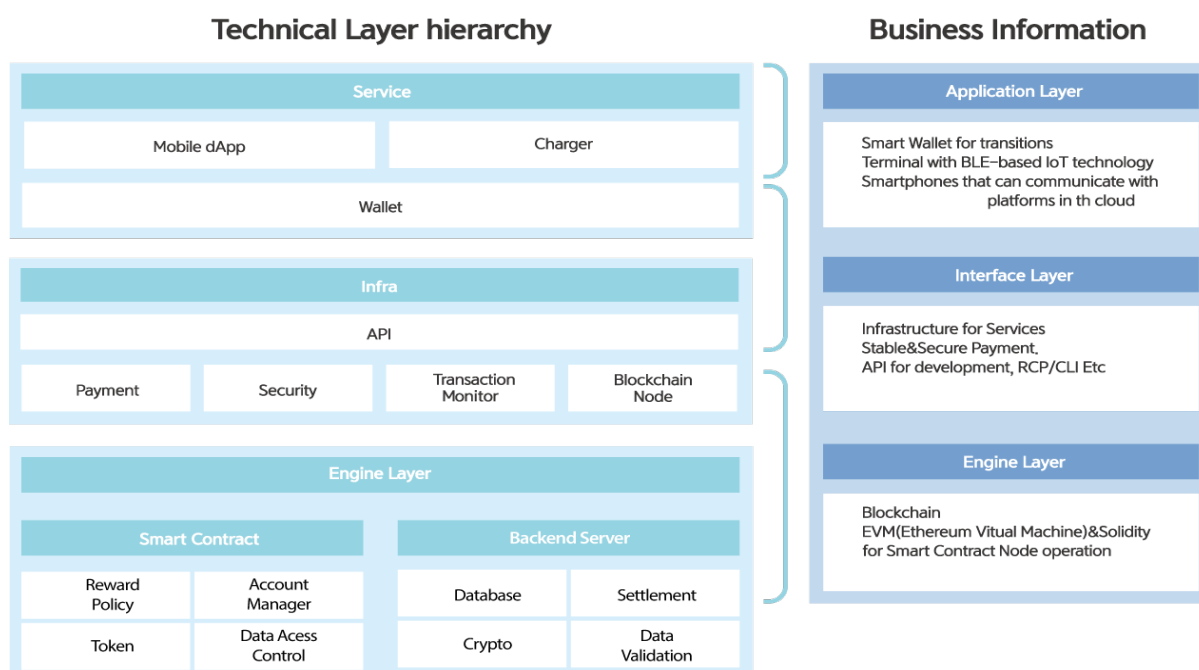
## 3.4 EVZ Coin Layer Structure

### 3.4.1 Service Layer

The service layer is the EVZ Platform's end point, that can be accessed by users or external systems. Users can find charging services and can process payments. They can use services made available through the infrastructure or blockchain and can access their wallets, which can also be accessed as a separate standalone feature. This layer has security features that prevent data breaches.

### 3.4.2 Infrastructure Layer

The infrastructure layer manages and processes all requests from the service layer. It connects the platform with Ethereum, and records all transactions between the EVZ Platform and the Ethereum node. It supports the payment service, roaming service and data security and ensures all data is recorded securely to the database and blockchain.



### 3.4.3 Engine Layer

The engine layer operates the core functions of the EVZ Platform. It stores all payment and reward information on the blockchain, as well as managing smart contracts and access to user's personal data, as well as securing private and sensitive data in the database using the encryption system. It verifies all stored data in the database and blockchain. It also manages various charging and payment processes.

## 4. EVZ Token Architecture

### 4.1 EVZ Token Economy

Inside the EVZ Platform, two kinds of payment and incentive systems will be established, namely: EVZ point (EVP) and EVZ coin (EVZ). Following the token sale, 'EVZ' may be acquired from the EVZ Platform through the performance of qualifying activities (see paragraph 4.1.2 below) or purchased from the open market (e.g. through an exchange). EVP and EVZ will play a primary role in inducing electric vehicle charging demand for EV charging in EVZ platform ecosystem.

#### 4.1.1 EVZ Point (EVP)

Equivalent to real currency within the EVZ Platform. 1 EVP will have a fixed value of US\$0.1 (1 cent) – the value of EVP may be denominated in other real currency such as KRW. EVP may only be used as payment for charging on the EVZ platform, and will not be listed or tradable on the market. Any person who wishes to obtain EVP may do so by purchasing EVP with credit card or cash.

For the avoidance of doubt, none of the EVZ Coins carry any right to obtain EVP or any other right other than as a means of payment on the EVZ Platform. Accordingly, EVP cannot be obtained by converting/exchanging EVZ Coin.

#### 4.1.2 EVZ coin (EVZ)

A ERC-20 token standard cryptocurrency operating in the system as an alternative means to pay for services. It can be used in any cryptocurrency marketplace that accepts payment with EVZ and its value will be determined based on market forces. A limited quantity of EVZ may be issued to users as a reward for qualifying transactions and activities on the EVZ Platform. For example, when a user makes payment with EVP on the EVZ Platform, such user will be eligible for a certain amount of EVZ as reward for carrying out the payment transaction. In instances where a private owner shares their charging station, such private owner will be eligible for a certain amount of EVZ as a reward for sharing in addition to any other usage payment.

When a user pays for the usage of a electric vehicle charger with EVZ instead of EVP, further incentives will be offered to help create demand for the use of EVZ.

- Purchase and Possession of EVZ by Local Host demand.

As the electric vehicle market continues to grow, related infrastructure is also expected to expand. A portion of the funds raised from the token sale of the EVZ

coins will be set aside to support activities of the EVZ Platform including, for example, providing any newly established electric vehicle charging business (Local Host) with the required charging station infrastructure free of charge and supporting the EVZ reward system to encourage expansion of the infrastructure.

If a Local Host wishes to expand their operation due to increased demand and does not have sufficient EVZ to meet the staking requirement of the EVZ Platform, they will need to acquire more EVZ, which will be stored in their private wallet on the EVZ Platform. The EVZ Platform will require businesses to maintain and stake a certain amount of EVZ in order to participate in the Platform. In the event that a business fails to comply with the relevant terms and conditions in respect of its participation in the Platform, EVZ that are staked by such business may be burnt. Operators will be able to accept either EVZ or cash as payment for their services.

- Participant Rewards

As well as Local Hosts, private users who install the EVZ Platform on their charging systems will also be able to earn EVZ. Whenever customers pay them via EVP, 1% of the payment amount will be accrued as EVZ. When provided energy stored from alternative or renewable energy sources, the operator will instead accrue 2% of the transaction in EVZ. By placing a value on charging at different times of day depending on supply and demand, participants will be able to earn more rewards.

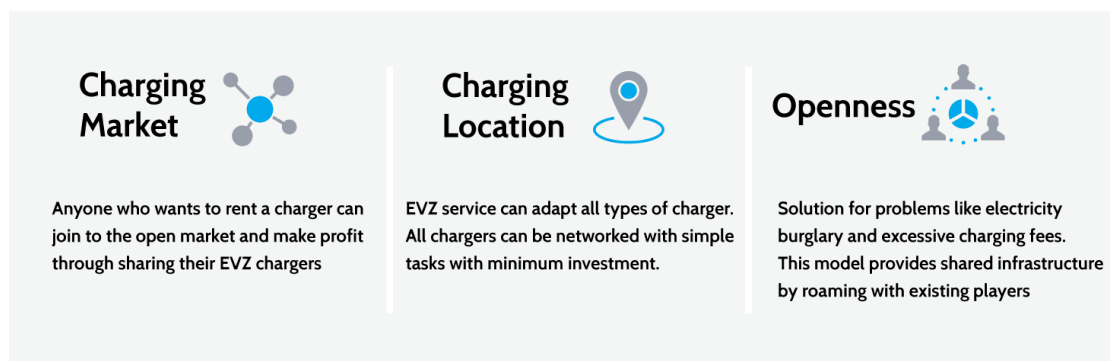
- Priority Charging Permission

While infrastructure continues to increase in areas of high demand for electric vehicle charging system, it is a reality that limitations in availability still exist. In high-density areas, demand for charging stations is rising dramatically, which raises questions about priority access. In these situations, customers who intend to pay for charging via EVZ rather than EVP will be given priority.

## 5. EVZ Ecosystem

### Blockchain based EV Charging Platform EVZ

EVZ Platform provides an open market place through active participation of actual users (consumers) by focusing on C2C while accommodating a diverse B2B commercial business model.



#### 5.1 Players in the Ecosystem

EVZ coins are the currency distributed for making purchases and transactions on the EVZ Platform. Various players will participate in the ecosystem of the EVZ Platform. These will include both purchases of electric charging and sellers of surplus electricity, electric vehicle retailers, charging point operators, and other local players, as well as independent power producers.

##### 5.1.2 EVZ Team

The EVZ team will be in charge of establishing the EVZ Platform, and will operate EVZ points and EVZ coins and manage expansion of the platform according to the budget. The team will also oversee the transparent involvement of charging point operators and users and their use of EVZ coins as well as managing the exchange rate.

##### 5.1.3 Charging Point Operators (CPO)

The number of participants on the EVZ Platform who possess private-use charging points and wish to share their facilities with other users is expected to increase gradually. Any private owner can use an application to easily register as a business and start earning money from their system, which will effectively help reduce the shortage of infrastructure. CPOs using the EVZ Platform have the flexibility to choose their own operating hours, usage costs, and when to run “coin-time” (a period where purchases can only be made through coins). The times that private operators choose to open their services will exert a direct influence on recharging and power distribution. Platform participants will be able to convert their coins into currency whenever they wish or can hold on to them if they expect the value to continue to rise.

- Method to convert private owners into CPOs

To continue expanding the EVZ Platform, many more charging points than are available now will be required. While this expansion will likely be related to an increase in

sales, it will also depend on the investment costs required for start-ups and the availability of land to construct new infrastructure.

Due to these issues, Europe and the USA have different systems to what is currently used in Korea. Domestically, the EVZ team will introduce a franchise concept to help minimize the issue of increasing investment fees for potential new CPOS. This model will involve renting equipment and offering a membership system.

– Expansion of CPOs through rental

There are several different forms of CPOs that need to exist in the EVZ ecosystem. These include users of electric vehicles who simply wish to convert into CPOs as a way of sharing their charging point, and business operators who want to attract more customers by offering differentiated services. The EVZ Platform will seek to proactively respond to the needs of the different CPO niches by promoting the rental concept through the following policies.

| Classification                |                            | Rental Terms                                                  | Sales Distribution Terms |                         |                                                   |
|-------------------------------|----------------------------|---------------------------------------------------------------|--------------------------|-------------------------|---------------------------------------------------|
|                               |                            |                                                               | Rental Period            | After Rental Period     | Note                                              |
| Fast Charge<br>(50kWh 이상)     | Commercial and First Grade | 36 month installment plan<br>50% of Charging and Set-up Fees  | Customer:Operator = 2:8  | Customer:Operator = 5:5 | Electricity Costs, Maintenance and Operating Fees |
|                               | Other                      | 24 month installment plan<br>100% of Charging and Set-up Fees | Customer:Operator = 5:5  | Customer:Operator = 5:5 | Electricity Costs, Maintenance and Operating Fees |
| Standard Charge<br>(7kWh)     | Commercial and First Grade | 36 month installment plan<br>50% of Charging and Set-up Fees  | Customer:Operator = 2:8  | Customer:Operator = 5:5 | Electricity Costs, Maintenance and Operating Fees |
|                               | Other                      | 24 month installment plan<br>100% of Charging and Set-up Fees | Customer:Operator = 5:5  | Customer:Operator = 5:5 | Electricity Costs, Maintenance and Operating Fees |
| Power Socket Charge<br>(3kWh) | Commercial and First Grade | 36 month installment plan<br>50% of Charging and Set-up Fees  | Customer:Operator = 2:8  | Customer:Operator = 8:2 | Electricity Costs Paid by Customer                |
|                               | Other                      | 24 month installment plan<br>100% of Charging and Set-up Fees | Customer:Operator = 8:2  | Customer:Operator = 8:2 | Electricity Costs Paid by Customer                |
| Personal-Charger Sharing      |                            | 24 month installment plan<br>100% of Charging and Set-up Fees | Customer:Operator = 8:2  | Customer:Operator = 8:2 | Electricity Costs Paid by Customer                |

[Condition]

With the “Payback” benefit renters will receive 7% of their payment back as EVZ coins, which will increase to 10% for private owners who are sharing their charging points. EVZ coins received through “Payback” will be restricted to use on future charging purchases only.

– Electricity Supply Contribution-based Membership System

Even after attracting many CPOs to the EVZ Platform, participants need motivation to

continue actively sharing their services, and a membership system will help to incentivize this. Members will be able to earn additional EVZ coins based on the amount of electricity they supply to customers. There will be three membership levels, with the incentive percentage rising along with their level.

| Level     | Qualfication     | Incentive Amount |
|-----------|------------------|------------------|
| A Class   | 0 - 700kw        | 3%               |
| S Class   | 700kw - 1400kw   | 5%               |
| VIP Class | 1400kw and above | 7%               |

[Condition]

Membership level will be determined based on the participant's contribution from 6:00am on the 1<sup>st</sup> of the month until 12:00am on the final day of the month. The total incentive amount will then be calculated and paid before the start of the next monthly period.

### 5.1.3 Charging Point Users

On the EVZ Platform, EVZ points or EVZ coins must be used to pay for charging. EVZ points can be purchased with credit card or cash, while EVZ coins can be earned through using EVZ points or as rewards for participating in several activities on the EVZ Platform. EVZ coins have special characteristics that will allow users to access priority charging during busy times or use the "Coin Night Time" product, which lets users combine electric charging and overnight parking fees in one purchase.

### 5.1.4 VPP (Virtual Power Plant)-based Independent Power Producers

Renewable and alternative energy sources, such as solar, geothermal and wind power, have been growing in prevalence, but these sources are limited in being able to always provide the appropriate supply to meet demand. Controversy also surrounds the extent to which electric vehicles can be considered to be environmentally-friendly given the use of fossil fuels in their production. Given these issues, the importance of delivering reliable green energy is growing, and one way to help achieve this is through providing a means to store renewable energy when it is available at levels exceeding demand.

The battery housed within electric vehicles is the perfect storage solution to facilitate this. VPP-based independent power producers, who generate their own alternative or renewable energy, can store their excess production in the battery and in times of insufficient electricity supply sell it for a profit. Power producers can receive EVZ points and coins for selling their power and as they gain more coins they can use them to get priority for selling more of their power.

### 5.1.5 International and Local Players

As the global electric vehicle market is expected to grow, global car manufacturers are aggressively investing in electric vehicle businesses. Many nations are introducing clean energy policies and offering varying levels of subsidies, and with the expansion in investment both from companies and generous governments the industry can expect to grow substantially. Due to this, collaborations between international companies and local car and charging point operators can be expected.

In Europe, renowned car manufacturing companies have already introduced a single card that offers a roaming platform to access 70 different charging point operators that have received investment. It is expected that EVZ will cooperate with all providers, both local and international, to ensure that customers are able to use or transfer points to access all charging services.

### 5.2 User Scenario

(as an example, all figures may not be accurate)

#### **Consumer's Perspective**

Justin uses an electric vehicle but lives in an apartment building with a shortage of parking spaces, so it is not practical to have a private-use charging point. He has installed the EVZ app, seeking an easy way to charge his vehicle and through using the app he is able to confirm that an EVZ charging point is only 5 minutes away.

He is able to check the price and operating hours on the app, and travels to the charging point location on his way home from work. Once he arrives at the location, he uses the EVZ app to gain permission to use the charging point, and then confirms the owner's pricing (1 EVZ point per hour at 7kWh) and time allowance (From 11pm – 12am, total 1 hour) before beginning charging.

Justin locks in a one hour time period on his phone and then pays the 1 EVZ point from his blockchain wallet connected to the EVZ app. Once the time reaches 12am, he unplugs his vehicle from the charging point and quickly departs. He is careful to leave on time to avoid the occupation fee, which costs double the normal price and is charged to vehicles that fail to leave after their time limit has expired. Justin has charged his vehicle using solar power, so the 1 EVZ point he spent earns him 0.02 EVZ coins as a reward. He has now gathered 5 EVZ coins.

The next day Justin travels to Daegu by car for an overnight business trip and must drive 300km each way. An electric vehicle can normally travel 400km when the battery is fully charged but Justin knows he should recharge his vehicle. He searches for a charging point in advance on his EVZ app, and once he finds one on the way to his meeting place he sets his navigation system to take him there. After 3 hours of driving he arrives at the charging point and decides to charge for an hour at 50kWh, costing \$10. He can choose to pay with either credit card, EVZ points or EVZ coin. He decides paying with EVZ points is the best choice so that he can earn EVZ coins. After paying he has now saved a total of 10.1 EVZ coins.

After arriving in Daegu and attending the meeting he needs to search for a hotel that offers overnight charging from 11pm. He finds one that offers an EVZ charging point and chooses EVZ coin as his payment option as he can use the “Coin Night Time” product to park the car overnight without incurring penalty fees for occupying the charging location after the charging is complete. He charges for 4 hours using 8 EVZ coins and leaves his car in the spot until 9am the following day. The “Coin Night Time” product is not available with rapid charging.

Justin’s payment of 8 EVZ coins is worth \$15. If Justin uses his credit card to pay he would need to pay penalty fees for 6 hours from 3am to 9am which would cost him an additional \$7. Users are encouraged to buy EVZ coin and EVZ points and consequently practice brand loyalty to receive these benefits.

### **Charging Point Owner’s Perspective:**

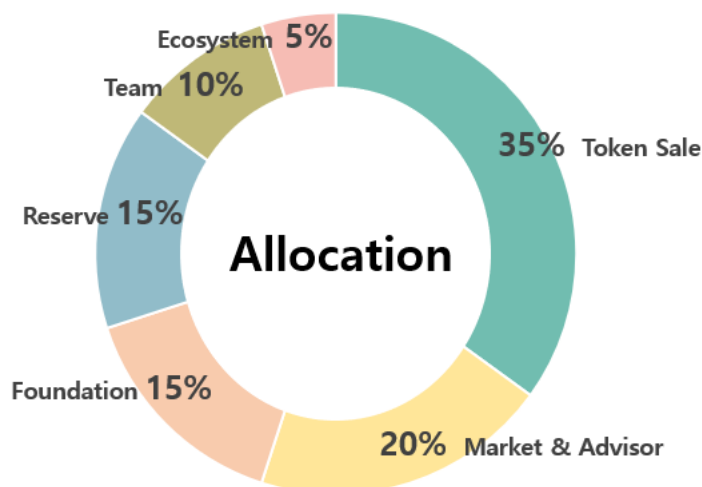
Kyle owns a private-use charging point as a way to recharge his personal electric vehicle. He drives less than 1000km a month per average and only spends about \$20 per month in operating his charging point. He wants to use it more efficiently so enrolls with the EVZ Platform. After spending \$120 to order an EVZ module he refers to a Youtube video to learn the installation method and sets it up himself.

He installs the EVZ app on his phone and registers as a HOST, then posts his operating hours, usage costs and coin time period. His operating hours are 8am – 9pm, and since he lives in nearby a Department Store, and parking fees are expensive in his neighborhood, he sets 12pm-4pm as his coin time. His charging point charges at 7kWh which costs him \$0.30 per hour and he wants to earn a \$0.4 profit as well as covering commission fee so he decides to charge \$1 per hour.

For one week he shares his charging point for 10 hours and earns \$10. After EVZ deducts a commission he decides that he will get more value out of receiving EVZ coin than cash so he requests EVZ coin as payment. Kyle can exchange his EVZ coin into cash but because he knows that use of electric vehicles is expanding he decides that it is better value to keep his coins as he expects their worth to increase.

## 6. Token Distribution

### 6.1 Token Allocation



The total supply of EVZ coins will be distributed as follows:

- 35% of the total supply of EVZ coins will be offered for sale during a token sale, out of which, 33% will be sold privately to investors and other organizations and 2% will be sold to the public. The proceeds from these sales will be set aside to generate the initial fund.
- 20% of the total supply of EVZ coins will be set aside for the market and advisors. Such EVZ coins shall be subject to a lock-up period of three years as described below.
- 15% of the total supply of EVZ coins will be set aside by EVZ Foundation Ltd. for use at its discretion. Such EVZ coins shall be subject to a lock-up period of three years as described below.
- 15% of the total supply of EVZ coins will be kept in reserve for emergency situations.
- 10% of the total supply of EVZ coins will be set aside for the EVZ team. Such EVZ coins shall be subject to a lock-up period of 30 months as described below.
- 5% of the total supply of EVZ coins will be made available in the ecosystem.

Notes: The above token distribution and distribution of proceeds are subject to change without notice.

– Details of the lock-up period:

- (i) The EVZ coins that are set aside for the market, the advisors and EVZ Foundation Ltd. shall be subject to a lock-up period of three years. During such lock-up period, such EVZ coins shall be unlocked in tranches: the first tranche of such EVZ coins shall be unlocked on the first anniversary of the date of which EVZ coins are first listed on an exchange ("**First Listing Date**") and thereafter, the remaining tranches of such EVZ coins shall be unlocked every month up to the last day of the lock-up period.
- (ii) The EVZ coins that are set aside for the EVZ team shall be subject to a lock-up period of 30 months. During such lock-up period, such EVZ coins shall be unlocked in two tranches: the first tranche of such EVZ coins shall be unlocked 18 months from the First Listing Date and thereafter, the second tranche of such EVZ coins shall be unlocked 30 months from the First Listing Date.

- Policy of Coin Burning

If a business fails to properly manage a electric vehicle charger that was installed, the EVZ coin that was staked by the business will be burned.

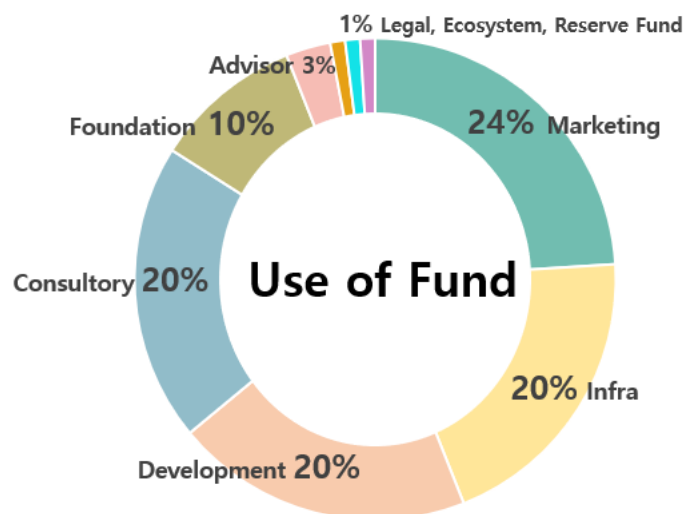
Recently the management of electric vehicle charger has fallen into neglect, and the system does not run smoothly. In the event that, even after securing many charging point operators to participate, the system does not run normally, the EVZ Platform can lose credibility. In order to prevent these kinds of problems any businesses that participate in the platform and deal with their coins in an unsatisfactory way will have their staked coins burned.

Any parties that cause damage to a charging point will have a 168 hour (7 days) grace period to rectify the problem, after which every 12 hours a certain amount of staked coin will be burned and after all staked coins are exhausted, they will be banned from the EVZ ecosystem.

- Securing an Incentive Pool:

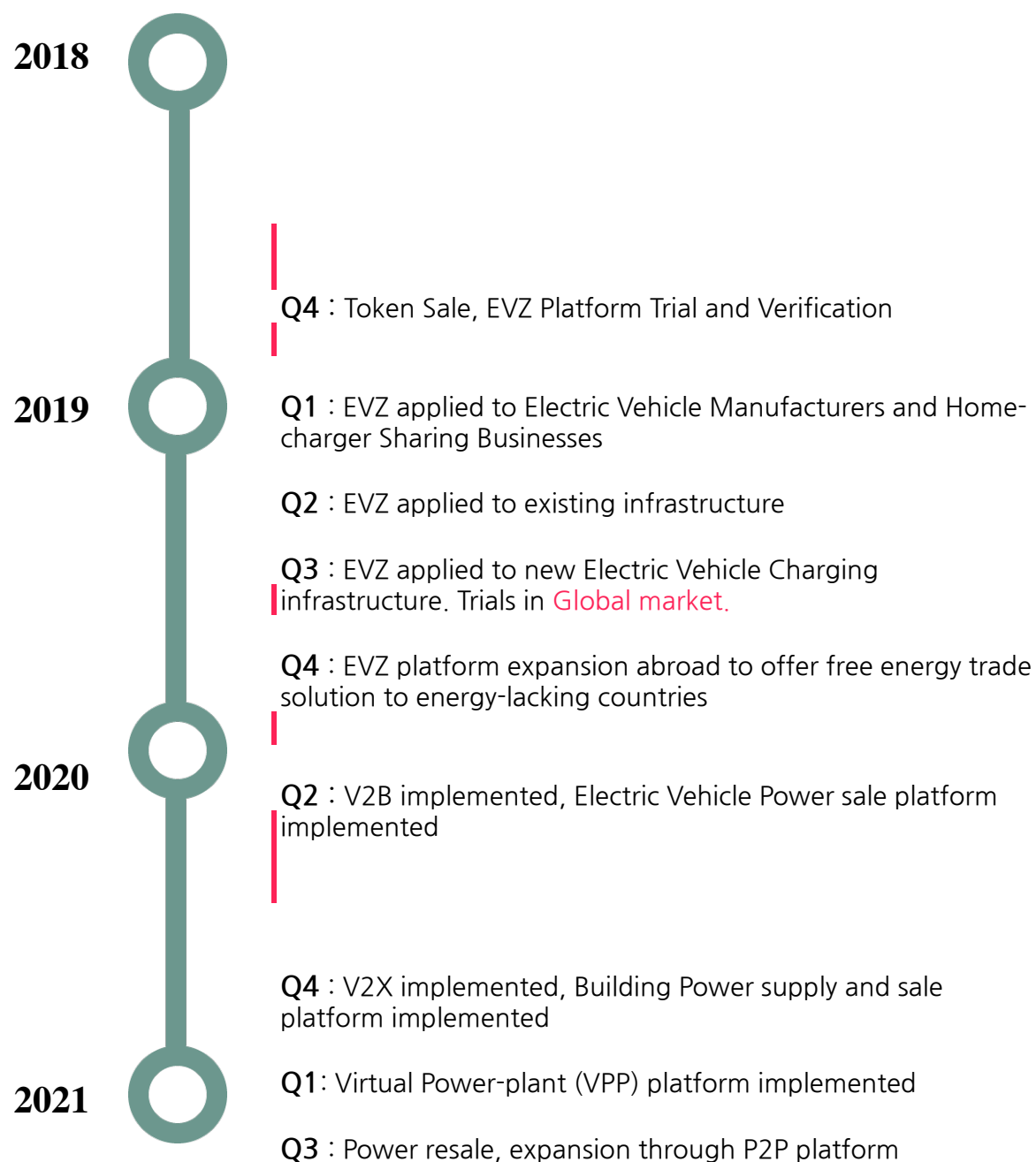
In the interest of signing up businesses to the platform, EVZ offers their products as rentals. Businesses can pay off their infrastructure installation fees in installments. To provide further incentive, the EVZ team will place 10% of profits from rentals into an incentive pool.

## 6.2 Use of Fund



Of the total raised funds, 24% will be dedicated to marketing and business fees, 20% will be invested in development, 20% spent on infrastructure, 20% will go towards blockchain and business consulting fees, 10% for team foundation and management costs, 3% for advisors, 1% put aside for any potential legal expenses, 1% as a minimum funds for maintaining the token management ecosystem and finally 1% to be kept in reserve in case of emergencies.

## 7. Road map



## 8. Team



CEO 최영석

- Charzin CEO
- Sunmoon University Smart Car Engineering - Adjunct Professor



CIO 최웅철

- Kookmin University vehicle engineering
- Electric Vehicle and battery charging research expert



CFO 최영호

- Previous Samsung vice-president



COO 김철수

- Previous Hyundai Mobis vice president



CTO 강범석

- Electric Vehicle charging infrastructure
- service planning and unification development expert



CSO 변성웅

- SI development expert-
- Automobile journalist



최주영

- Electric Vehicle charging infrastructure



김도현

- Mobile infrastructure developer and programmer



김현준

- Electric Vehicle total system engineer
- ICT SA expert



Hee Jang

- Electric Vehicle

Diagnosis/Evaluation/Service Expert

## 9. Adviser



Gyu-won Lee

- POSCO technology Investor



Jae-goo Park

- Former Aide of Jeju Governor  
- Former Aide and Spokesperson  
of Gyeongnam Governor



Giorgio Rizzoni

- Ohio State University  
Automotive Responsibility Professor  
- Electrical and Computer Engineering Professor  
- Ford Motor Company Chair in ElectroMechanical

## 10. Legal Advisor

TEK & LAW

## 11. Partnership



**KEVUA**  
한국전기차사용자협회



NO.1 전기차 전문 세어링

## IMPORTANT NOTICE

PLEASE READ THE ENTIRETY OF THIS “IMPORTANT NOTICE” SECTION CAREFULLY.

WE RECOMMEND YOU CONSULT A LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISOR(S) OR EXPERTS FOR FURTHER GUIDANCE PRIOR TO PARTICIPATING IN THE EVZ ECOSYSTEM TOKEN SALE OUTLINED IN THIS WHITEPAPER.

THIS WHITEPAPER MAY NOT BE DISTRIBUTED, DISSEMINATED OR OTHERWISE TRANSMITTED TO ANY COUNTRY WHERE SUCH DISTRIBUTION, DISSEMINATION OR TRANSMISSION MAY BE PROHIBITED.

### 1. Legal Statement

- (a) This whitepaper (“**Whitepaper**”), in its current form, is issued by EVZ Foundation Ltd. (Company Registration No. 201823338G), a company incorporated in Singapore with its registered address at 10 Anson Road, #23-14E, International Plaza, Singapore 079903 (“**EVZ Foundation**”). This Whitepaper is circulated for general information purposes in relation to the EVZ blockchain project as presently conceived and is not legally binding on EVZ Foundation or any other parties.
- (b) The information in this Whitepaper is current only as of the date on the cover hereof and is subject to review and revision. EVZ Foundation reserves the sole and absolute discretion to revise any part of this Whitepaper from time to time by posting the revised Whitepaper on <https://www.evzlife.com> (“**Website**”). Such updated Whitepaper shall become effective immediately from the time of posting.
- (c) No person is bound to enter into any contract or binding legal commitment in relation to the sale and purchase of the EVZ coin and no payment is to be accepted on the basis of this Whitepaper. Any sale and purchase of the EVZ coin will be governed by a legally binding agreement, the details of which will be made available separately from this Whitepaper. In the event of any inconsistencies between the above mentioned agreement and this Whitepaper, the former shall prevail.
- (d) This Whitepaper does not constitute or form part of any opinion on any advice to sell, or any solicitation of any offer by the issuer/distributor/vendor of the EVZ coin to purchase any EVZ coin nor shall it or any part of it nor the fact of its presentation form the basis of, or be relied upon in connection with, any contract or investment decision.

- (e) The EVZ coins are not intended to constitute securities, units in a business trust, or units in a collective investment scheme, or any other types of capital markets products, each as defined under the Securities and Futures Act (Cap. 289) of Singapore (“SFA”). This Whitepaper does not, and is not intended to, constitute a prospectus, profile statement, or offer document of any sort, and should not be construed as an offer of, or a solicitation for investment in, capital markets products, securities or any other financial or investment instrument in any jurisdiction.
- (f) No EVZ coin should be construed, interpreted, classified or treated as enabling, or according any opportunity to, purchasers to participate in or receive profits, income, or other payments or returns arising from or in connection with the EVZ Ecosystem, EVZ coins, or products, or to receive sums paid out of such profits, income, or other payments or returns.
- (g) No regulatory authority has reviewed, examined or approved of any of the information set out in this Whitepaper. No such action has been or will be taken in any jurisdiction.
- (h) Where you wish to purchase any EVZ coin, please note that such coin is not to be construed, interpreted, classified or treated as: (a) any kind of currency other than cryptocurrency; (b) debentures, stocks or shares issued by any entity; (c) rights, options or derivatives in respect of such debentures, stocks or shares; (d) rights under a contract for differences or under any other contract with the purpose or pretended purpose to secure a profit or avoid a loss; or (e) units or derivatives in a collective investment scheme or business trust, or any other type of securities.

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- (b) EVZ Foundation and its Affiliates do not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in this Whitepaper.
- (c) To the maximum extent permitted by the applicable laws and regulations, EVZ Foundation and its Affiliates shall not be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort,

contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you.

#### 4. Cautionary Note on Forward-Looking Statements

- (a) Certain information set forth in this Whitepaper includes forward-looking information regarding the future of the project, future events and projections. These statements are not statements of historical fact and may be identified by but not limited to words and phrases such as “will”, “estimate”, “believe”, “expect”, “project”, “anticipate”, or words of similar meaning. Such forward-looking statements are also included in other publicly available materials such as presentations, interviews, videos etc. information contained in this Whitepaper constitutes forward-looking statements including but not limited to future results, performance, or achievements of EVZ Foundation or its Affiliates.
- (b) The forward-looking statements involve a variety of risks and uncertainties. These statements are not guarantees of future performance and no undue reliance should be placed on them. Should any of these risks or uncertainties materialize, the actual performance and progress of EVZ Foundation or its Affiliates might differ from expectations set by the forward-looking statements. EVZ Foundation or its Affiliates undertake no obligation to update forward-looking statements should there be any change in circumstances. By acting upon forward-looking information received from this Whitepaper, EVZ Foundation or its Affiliates’ website and other materials produced by EVZ Foundation or its Affiliates, you person-

ally bear full responsibility in the event where the forward-looking statements do not materialize.

(c) As of the date of this White Paper, the EVZ Platform has not been completed and is not fully operational. Any description pertaining to and regarding the EVZ Platform is made on the basis that the EVZ Platform will be completed and be fully operational. However, this paragraph shall in no way be construed as providing any form of guarantee or assurance that the EVZ Platform will eventually be completed or be fully operational.

## 5. Potential Risks

- (a) Please carefully read every piece of information, understand and analyze the risks related factors before deciding to participate and purchase the EVZ coin. The risks include, but are not limited to:
- (i) risk of losing access to EVZ coin due to loss of private key, credentials and other identification information, or any other kind of custodial or purchaser errors;
  - (ii) fluctuations of the price of EVZ coin post issuance due to the general global market and economic conditions. Such volatility in the value of the EVZ coin may lead to EVZ Foundation not being able to fund the development of the EVZ Ecosystem, or may not be able to maintain the EVZ Ecosystem in the manner intended;
  - (iii) any malfunction, unplanned function or unexpected operation of the Ethereum protocol which may, in turn, cause the EVZ coin or the EVZ Ecosystem to malfunction or operate in a way that is not expected as they are based on the Ethereum protocol. Ether, the native Ethereum Protocol account unit, may itself lose value in a similar way to EVZ coin, and also in other ways;
  - (iv) changes in political, social, economic and stock or cryptocurrency market conditions, and the regulatory environment in the countries in which EVZ Foundation or its Affiliates conduct their businesses and operations, and the ability of EVZ Foundation or its Affiliates to survive or compete under such conditions. It is possible that certain jurisdictions will apply existing regulations on, or introduce new regulations addressing, blockchain technology, which may be contrary to the EVZ coin and/or the EVZ Ecosystem which may, inter alia, result in substantial modifications of the EVZ Ecosystem and the EVZ Foundation blockchain project, including termination and loss of EVZ coins;

- (v) changes in the future capital needs of EVZ Foundation or its Affiliates and the availability of financing and capital to fund such needs. A lack of funding could impact the development of the EVZ Platform and the uses or potential value of the EVZ coin;
- (vi) for a number of reasons including, but not limited to, an unfavorable fluctuation in EVZ coin value, the failure of business relationships or competing intellectual property claims, the EVZ Foundation project may no longer be a viable activity and may be dissolved or simply not launched;
- (vii) the lack of interest from large number of companies, individuals and other organizations for the EVZ Ecosystem and services and that may have limited public interest in the creation and development of distributed applications. Such a lack of interest could lead to a lack of funding and also impact the development of the EVZ Platform and the uses or potential value of EVZ coin;
- (viii) significant changes made to the features or specifications of the EVZ coin or the EVZ Platform before the release or implementation of the EVZ Foundation project and/or the EVZ Ecosystem. While EVZ Foundation intends for the EVZ coin and the EVZ Ecosystem to function as described in the Whitepaper, EVZ Foundation may nevertheless make such changes;
- (ix) competition from alternative platforms that may have been established, which could potentially adversely impact the EVZ coin and the EVZ Ecosystem (e.g. lack of commercial success or prospects caused by competing projects);
- (x) interference with the use of EVZ coin and the infrastructure of the EVZ Ecosystem due to any weaknesses or malware that may be intentionally or unintentionally introduced into the software of the EVZ Ecosystem. The blockchain used for the platform is also vulnerable to attacks which pose a risk to the platform and the performance of related services;
- (xi) occurrences of catastrophic events, natural disasters that affect the businesses or operations of EVZ.

Network or its Affiliates and other factors beyond the control of EVZ Foundation or its Affiliates. This includes mining attacks, attacks by hackers or other individuals that could result in theft or loss of proceeds of the EVZ coin sale, or the EVZ coin and impacting the ability to develop the EVZ Ecosystem;

- (xii) the EVZ coin and other cryptocurrencies are a new, untested technology and constantly developing. The full functionality of the EVZ coin is not yet complete and no assurance can be provided of such completion. As technology matures, developments in cryptographic

technologies and techniques or changes in consensus protocol or algorithms could present risks to the EVZ coin, the EVZ coin sale, the EVZ Foundation project and/or the EVZ Ecosystem, including the utility of the EVZ coin;

- (xiii) EVZ coins confer no governance rights of any kind with respect to the EVZ Foundation project, the EVZ Ecosystem and/or EVZ Foundation and all decisions will be made by EVZ Foundation at its sole discretion, including decisions to discontinue the EVZ Foundation's products or services, the EVZ Foundation project and/or EVZ Ecosystem, to create and sell more EVZ coins for use in the EVZ Ecosystem or to sell or liquidate EVZ Foundation; and
  - (xiv) The tax treatment and accounting of the EVZ coins is uncertain and may vary amongst jurisdictions. There may be adverse tax consequences and independent tax advice in connection with purchasing EVZ coins should be obtained.
  - (xv) In addition to the risks stipulated above, there are other risks that EVZ Foundation and its Affiliates cannot predict. Risks may also occur as unanticipated combinations or as changes in the risks stipulated herein.
- (b) If any of such risks and uncertainties develops into actual events, the business, financial condition, results of operations and prospects of EVZ Foundation or its Affiliates could be materially and adversely affected. In such cases, you may lose all or part of the value of the EVZ coins.

## 6. No Further Information or Update

No person has been or is authorized to give any information or representation not contained in this Whitepaper in connection with the EVZ coin, EVZ Foundation or its Affiliates and their respective businesses and operations, and, if given, such information or representation must not be relied upon as having been authorized by or on behalf of EVZ Foundation or its Affiliates.

## 7. No Advice

No information in this Whitepaper should be considered to be business, legal, financial or tax advice regarding the EVZ coin, EVZ Foundation or its Affiliates. You should consult your own legal, financial, tax or other professional advisor(s) regarding the EVZ coin, EVZ Foundation or its Affiliates and their respective businesses and operations. You should be aware that you may be required to bear the financial risk of any purchase of EVZ coin for an indefinite period of time.

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