ESP Project White Paper

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The ESP ecosystem comprises of a ERC-20 style utility Token used in both open Decentralized apps and closed vertically oriented systems. The ESP token has planned specific use cases in Education, Energy & Solar as well as more general electronic payment platforms. ESP believes that having targeted, use specific tokens, focuses value and utility while fostering a like minded community ecosystem delivering meaningful results with their products and services and doing something that matters.

The ESP project is just the beginning and not just a Token. With a long term vision and roadmap aimed to deliver value, convenience and comfort.
INTRODUCTION

Welcome to ESP. The first reasonable question is what does ESP stand for? Education and Solar Projects. Though the roots of this project centred around Education and Solar Projects, there is more to the story, with a much deeper long term vision.

At its heart, currencies are used for making payments. Here is really where our focus remains. ESP has multiple meanings. Education System Payments, Energy & Solar Programs, Electronic Supply-Chain Payments and others. This document will talk about how our vision will create an ecosystem that will support both closed and fully decentralized use cases. Each use case is highly focused where we feel our ESP token provides utility. Our goal is to enable these different use cases with frictionless payments that reduces the overhead of traditional methods in both time, cost and effort.

We will not be just another one of those tokens. We look to have an extensive roadmap that leads to a native coin in the future supported by local exchanges for our targeted use cases as well as a more global approach supporting flows between multiple blockchains through provided swap gateways.

This is a living breathing document. As we extend our vision and fine tune our execution strategy this document will be updated. We will be guided by the industry, requirements of the ever changing crypto landscape, new technologies & markets with our singular goal of providing utility and value.

THE WHY

Our goal is to make a significant impact on improving the effectiveness of the education system by using a technology driven ecosystem of products and services. One of the main issues in developing countries where our Education services would be launched first is the simple fact that a large percentage of people do not have bank accounts, yet everyone has a smart phone. This is a perfect application for a utility token.

Over the last 3 years as we discussed the ecosystem with educators and service providers it was obvious there are a number of challenges that can addressed by the utility token. These range from divorcing our services from the credit card / payment processing side, creating a decentralized content delivery network (CDN) and creating closed systems for specific services such as pay to view and paid to watch services.

Targeting an international audience, also raises complex issues of ForEx and methods of payments. As we continued down the thought development path, it was also obvious that a lot of the challenges and enhanced capabilities that we were considering were applicable to many industries allowing us to broaden our concepts.

The environment, green Energy and Solar are of particular interest to us. Here again we can see making a meaningful impact. We know that on average a house with solar saves the environment around 7 barrels of oil per year, or around 3000kg of CO2 per year. Over a 30 year life expectancy of a solar system, this works out to 90,000kg of CO2 per house!
Lastly, we strive to provide a friction free environment for all of the services offered in the ecosystems we aim to support. We envision a more general payment system, to support various supply-chain transactions. Here, a more “DeFi” mode of operation is possible with the idea of financing invoices, facilitating immediate payments through the use of smart contracts and payment tokens are obvious. Integrating crypto payments in a complete POS solution in our opinion makes complete sense.

THE HOW

Clearly, we have a wide range of reasons to create a utility token. There are many tokens already available in the crypto currencies space. We believe that there is no single token or currency that fits all. Making a utility specific token makes a lot of sense and narrows the focus of what we are trying to achieve. We are fully aware that our Utility token will not meet every payment requirement and was not designed as such.

Not only a token needed, but also the services required in various industries to better automate payment transactions. This means creating both open and closed systems. In Education, we are developing a content delivery system on a pay per use, and paid to view platform. Using the Token we can integrate consumers, content providers, advertisers as well as through the use of smart contracts have decentralized governance for content approval and dispute resolution all wrapped in a decentralized CDN where the Token is the currency for payments.

Having exchanges in the countries that we are operating in to exchange the E$P token to Fiat currency allows us to push the local compliance regulations and requirements on to the exchange reducing the complexity of our international payment structure.

This project is the spring board to launch a multi-pronged product and services roadmap.

THE WHAT

In the context of the ESP project. We are focused on the E$P token and the use case for the below described industries.

Use Case: Education Ecosystem

Our first use case is an Education Ecosystem at the school board level. The token will be a means of payment for School services, supply chain payments, and student wallet funds.

A platform that connect parents, teachers and students on a single application. This application will be a Student Information & Management system. It will provide functions such as attendance, performance, attitude monitoring and communication. As well, one of the most requested features is to have a digital wallet for students to use at school to pay for lunches / snacks & books. Parents can also pay for tuition, school trips or other expenses. The
use of a token system makes it such that students never have to carry cash, parents can remotely fill student wallets as needed or make school payments instantly. The obvious benefit to the school is to not have to pay or arrange complex payment processors. For parents with students in remote locations or countries, this becomes very convenient as they can purchase tokens in their local currency, instantly send to either the student or service/school provide funds. The school/service provider will use the local exchange to convert tokens to local Fiat as required omitting the need to use a bank for the transfer and expensive ForEx conversion. Since local exchanges will be used, we will be locally compliant with the regulations and or limits.

In this closed system, a local Fiat Currency to Token exchange is required. This or another oracle for reporting value of the token to the local currency is also required allowing the app to dynamically price in Tokens the correct value relative to the local currency.

In this closed system, the E$P token will be the preferred form of payment. With the central SIM (Student Information Management) app in place, a simple API is all that is required to allow other service providers into the closed system.

**Use Case: Education/Content Delivery Platform**

For Educational content delivery, we envision both a open and closed system.

**CLOSED SYSTEM**

For a service provider that will act in a more centralized fashion and wants to have control over the nature of the content and quality as an organization, provide specific marketing and support, a close system can be appropriate. This project will be launching such a system. The token will be used as the only form of payment. Content providers will be paid in E$P based on negotiated rates and conversion factors provided by an oracle. They will earn based on total views of their content. This also encourages the Content provider to market their specific content alongside the organization. Content providers will also earn a percentage of "annual fees" paid by content consumers who select an annual membership.

Content Consumers will pay either an annual consume all membership or pay per use fee. Content consumers optionally can EARN tokens by watching advertiser placed content thus giving the ability for the consumer to get their intended content for a reduced or even free cost.

Advertisers can place advertisements in the platform on a targeted and selected basis. They will pay in Tokens. Advertisers can also provided more of a infomercial type of content for a fee that will be paid in part to the Content Consumers who will earn for consuming the content.

If utilized, a CDN (Content Delivery Network) can be totally decentralized. For those CDN providers that will run a node, will be paid for content storage on their systems and for each delivery of content. CDN providers will be paid again in E$P.

**OPEN SYSTEM**
In an open system, everything is decentralized. Content hosting sites can hook into the decentralized CDN. Acquire and cultivate consumers and content providers. Monetize the service using the E$P Token. Decentralized content approver mechanisms can be built via smart contract requiring a consensus of a fixed number of approvers before content is generally available. A separate smart contract would be executed to resolve any content related acceptance/rejection disputes. This concept would very much look like a Video Wikipedia with the community at large managing the creation and acceptance of content. On chain governance for managing the ecosystem can also be incorporated into the system providing true community governance for elements such as approval thresholds and policies. This use case is a natural evolution of the closed system and is incorporated into our long term roadmap.

**Use Case: Energy - Solar**

With the world increasing focus on renewable energy along with sizeable investment, the opens the opportunity to leverage a DeFi initiative to help in residential and small commercial deployments. Creating again a closed system where using the E$P utility token as the main currency allows for creating a decentralized lending platform, rapid payment and smart contract based management a reality. Individual contracts to finance projects can be created that can be funded in a completely decentralized way. The Smart Contract will manage the day to day compliance of the borrower and when a condition is not met, pre set actions can take place. This includes involving external third party collection services as an example. A security model for the supplied asset will need to be created and intrinsically linked to the smart contract. This can be done in jurisdictions that have a legal framework that support such requirements. This then can provide a completely decentralized trust framework which would be necessary for a decentralized lending model. The lenders can then resell the secured asset to lower capital cost lenders through a secure trusted contracts. This allows for consolidation of multiple projects to be funded by larger institution entities. Since the receivable could be insured, an insurance parameter can also be introduced into smart contract. By using a completely decentralized approach, total costs of interest, fees and insurance can be substantially reduced while keeping the receivable as a virtually risk free asset.

**Use Case: Electronic Supply-Chain Payments**

Today, usage of electronic cash registers (ECR or POS from Point of Sales) is necessary step to ensure more efficient business process for any business that needs to register sales, irrelevant is this large retail store or a small shop. Usage of ECR’s has not only effect on improving efficiency of business, but through impact of easier control of taxation it has significant socio-economic impact on all developing countries where tax evasion is preventing economic progress. Some of the key areas that need to be enhanced through the usage of crypto on the POS for maximum positive socio-economic effect to be achieved are:

1. **Acceptance of crypto currency in parallel with local currency** – many developing countries face significant problem from government unsound monetary policies (often in some African and Asian countries) that can lead to inflation and devaluation of local currency. By enabling E$P token usage as a means of
payment through ECR network, we can ensure reduction of inflation pressure, improve price stability and reduce risks of unsound monetary policies by government.

2. **ECR Subscription payments** – using E$P tokens to serve as a monthly payment for ECR system itself (HW, SW or both) we can help merchants to easily predict their subscription costs (in E$P), that is not necessarily related to the fluctuation of the local currency. E.g. if subscription for certain ECR system will be accepted in E$P (through partnership with ECR providers) then merchant risk of investing in the ECR is reduced.

3. **Loyalty systems** – today most loyalty systems are comprised of several elements;
   1. mobile app - to track status, promotions, earned points, means of spending loyalty points
   2. central system – to track all user accounts, statuses, create partnership programs, promotions.
   3. Physical card (not necessary anymore since most loyalty schemes replace it with mobile app)

For loyalty systems to work, users must trust that their “collected points” have value that can be either exchanged for some discount or used instead of standard currency. E$P can facilitate and provide out of the box “trust” in collected points if points are represented as E$P tokens and if such can be used/redeemed on the Electronic cash registers that support loyalty scheme.

All three described scenarios are examples of how crypto currency can help developing economies and it is likely that most developing countries could improve their economic growth by adoption of crypto currency. This process has already underway since El Salvador announced Bitcoin as legal tender in June 2021.

Usage of crypto currency together with mandatory usage of ECR/POS devices is outcome that many governments are expecting in their fight to reduce gray economy and improve taxation.

Electronic cash registers provide the key source of original data in the retail sector for tax auditors. In their efforts to address unreported sales and the hiding of income, tax administrations have made many attempts to ensure timely and uncompromised access to this source of information. Advances in digital technology have opened new opportunities for the enforcement of closer controls over retail transactions and reducing tax risks that were traditionally associated with the vulnerability of cash register data*


**TOKEN ECONOMICS / TOKEN UTILITY**

Our initial ERC-20 Token on Ethereum is E$P.
Max Total Supply: 400 Billion Tokens
Pre-public allocation: 50 Billion Tokens (Restricted)
Max Total Supply After Burning: 50 Billion Tokens
**Transaction Tax**

A 1% Transaction tax will be charged for transfers directly programmed into the smart contract. Allocation of the 1% is as follows:

- 0.5% Will Be Directly Burned By Smart Contract until total max circulation reduces to 50 Billion Tokens
- 0.5% Will Be Redistributed across all account holders. Once max circulation reduces to 50 Billion, The entire 1% transaction tax will be allocated across all account holders. Exchange wallets will be excluded as well as wallets with more than 1 Billion E$P tokens.

**Token Buy Back**

Profit from active operations (return on capital) will be 90% allocated to purchase tokens in open circulation. Purchased Tokens will be immediately burnt and will not be available for recirculation until max circulation reduces to 50 Billion. All purchased Tokens in the Token Buy Back program will be fully listed on the website with transaction ID’s to validate removal from circulation. The Token Buy Back program will continue for the life of the project, once the max circulation reduces to 50 Billion Tokens, the Tokens will not longer be burnt and will be allocated to the project treasury. The timing of the Buy Back program will be via a secret algorithm with a randomize function such that the market cannot “game” the system in anticipation of the purchase for advantage. Significant repurchases will be spread over time to reduce impact to the market price.

**Seed Restrictions**

Each initial pre-public seed purchaser will have a separate Smart Contract which will manage a minimum 90 day hold period for their Tokens. Additionally, the Smart Contract will only make available 20% of the seed purchase amount available for unrestricted trading per day to limit the potential impact of a seed purchaser liquidating their holdings and negatively impacting price and volatility. No one purchaser will be allocated more than 1.6% of the total circulation. Total seed allocation will be no more than 12.5% of the total Max Supply.

**THE ERC20 TOKEN SMART CONTRACT**

The E$P token will be a fully compliant ERC-20 token for the Ethereum blockchain compatible with its derivatives. Programmed in Solidity, code will be openly hosted on GitHub and certified. Additional features of the E$P token will be:

- 1% Transaction Tax
- Function Hooks for Chain Swapping
- Distribution Function (for .5% Transaction Tax)
• Minimum Max Supply Limit of 50 Billion E$P Tokens
• Blacklisting Of Token Redistribution For Wallets Greater than 1 Billion E$P Tokens

The Distribution Function will randomly select accounts to distribute the Transaction Tax for each transaction. The distribution account selector will have a statistic probability equal for all accounts. We have chosen this method to reduce the Ethereum Gas fees associated with writing excessive data to the blockchain. Accounts with a zero balance will be ineligible to receive the distribution award. This will be a coded function in the Smart contract.

The token is programmed to be as lightweight as possible to avoid excessive Ethereum Gas fees. For this reason, separate smart contracts called the Seed Contract will be put in place to manage the pre-public sale of tokens.

**Seed Contract**

This smart contract is used specifically for managing the pre-public purchases of E$P Tokens. The contract will hold the balance for the specified time of 90 days. Once the hold time has expired, the contract will release tokens at a rate of 20% per day to an unrestricted wallet registered in the smart contract.

**Chain Swapping Contracts**

As part of our support to offer a 1:1 gateway to different blockchains, we will utilize a smart contract to perform this function in each blockchain. The contract will in essence hold the tokens to be swapped until an appropriate number of confirmations are in place, then will emit an event to trigger the sending of the tokens on the new blockchain. Again, once a sufficient number of confirmations has taken place, the smart contract on the new blockchain will emit a event allowing the release of the old tokens into a liquidity pool.

In the case where the transaction was unable to be completed in a set time frame, tokens would be returned back to the sender. This situation is possible when there may not be sufficient liquidity in the receiving blockchain.

**BLOCKCHAIN SUPPORT**

Initially the ESP ecosystem will exist on the Ethereum blockchain. Though with the rapidly rising cost of Ether and Gas fees we are looking forward to the migration to Ethereum 2.0 utilizing a proof of stake architecture.

We also plan on launching an equivalent token on other blockchains such as Cardano and Tezos. It is expected that Cardano will support ERC-20 tokens in the near future, while Tezos has a ERC-20 style token (TZIP-7) already supported. Any blockchain which supports an ERC-20 style token will be considered based on the demand from the user community.

In each case of a new supported blockchain, we will provide a 1:1 chain swapping gateway so users can move freely between blockchains.

Our longer term ultimate goal will be to coalesce our ecosystem to our own native chain. This will be driven by the requirements of the specific use cases above. Our vision is to support a number of dApps such as a decentralized Content Delivery Network (CDN) as an example. At this stage we also envision to have a form of on change governance for the future vision of the ESP ecosystem.
PROJECT DEVELOPMENT PLAN

June 2021:
Launch of E$P Token
Public Trading On One Exchange
Continued Development of Education Platforms (T2E and Student Information Management System)

July 2021:
Launch of E$P Token on Secondary Exchange
Launch of E$P Token of Secondary Blockchain
Chain Swapping Gateway Function on Website
Initial Solar Project Launch

August 2021:
Launch of POS Solution with Integrated Supply Chain Crypto Payments
Private Trials of Student Information System
Public Launch of T2E (Educational Content Delivery Platform)
First Token Buy Back & Burn

September 2021:
Add Additional Local Exchanges for E$P Token
Initial Public Launch of SIMS at select Institutions
Token Buy Back & Burn (Will Happen Monthly)

Q1 2022:
Launch of Decentralized CDN

Q2 2022:
Transition to Native E$P Coin
DISCLAIMER

We reserve the right to change any technology mentioned in this white paper in favour to the overall goal of the project.

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