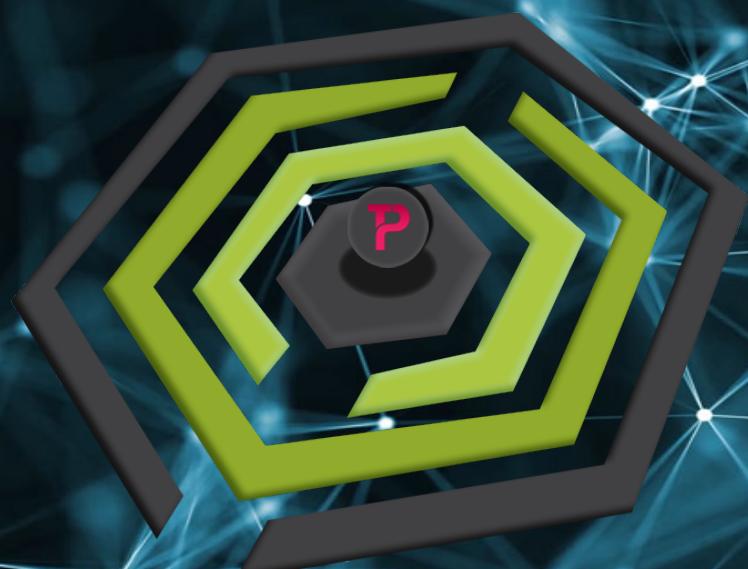




Decentralized Parking Reservation System

Powered by Blockchain



[parkres.org](http://parkres.org)

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## Summary

PARKRES provides a state of the art sensory network to track and manage parking spots across a city and parking lots. It employs an IoT (Internet of Things) based sensory network to track and monitor the parking spots across parking locations to suggest or allow you to reserve parking spots closest to your destination in advance.

This revolutionary service saves countless time, hassle, traffic congestion, fuel and paper waste as transactions are made with the PARKRES cryptocurrency and payments can be made by phone, online, auto payments, or monthly subscriptions. System also allows making payments by FIAT currencies and credit cards if user chose to do so over digital currencies.

PARKRES system is reinventing the parking industry, as we know it today. On PARKRES platform users would be able to register or list their own free/open parking spaces, garages to rent out and make money from it. It would revolutionize the private parking rental industry, and provide user means to capitalize on their empty and unused space.

Parkres is an easily adoptable Green, Clean and Smart Parking Reservation Platform that is accessible over a public API and freely available mobile applications. By utilizing the Ethereum Blockchain and PARK Utility Tokens, PARKRES will offer a variety of solutions and smart contracts that will directly benefit a wide spectrum of stakeholders within urban metropolises and smaller cities.

Parkres is design with an intension to continuously improve the flow of traffic and decrease carbon monoxide emissions and congestion. At the same time replace and renew outdated technology and investing in smart parking solutions through IoT (Internet of Things) devices, green field appliances, a real-time parking app and universal dashboards.

The whitepaper is dividend into 5 sections.

1. Show the issues with current parking systems
2. Show how PARKRES will provide solution to Parking problems
3. PARKRES business model and enhancements
4. Outline PARKRES plan and progress to provide the solution and
5. Token launch, details and allocations.

## **Notice**

If you are not sure about joining into the following initial token offering (ITO), please consult with professional advisers in the fields of legal, tax and financial.

## **Legal disclaimer**

### **Purpose**

The purpose of this White Paper is to present PARKRES and the PARK token to potential token holders in connection with the proposed ITO. The information set forth below may not be exhaustive and does not imply any elements of a contractual relationship. Its sole purpose is to provide relevant and reasonable information to potential token holders in order for them to determine whether to undertake a thorough analysis of the company with the intent of acquiring PARK Tokens. Nothing in this White Paper shall be deemed to constitute a prospectus of any sort or a solicitation for investment, nor does it in any way pertain to an offering or a solicitation of an offer to buy any securities in any jurisdiction.

This document is not composed in accordance with and is not subject to laws or regulations of any jurisdiction, which are designed to protect investors. The product token is not a digital currency, security, commodity, or any other kind of financial instrument and has not been registered under the Securities Act, the securities laws of any state of the United States, Canada or the securities laws of any other country, including the securities laws of any jurisdiction in which a potential token holder is a resident.

This English language White Paper is the primary official source of information about PARKRES and PARK Tokens. The information contained herein may from time to time be translated into other languages or used in the course of written or verbal communications with existing and prospective customers, partners etc. In the course of such translation or communication, some of the information contained herein may be lost, corrupted, or misrepresented. The accuracy of such communications cannot be guaranteed. In the event of any conflicts or inconsistencies between such translations and communications and this official English language White Paper, the provisions of this English language original document shall prevail.

### **Risks and uncertainties**

The PARKRES platform is not yet developed and is subject to further changes, updates, and adjustments prior to its launch. Such changes may result in unexpected and

unforeseen effects on its projected appeal to users, possibly due to the failure to meet users' preconceived expectations based on this White Paper, and hence, impact its success. For the foregoing or any other reason, the development of the PARKRES platform and launch of PARKRES future business lines may not be completed and there is no assurance that it will be launched at all.

Additionally, in a down-cycle economic environment, PARKRES may experience the negative effects of a slowdown in trading and usage of the PARKRES platform and may delay or cancel altogether the structuring and launch of the anticipated PARKRES future business lines.

Further, should the costs, financial or otherwise, of complying with any newly implemented regulations exceed a certain threshold, bearing in mind the fact that it is difficult to predict how or whether governments or regulatory authorities may implement any changes to laws and regulations affecting future business lines, maintaining the PARKRES platform and structuring and launching PARKRES future business lines may no longer be commercially viable, and the Company may opt to discontinue the development and operation of PARKRES platform.

We may not be able to pay any anticipated rewards in the future. There is no assurance that there will be sufficient engagement in the PARKRES platform and that you will receive any rewards/discounts. The ability of the Company to pay any reward to you will depend on the future results of operations and the future business and financial condition of the Company.

In the case of unforeseen circumstances, the objectives stated in this document may be changed.

Despite the fact that we intend to reach all goals described in this document, all parties involved in the purchase of PARK tokens do so at their own risk. The funds raised in the ITO are exposed to risks of theft. The Company will make every effort to ensure that the funds will be securely held in blockchain wallets. Notwithstanding such security measures, there is no assurance that there will be no theft of the cryptocurrencies as a result of hacks, sophisticated cyber-attacks, distributed denials of service or errors, in the smart contract(s) on the Ethereum or any other blockchain, or otherwise. In such event, even if the ITO is completed, the Company may not be able to receive the cryptocurrencies raised and CryptoKart Inc. may not be able to use such funds for the development of the PARKRES platform. In such case, the launch of the PARKRES platform might be temporarily or permanently curtailed.

## **No Cancellation and No Refund**

All PARK token orders are deemed firm and final. The Client acknowledges that they are fully aware that they will not be entitled to claim any full or partial reimbursement under any circumstances whatsoever. As the sale of the proposed tokens is strictly reserved for experienced professional clientele, the Client may not claim any right of return against PARKRES.

## **No guarantee on trading**

The Company will use reasonable endeavors to seek approval for the availability of the PARK tokens for trading on a cryptocurrency exchange. Furthermore, even if such approval is granted by a cryptocurrency exchange, there is no assurance that an active or liquid trading market for the PARK tokens will develop, or if developed, will be sustained after the PARK Tokens have been made available for trading on such cryptocurrency exchange. The Company is not responsible for, nor does it pursue, the circulation and trading of PARK Tokens on the market. Trading of PARK tokens will merely depend on the consensus on its value between the relevant market participants.

## **Note on forward-looking statements**

All claims and statements made in this PARKRES white paper, PARKRES website, press releases made by PARKRES, also any oral statements made by PARKRES team members or agents acting on behalf of PARKRES that are not an accomplished fact may represent so-called forward-looking statements.

Some of these forward-looking statements may be considered such by containing the following terms: "will", "anticipate", "plan", "aim", "target", "expect", "estimate", "envision", "intend", "project", "may", "believe", "if", or any other such terms. Further, the terms listed above are not necessary to identify a forward-looking statement. All statements that include, but are not limited to any financial projections, estimates, plans or possible trends, risks, as well as future prospects of cryptocurrencies should be considered as forward-looking statements as well.

These forward-looking statements are not yet accomplished facts and PARKRES does not take responsibility and cannot guarantee that the future results will correspond with above-mentioned forward-looking statements.

These forward-looking statements are also provided as-is and PARKRES takes no

responsibility for updating these forward-looking statements, should any information relevant to the pertaining forward-looking statements become available in the future.

No information contained in this white paper should be considered as a promise, representation of commitment or undertaking as to the future performance of the PARKRES platform, PARK token or any other component of the PARKRES ecosystem.

## What is PARKRES?

### Introduction

PARKRES is an eco-system, which is designed with an idea to simplify our lives. With the advancement of technology, everything has become so easily accessible at the same time everything is so difficult to understand and sync in. A small thing such as parking, which was hardly an issue in the old days, now it is such a rare commodity to find. To find a parking spot is such a frustrating and time-consuming experience these days that people often have to leave the primary task and focus their time and effort on this unnecessarily important task. PARKRES is just about to change that.

### Why Parkres?

Some statistics based on research conducted in US, UK and Germany which makes it even more important to have a system such as PARKRES to show some solution to these ever-growing problems.

*Economic Disadvantage to Consumers / Drivers (INRIX Research Paper – 2016 - 2017 Survey)*

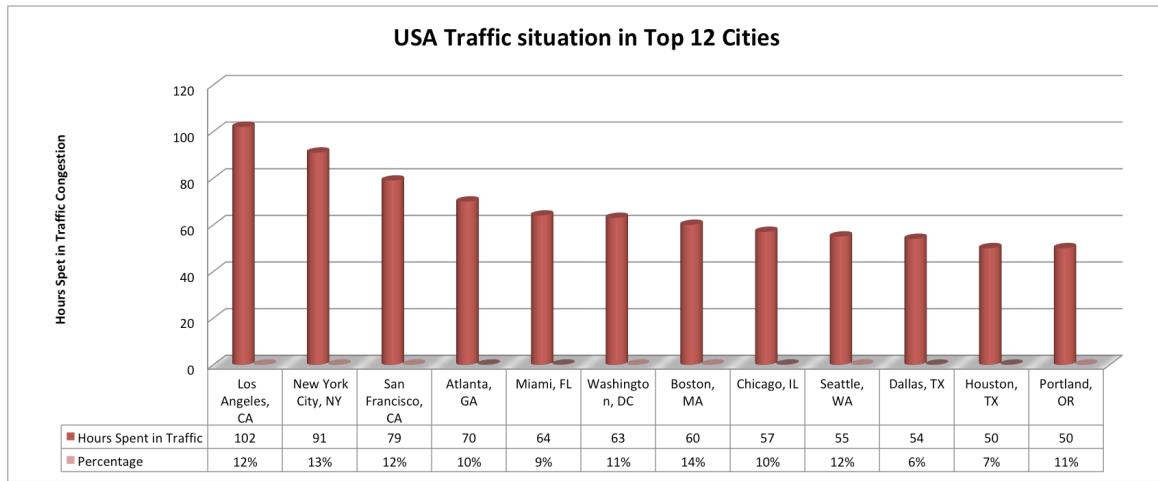
Events	Time	Costs (Combined)
Average Loss of time in Finding affordable parking spot per Driver in UK	44 hours	\$33 billion annually
Average Loss of time in Finding affordable parking spot per Driver in US	17 hours	\$72.2 billion annually
Fines paid in Parking ticket in UK	--	\$44.2 billion annually
Fines paid in Parking ticket in US	--	95.7 billion annually
Traffic Congestions in UK	46 hours	37.7 billion annually

### *Non-Economic and Health Disadvantages*

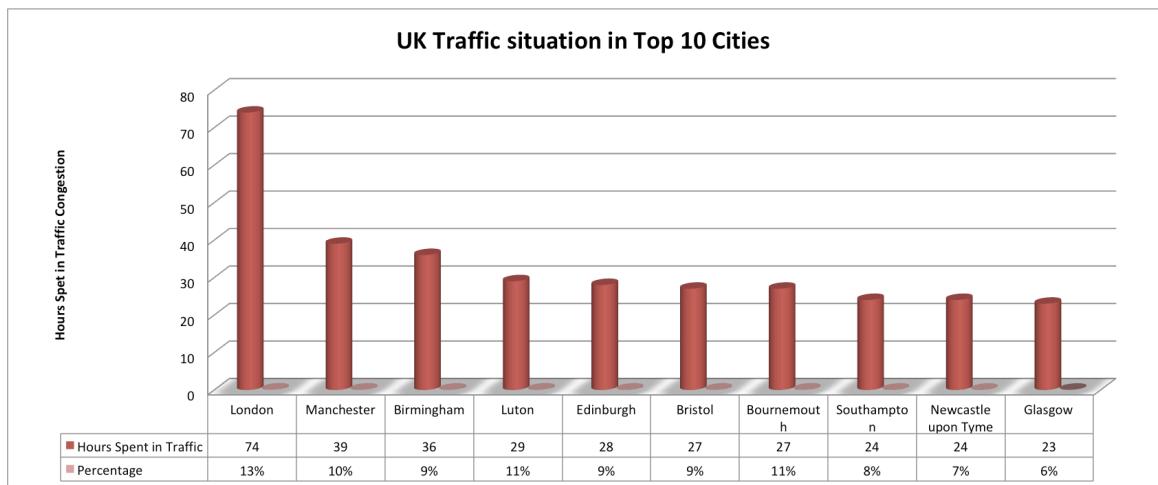
Events	%	Source
Argument and fights with fellow drivers due to frustration in Male drivers, causing traffic issues	32%	2016 Survey US
Stress and Anxiety issues in Female drivers	69%	2016 Survey UK
Missing important appointment like hospital, meetings, flights, business meetups.	40%	2016 Survey UK

Above number shows how big problem, parking really is, which we often ignore. This has caused huge in terms of money, environmental problems, health issues, traffic issues and so on.

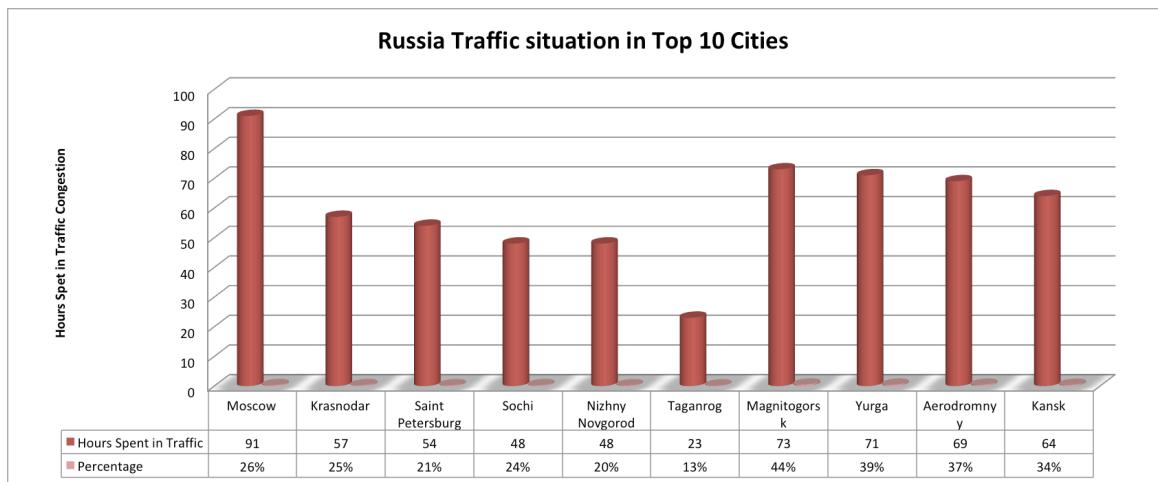
According to INRIX 2017 survey, take a look at traffic situations in some of the top cities around the world. Almost every country developed or not is facing this issue today

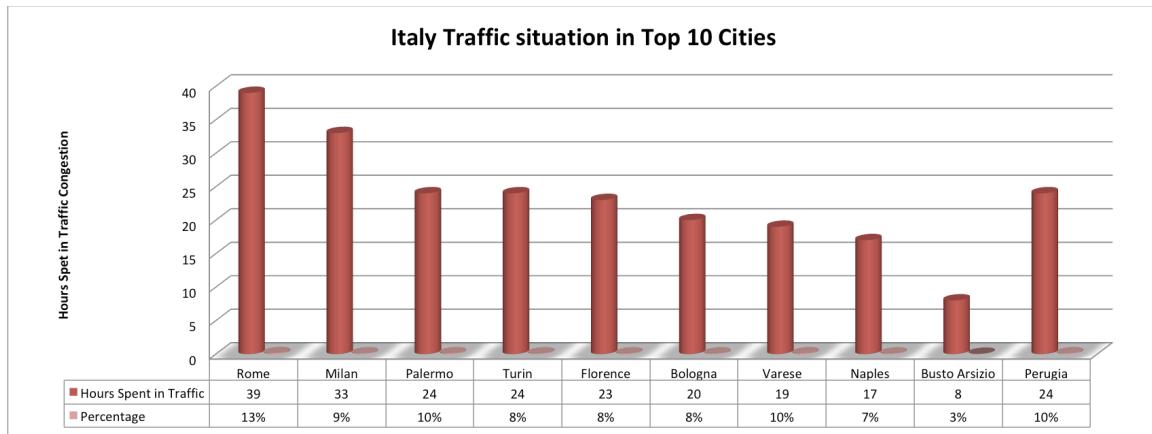
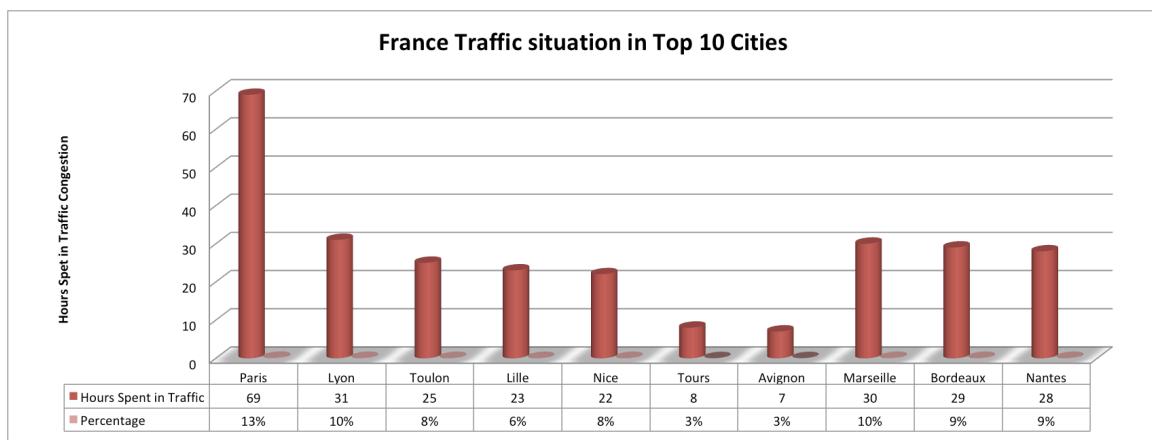
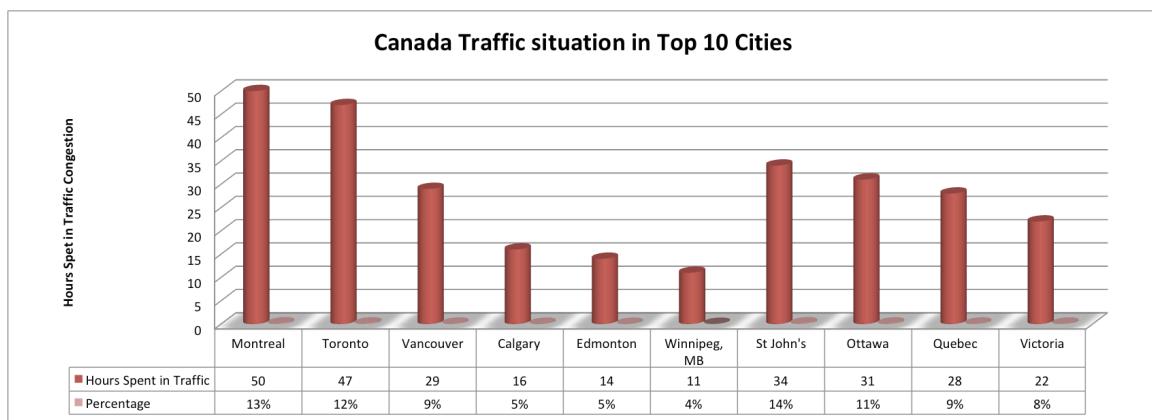
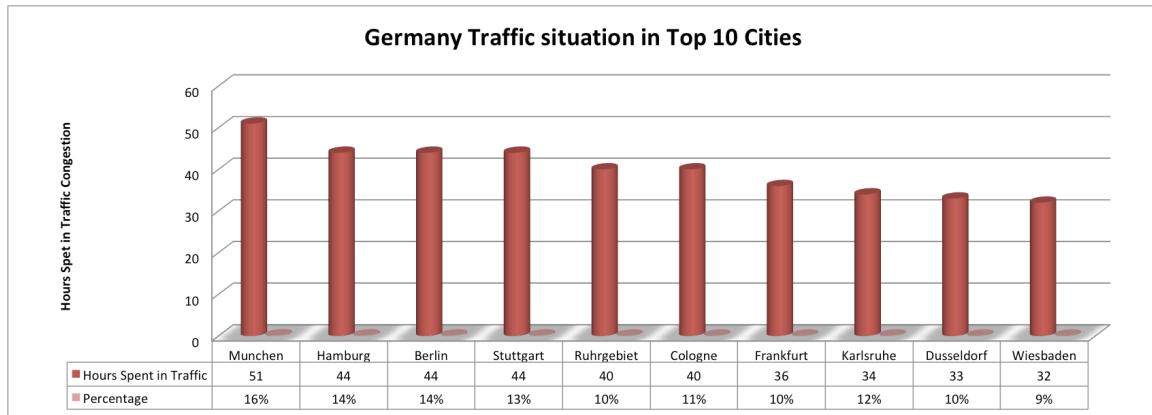


In USA Los Angeles tops the index with 102 hours spent on an average per driver in traffic congestion.



Londoners spends about 74 hours a year/driver in traffic.





## 1. Challenges with Parking

In today's world where a car has become a necessity rather than a luxury, parking has become an equally important aspect of day-to-day life. Any place you travel, the first thing to consider is parking apart from a gas station. With the population explosion and more vehicles on the street than ever in the history of mankind, it is becoming more and more difficult to accommodate the traffic on the street. And so the parking places.

Many times people end up spending more time finding a parking spot than doing the actual work they are out for. Parking spot has become a rare commodity especially in the downtowns, city center, shopping complexes, marketplaces, theaters, stations, hospitals, and office spaces and sometimes even at the airports. Finding a parking spot at the desired location is a matter of luck and a rare occurrence.

The scarcity of parking spots also gives rise to some other environmental and economic disadvantages, which we seldom realize. People spend more and more fuel just to find a parking spot than in actual travel. Also, looking for a parking spot in the crowded place leads to accidents, which leads to frustrating traffic jams. People often have to drive on lower gears to search for parking spots causing more emission of harmful gases in the atmosphere, which leads to a rise in CO<sub>2</sub> contents adding to global warming. More the driving, more the consumption of non-renewable resources like fuel, more the emission of gases.

Many times people end up parking in the no-parking zone in case of emergency hospital visits. The patient has to suffer even more. Eventually, it causes further parking issues and adds to the traffic woes around the hospital for other patients and ambulances. It is a vicious circle.

### 1.1 Current Parking Systems

There are different types of parking system installations at different places. Each has its own advantages and disadvantages. Majority of these parking systems are unmanaged. From figuring out an empty parking spot to reaching the spot on time before someone else takes it, it is a mad race. Most of these parking facilities are pay-as-you-go setups, where you take a ticket from the kiosk while entering the parking area and pay when you leave depending upon the time you use the parking spot for.

The parking systems today only provide a smart payment solution but lack a number management solution.

Three main parking systems in use today are TIBA, Kiosk, and Native. Kiosk is very common and everyone is aware of this system. This is a general system that you would find in any shopping complex, Airports, Train Stations etc. You take a ticket while going

in and pay while going out by validating your ticket.

TIBA also works in a similar manner, but it provides some more options to validate the customer's ticket over online web console or mobile devices. Native parking systems are also very common in core downtown places, where a parking booth would be human controlled and you pay a flat parking price.

All the parking systems accept all popular payment methods like credit card, debit card or cash, but if Kiosk is unable to read the card then you are stuck at the hands of an agent resulting in long queues.

With cryptocurrencies and other blockchain-based products for payment solutions, the story is completely different. Critically important is the fact that there are usually no middlemen between the two parties making the transaction. This fact brings some major benefits:

- It takes seconds to perform the transactions.
- Transaction can be done over a mobile, no need to wait at the kiosk or booth for payment.
- No hassle of cash or change.
- No problem of currency exchanges while traveling different countries or on a road trip.
- Transaction can be automated and no need to wait in queue for making payments.

***More points to consider and highlight the problem in details:***

- Drivers in New York City spent an average of 107 hours (against a nationwide average of 17) per driver per year looking for parking, and this costs them \$2,243 per driver per year. Wasting time and fuel makes up the bigger part of the cost for searching parking spots
- Londoners end up driving around 67 hours (against the national average of 44) per driver per year, which costs them \$1,566 per driver per year.
- These are no small amounts of money to waste just on parking.
- Because of outdated technology and unreasonable rates, drivers also end up paying for hours of parking that they do not need
- Reasons for this include having to pay for a minimum of two hours while only needing 30 minutes
- Paying for extra hours out of fear for parking tickets.
- On average, drivers in the U.S. overpay for 13 hours per year while drivers in the U.K. do the same for 45 hours
- In the most extreme cases we're looking at 96 hours per year and \$896 per driver in New York, against 67 hours per year and \$539 per driver in London.

- Traffic Congestion and Delays due to parking hunters in the cities causing pollution and carbon monoxide emission in the environment, which adds up to global warming.

Parking availability, wasted search time, cost of parking and stress related to parking make up for the most frustrating aspects of their endeavors.

## Why Blockchain?

There are several parking authorities and parking providers that exist today, each of them working on different set of policies, standards and framework. This creates an unregulated, unchecked marketplace. If you notice, there are no rate regulations, controls or standards in place, when it comes to parking charges from place to place. Parking rates may vary anywhere between \$2 to \$10 per hour depending on various factors. This needs to be regulated and standardized, so consumers don't pay ridiculous amount of money on parking.

Blockchain can easily solve the issue. Especially ethereum-based blockchain, which is capable of managing and executing smart contracts, has benefits over the others. Smart contracts can be setup between parking providers and different parking authorities in such a way so parking rates across a particular zone can be standardized and controlled. Since the rates and terms will be managed over blockchain and executed by smart contract, there is no possibility of tempering and manipulation of the policies, so no system can bypass it.

Consumers do not have to worry about parking payments when on domestic land or foreign. Since blockchain allows payment via digital currencies, so no currency conversion overhead costs or international credit card transaction charges for the customer. Parking experience for the consumers will become seamless.

Parking providers do not have to onboard and support different payment gateways like visa, MasterCard, Moneris which charges anywhere between 3.9 to 10% on every transaction. Millions of dollars are paid to broker applications and payment gateways just to process transactions and on credit card transaction fees. Parking providers would be able to save all this revenue. This will boost the efficiency and productivity of their parking locations.

## 2. PARKRES – Improved Parking Solution

Can traditional parking players provide fast, efficient, affordable parking services to businesses and individual's need? The answer is NO. They can simplify their front-end operations, but the machinery behind it still causes problems because of the way it is structured.

### Parkres Solution Provides

- real-time parking availability,
- advanced parking reservation,
- advanced payment and navigation to parking.
- Notifications and updates about traffic congestion
- Alternate parking spot suggestions
- Parking airbnb system, to help reduce parking scarcity in the city

On an average only 8% of Americans uses some sort of parking reservation applications. Only 7% of Americans uses some sort of real time parking update system. Which mean we are targeting a very fertile and highly available market that could benefit from PARKRES innovation and seek some immediate improvement in their lifestyle, environment around them and atmosphere they live in. Since PARKRES will help reduce carbon monoxide and carbon dioxide footprint, it will also help reducing environment dis-balance caused by traffic and present parking situations.

PARKRES uses IoT sensory network over cloud based solution, which can be easily adapted by cities, municipalities, institutions and individual customers. PARKRES will run on Ethereum blockchain based platform, which could host smart contract. These smart contracts make it possible to have an immutable agreement between companies, institutions, government authorities like (municipalities, parking governance systems) and consumers. The smart contract will make sure that drivers would pay only what they have used for, no more extra payments or parking ticket fear.

PARKRES will also help reduce the traffic situation in the downtown area, which is caused due to the secondary traffic of parking spot hunters. People can avoid going to the areas where there is no parking spot available. Or can pre-book their spot before reaching the destination.

PARKRES system also has a smart notification service, which can provide real-time alerts to customers of all available parking spots and locations around them. It will also be able to provide a report of how many parking spots are available at what location with coordinates to the parking spot, so the customer doesn't have to circle around the parking facility to search for an empty spot. This will save a lot of fuel consumption and time. And will also save the environment of the harmful gas by burning the precious natural resources. This would also control the accidents to some extent caused due to

over parking or long parking queues, especially in the downtown and city center locations.

PARKRES system uses cryptocurrencies as a mode of payment and payments can be made by phone, online, auto payments, monthly subscriptions etc. This will save a lot of time, which is wasted on payment kiosk. It will also save paper, which is wasted on printing parking tickets as PARKRES system employs authentication token-based entry and exit validation. This will avoid the need for printing any parking tickets, hence saving tons of paper being wasted.

Parkres is designed with a view to target specific problems of society, environment and transportation industry. Parkres will provide a real-time, affordable, standardized, green, and clean parking solution on global scale. It will help consumer to find and reserve a parking spot near their destination anytime anywhere, by significantly reducing time they spent in search of parking, fuel they lose, traffic issues and congestions and environment pollution they cause in the process.

In Addition to that Parkres will offer a LPALMS platform (Local Parking Location Monetization Platform), which will allow people to list their unused spaces, garages, parking alleys on Parkres platform, which will be shown to consumers searching for parking spot in that area. This will help reduce the shortage of parking spaces in the cities, also people will be able to make money from their otherwise useless space. Imagine your parking spot making money for you while you are working in office, watching movie or enjoying vacation with your family.

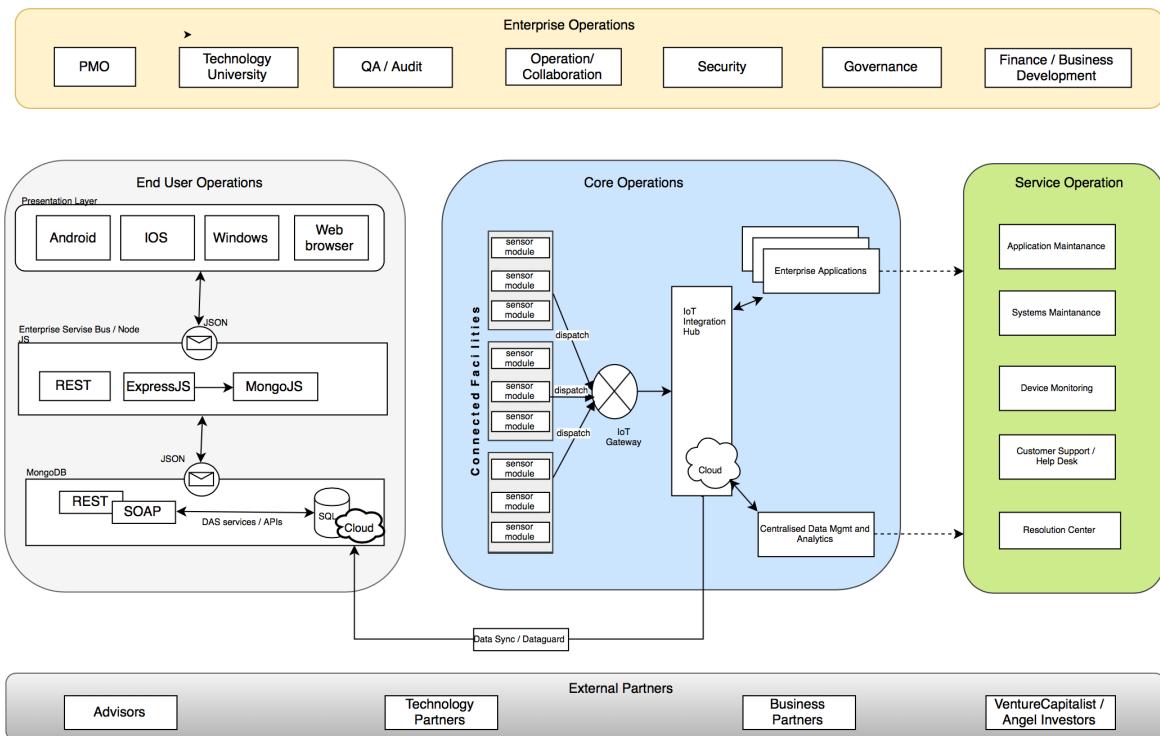
Parkres will provide a universal and state of the art dashboard to all parties like Parking providers, Garage owners, Parking Authorities, Institutions (Airport, Hospitals etc), and Individual Customers which will show the real time availability and rates for any parking spot across the city/cities thereby cutting the middleman from the process, which drives the parking rates higher and higher.

These dashboard systems will be connected to Parkres cloud, IoT networks and gateways. The traffic data feeds from different institutions including Google, parking authorities will help our system to provide consistent and real time notifications to consumers about any traffic congestions and suggest them alternate parking spots. With more and more automobile companies heavily investing on IoT technologies and smart car initiatives, Its just a matter of time when almost every car company will be compatible to connect and integrate Parkres open Apis and smart parking solution into their consoles. We will be publishing open APIs to the community so they can use all the state of art services that Parkres is integrating into its smart solution.

Parkres ecosystem runs exclusively on PARK utility tokens on the Ethereum blockchain. Parkres will also allow users to make parking reservations using other crypto

currencies or FIAT currencies (USD, GBP, EURO etc). However, to use Parkres APIs and smart solutions, upgrade Parkres provided applications and devices users will need PARK utility tokens. Depending upon the type of customers there will be variety of APIs exposed, which can be called and utilized using PARK utility tokens. Similarly, people listing or offering their parking spots facilities on Parkres platform will earn Parkres tokens.

## 2.1 PARKRES System Architecture

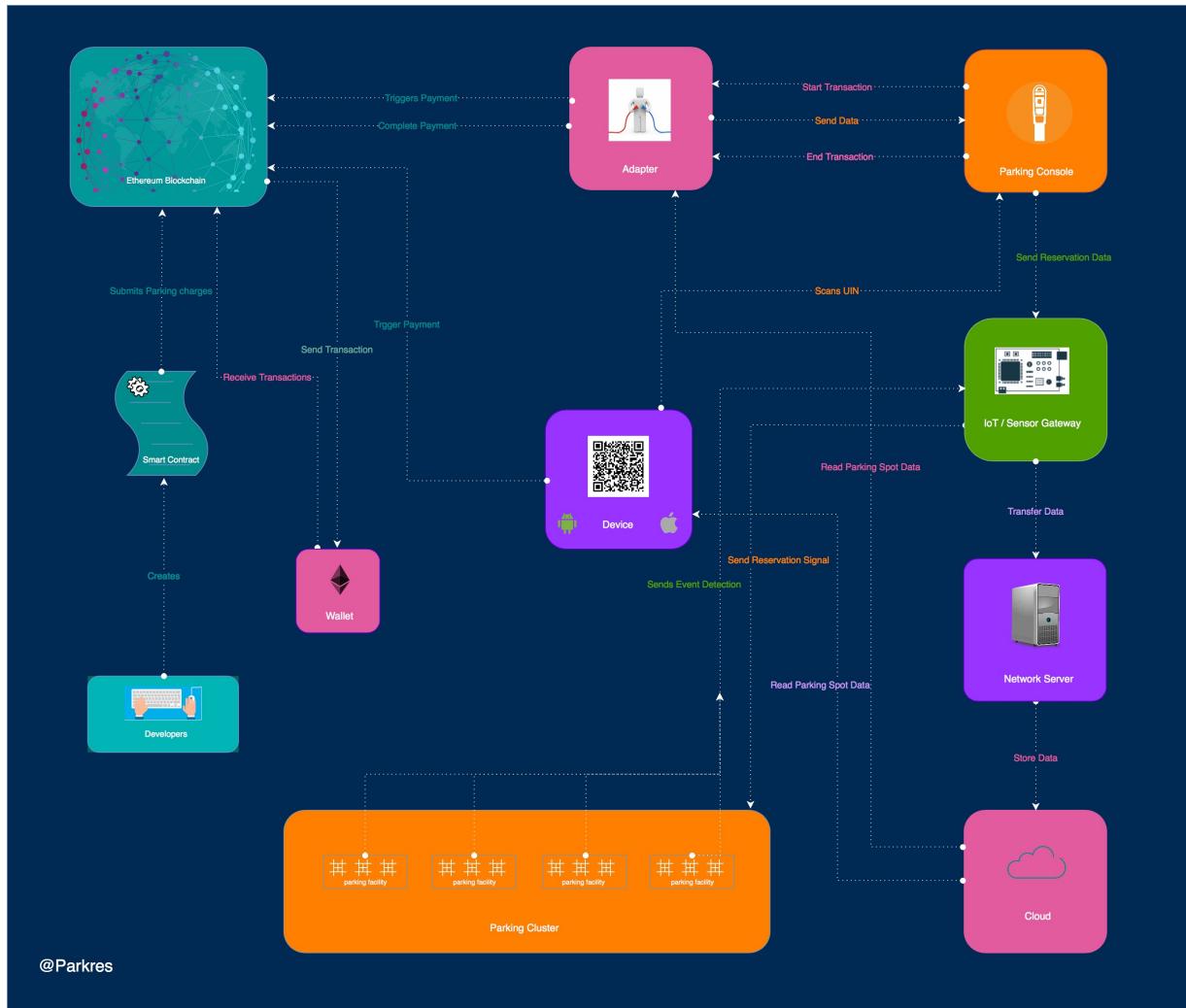


Above figure shows the high-level enterprise architecture of the PARKRES System. It is highly scalable and flexible and makes use of latest technologies for its implementation.

The customer operations and front office operations will be made available on all popular devices like iPhone, Android, Windows and over Web. Data will be served over a secured cloud network. The core component consists of IoT sensor modules, which relays events to IoT gateway. IoT gateway aggregates the event and transforms the data into a machine-readable format. With the help of machine learning and data analytics, the system will be able to optimize the parking search over time and provide the most accurate locations in the least time on customer's devices. Back office operation will be available to support customers 24/7 with any issues or concerns they have regarding their bookings, use of the system, use of consoles, or any other technical difficulties.

## 2.2 Implementation Details

PARKRES system consists of hardware components like sensors, transponders, gateways, multiplexers, transmitters etc. and also many software modules and components. Below is the system interaction and component network diagram for PARKRES system.



**Parking Cluster:** It's a mesh of multiple parking facilities across a city. Each city is divided into a cluster. Similarly there will be multiple clusters for different cities. Each cluster will talk to a dedicated gateway and network server. These parking clusters will be equipped with IoT sensors and transponder network, which communicates parking spot change events to gateway.

**Parking Console:** It's a electronic device that would read Universal Identification Number from user's device. UIN will be in the form of a QR code. User's PARK wallet address will serve as their UIN on Parkres network. Parking Console will scan the UIN and presents a touch screen with available parking spot for selection and reservation. Once User selects a spot, a transaction will be triggered to contract on blockchain.

**IoT / Sensor Gateway:** Gateway is a device, which is capable of receiving all the IoT and Sensor communications. Sensor network from parking facility will communicate the event data to gateway. Gateway then feeds this to network servers in batches.

**Adapter:** Adapter is a software component, which provides capability of data transformation, orchestration, data enrichment, data translation, aggregation, routing and data massaging. Different devices on network talking different technologies can communicate through adapter.

**Cloud:** Data center will be hosted on cloud. It will store the metadata and transactional data received from different gateway modules and software components. Data is stored and read from cloud via big data, queryplex framework. This will serve as a source for Business Analytics and Telemetry for business development and expansion.

**Devices:** Devices can be mobiles devices like iPhone, Samsung etc. or Desktop, Laptop, Tablets, which will allow users to perform parking discovery, reservations and required transactions.

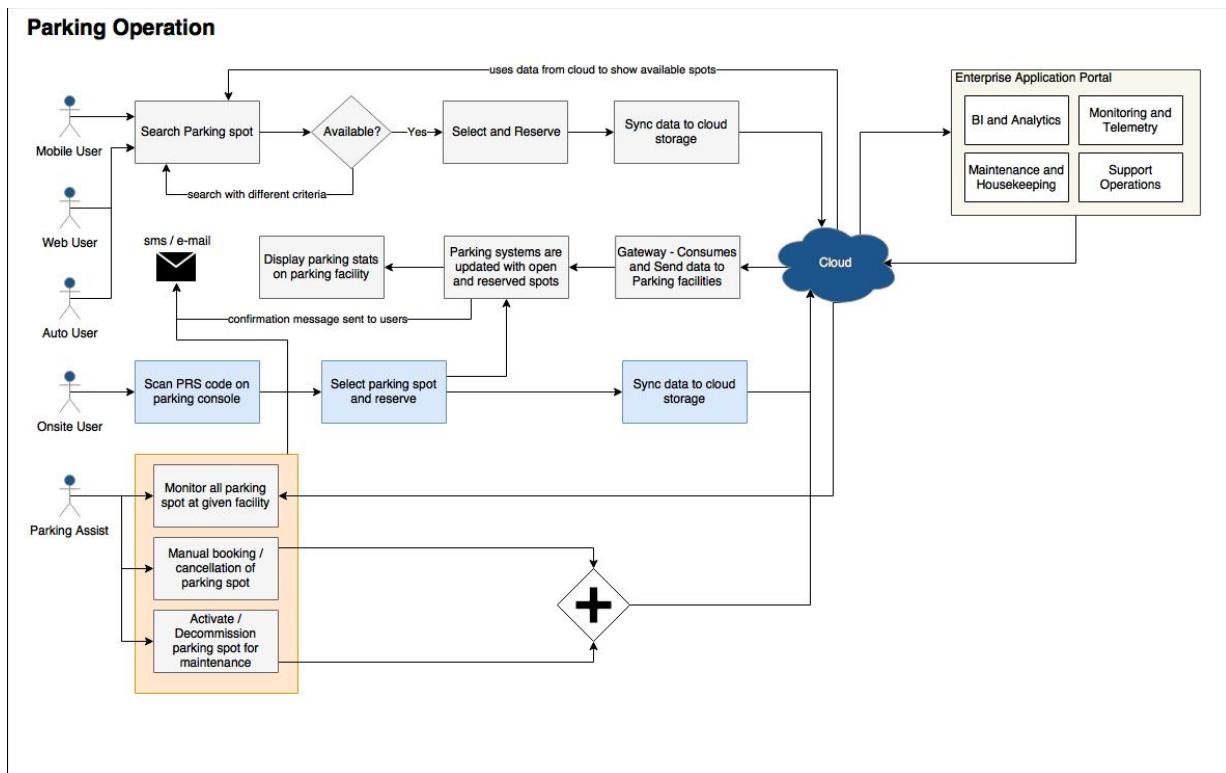
**Smart Contract:** PARK smart contracts, written in solidity, controls the transactions performed during parking reservation. Smart contract will hold the parking charges once the user scans UIN at the parking location or at the start of the reservation slot. When User leaves the parking spot, Sensors activates the network and triggers a confirmation to contract, contract then transfers the amount equivalent to parking time used to PARK wallet and reverses any access amount back to user wallet.

**Network Servers:** Network Servers receives the data and events from different systems in the network and store them over to cloud. They form the backbone of the ecosystem. Every data transaction directly or indirectly goes through Network Servers.

## How it Works?

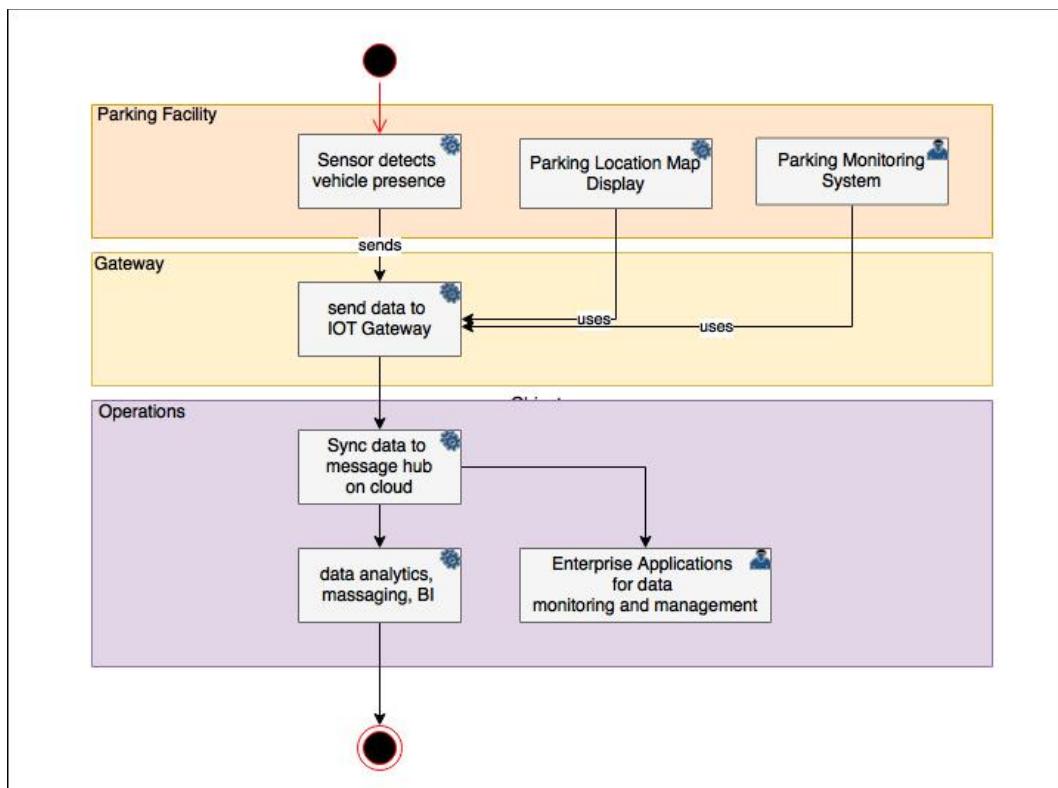
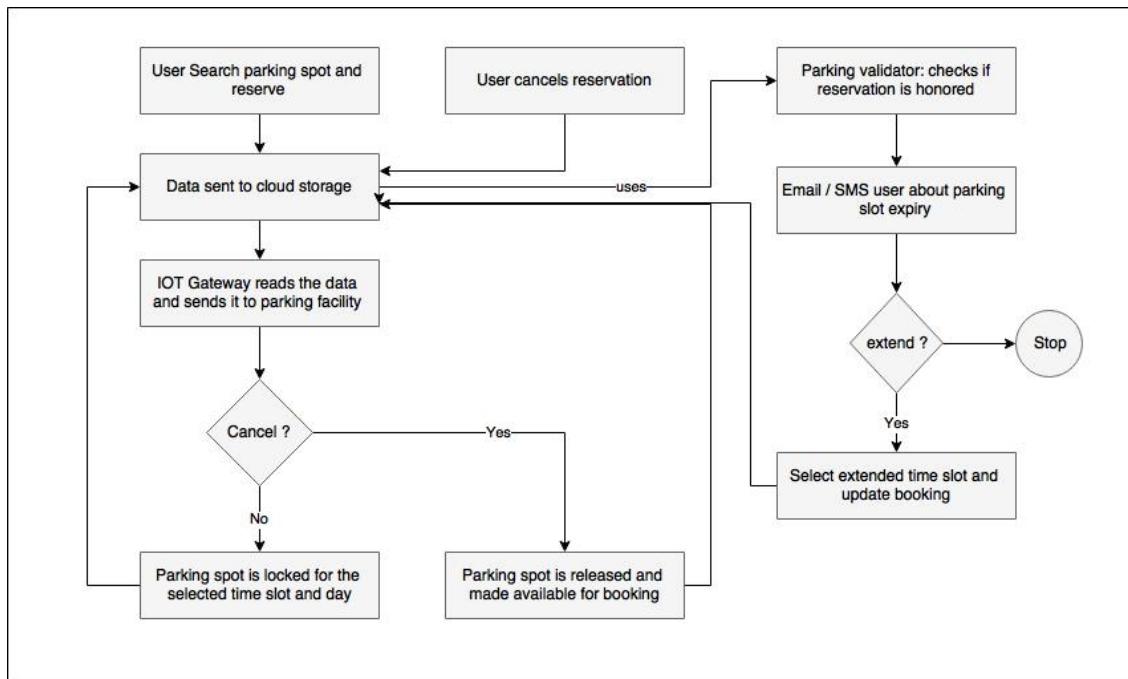
The Parkres App works on data collected and arranged by 3 different algorithms that works in symphony - Geo-Taging, Location Indexing and IoT event generator. Data will be collected real time and continuously over IoT networks and other sensory networks and hosted on a cloud. Where based on the principle of MDM probabilistic matching it will be collapsed and merged with metadata collected from Geo-Taging and Location indexing during the installation and onboarding of parking facility on Parkres ecosystem. This data will be served to mobile applications and Dashboard across all consumers of the Parkres system. This will deliver a single source of truth and all the consumers and partners will have access to same system, data and services. This will also cut off the middleman from the system there by standardizing the parking rates across cities.

Users once registered on Parkres app, can search for a parking spot near their destination by providing a postal code or complete street address and timeslot. The system will present all the available parking locations for the Parkres data-lake, along with average parking prices and number of available parking spots at each location. User would then select one parking facility, which will provide user a deeper and more detailed view of the selected facility. Here User will be able to select a specific parking spot of his choice from the available parking spots at that location. Once selected this event will be sent to parking manager console on Parkres cloud, which will update the backend system with real time. So other users searching for the parking spot will not see this spot on their screen for the already booked timeslot. Upon booking a spot successfully user will be able to see and manage his booking in the Parkres App. Users Parkres wallet key will work as his UIN (Universal Identification Number), which will remove the need printing any parking code or generating a different code for user each time they book. This will reduce paper wastage and unnecessary computation power.



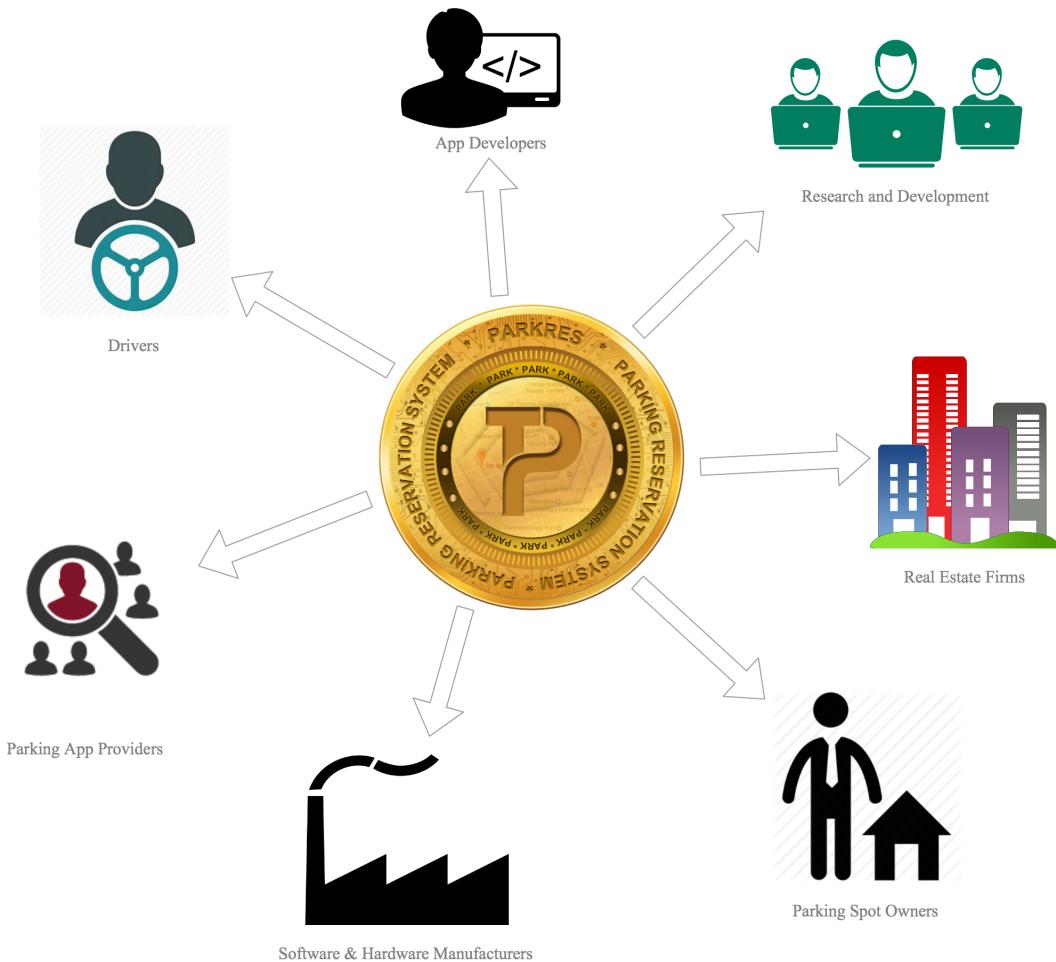
User can then approach the booked parking location with the help of guided navigation provided by Parkres app. At the parking facility user can either flash their UIN code to the Parkres console to gain access to the parking lot or use a touchless entry into the facility by installing RFID devices provided by Parkres. The UIN and RFID codes will be recognized by the system and grant user access to parking facility where they have pre-booked their spot. At this point system will trigger a timer on users account. When user leaves the parking lot by flashing UIN or RFID a transaction will be triggered on Smart-Contract, which will deduct the tokens from users wallet for the time used by user on

the parking facility. This way user will never have to worry about parking tickets, waiting in payment queues at the Kiosk - wasting his time, or even worry about parking payments. The Parkres wallet will be integrated within the Parkres app and dashboard providing users with seamless payment, parking reservation, parking management experience. In case of any traffic issues, system will notify user of traffic congestion to his booking location and will also suggest an alternative spot closest to his destination. User would be able to change his reservation with a single click.



## 2.3 Potential Partners

PARKRES sales team will be targeting major parking location like Shopping complexes, Airports, Train Stations, Stadiums, Theaters paid parking's so that majority of the places will be covered. And then approach small parking locations like Hotels, Apartments, native parking sites. The program will be launched in Canada first and then rest of North America, followed by India, UK, Germany, and so on.



**Drivers** - You are the primary consumers of the Parkres ecosystem. You will get real-time information to parking locations, traffic updates, and affordable rates. You will be able to significantly save your time, money, fuel and Energy. No more parking tickets, No more towing vehicle, No more extra payments and No more waiting in long queues for paying parking charges. You will have more time for your work and your family.

**Parking App Providers** – Parkres is designed and architected with an extensive flexible and scalable framework. It can be easily integrated and adapted by existing app providers and service providers. By making use of Parkres specific APIs they would be able to make use of all smart solutions Parkres has to offer.

**Software Hardware Providers** – Parkres works with IoT sensory network over cloud. The event detection mechanisms for vehicles are based on Sensors, RFIDs and Barcode/QRCode reader systems. Software and Hardware providers would be able to partner with Parkres and provide Parkres compatible consoles and devices. We want to bridge the gap between providers and consumer by providing a seamless integration medium.

**Parking Spot Owners** – No matter who you are, an institution, garage owner, council, parking authority, or individual owner with parking spots. With the help of Parkres console you would be able to offer and manage your spots directly to millions of parking seekers out there. You will get immediate visibility on global platform and a medium to monetize your unused spot and increase your revenue by reducing redundancies and congestions.

**Real Estates Firms** – You manage many parking facilities and often have to employ a Parking management team and payment management system. With the help of Parkres you would be able to cutout the middleman and save millions on outdated Parking management system and Payment gateway fees.

**App Developers** – Parkres promotes open APIs and innovations. But also wants to maintain the quality of service and ease of access. App developers would be able to use Parkres open APIs to develop smart applications. Parkres is also introducing a concept of Innovation University, where developers and designers can propose their ideas and improvement to help make the system better and can gain huge benefits and rewards from the program. All the initiative will be sponsored and supported by Parkres R&D team.

## 2.4 PARKRES Tokens

PARK is the official token for PARKRES ecosystem. Tokens can be used in 2 ways:

- as Utility Tokens and
- as Value tokens.

Utility tokens provide discounted parking rates to the token holders, when they use these tokens. These tokens will be used to make the payment against parking and reservations. To use PARKRES APIs PARK tokens will be needed. PARK tokens are utility tokens as it is needed to use the PARKRES ecosystem and integration framework.

User can choose to stake PARK tokens as value tokens in this case they would work like bonus accumulating tokens or loyalty tokens. To use PARK as Value Tokens the token holder should hold the tokens in their PARK wallets, in other words, stake the tokens for a fixed amount of period, once they do so, these staked tokens will gain loyalty

bonus, which will be released by the company from time to time. Bonus allocation would start once the PARKRES platform is successfully installed and operational for the public use.

#### **2.4.1 Why PARK tokens is not Security but Utility token**

Globally, tokens are considered either to be utility or security. As the name suggests, utility tokens are tokens, which have an underlying utility function within the platform or product, whereas security tokens are solely used as a fundraising and trading currency.

As this whitepaper has properly proven, PARK is a utility token. End-users engage in transactions with other end-users and can either spend or earn PARK tokens through several actions within both the Parkres Parking app and the Parkres Platform. PARK is, in other words, a consumable resource on all of Parkres products and services.

### **2.5 Online customer support**

The PARKRES online customer support team is ready to deal with any inquiries. Our team of dedicated professionals handles all issues and inconveniences. Support will be accessible online and via mobile, ensuring the necessary communication channels are on offer when required. We understand that continuous, high-quality support is the key to success, which is why we prioritize providing the very highest level of client support. Every user spreads the word about their product experience, and we want this word-of-mouth communication to be positive, encouraging more customers to join our community. We will dedicate all the necessary tools, resources and people to make this happen.

### **2.6 Knowing your customer and anti-money laundering**

Anonymous and pseudonymous use of PARKRES services will not be possible. All users will be requested to provide satisfactory identification, proof of residence and/or other documents necessary to meet all legal requirements.

AML modules will be integrated into the payment infrastructure offered by PARKRES. That said, these measures are not intended to make users' lives difficult. The goal here is to systematically improve the credibility of cryptocurrencies as fair and legal means of payment.

We will use a leading KYC service provider to deliver our users a fast and effective onboarding process. PARKRES is entitled to bring top-level Know Your Customer standards to its business operations. What's also important to note is that the authentication process we have designed is intended to avoid the shortcomings of similar processes used.

This authentication service will offer maximum convenience, and the verification of user information should take no longer than 24 hours.

## 2.7 Security and audit

To ensure PARKRES's ability to comply with security requirements, we aim to conduct external security audit no less than once per year. The scope of such audit encompasses the entire PARKRES platform.

First such audit scheduled to be held in the second quarter of 2019.

We will also use independent security audits of a narrower scope throughout our product development lifecycle. Our security philosophy is based on two main principles:

- Creating a reliable technology platform that has sufficient protection from external threats by design.
- Protection from the human factor through adherence to widely accepted best practice

## 2.8 Conclusion

PARKRES is a project that aims to bring revolution in parking system and introduce cryptocurrencies into your everyday life. At present, the growing numbers of people who wish to integrate cryptocurrencies into their daily transactions still face too many obstacles.

We believe that currently the parking industry is still operating on the generations-old model and it needs a major change. This industry has remained aloof from technological advancement for a long time.

We believe the step forward needed is to bridge the gap and remove the inefficiencies in the system. Simultaneously help save the environment of its non-renewable resources, papers wastage, traffic issues, accidents etc. and help people spend more time with family and less time on finding a parking spot.

## **3. PARKRES Business Model**

PARKRES's eco-system comprises of different parts of the platform we offer. Below are the main modules of the PARKRES platform, followed by the business model:

### **3.1 PARKRES Modules**

#### **3.1.1 Token System**

PARK is the official PARKRES token; these token will be available for purchase as part of private, pre-ITO and ITO phase.

PARK will be used as a utility token, which will allow a user to use these tokens in the PARKRES, managed parking locations for discounts, reservations, pre-booking etc. PARK tokens will be required to make use of any Parkres exposed APIs to different service consumers. People may choose to hold and participate in Parkres loyalty program by staking the tokens, as value token instead of spending them. They will benefit from PARK tokens valuation growth, as the demand will increase, as more and more consumers are on-boarded on the Parkres platform. PARK tokens fuels the Parkres platform, and with mass adoption demand for the tokens would significantly increase benefiting the token holder directly.

#### **3.1.2 Mobile Wallet and PARK App**

A convenient application for managing all of your utility or dividend tokens.

The mobile wallet will be inbuilt in PARK Application, which will allow the user to manage parking system and their reservations. PARK app will be available on Android, IOS and Web based interface.

#### **3.1.3 Parking Consoles**

These will be installed at designated parking location to manage and monitor the parking activities. Parking consoles will be equipped with UIN scanner/reader and IoT feed integration module with dashboard panel. User would be able to choose desired parking spot on the console while present physically on the parking venue.

People who are not tech savvy and believe in old parking framework, do not use mobile devices would be able to print paper ticket as today. Parkres would support this function and do not encourage this, as main focus of Parkres platform is to reduce the waste of paper, fuel, money, time and there by help environment and ecosystem to evolve in green, clean, smart, connected manner.

### 3.1.4 SOS Services

We call it “save our ship” services; user can use these services in case of any problem with the system and to seek immediate resolution for their problems once the system is fully launched and operational.

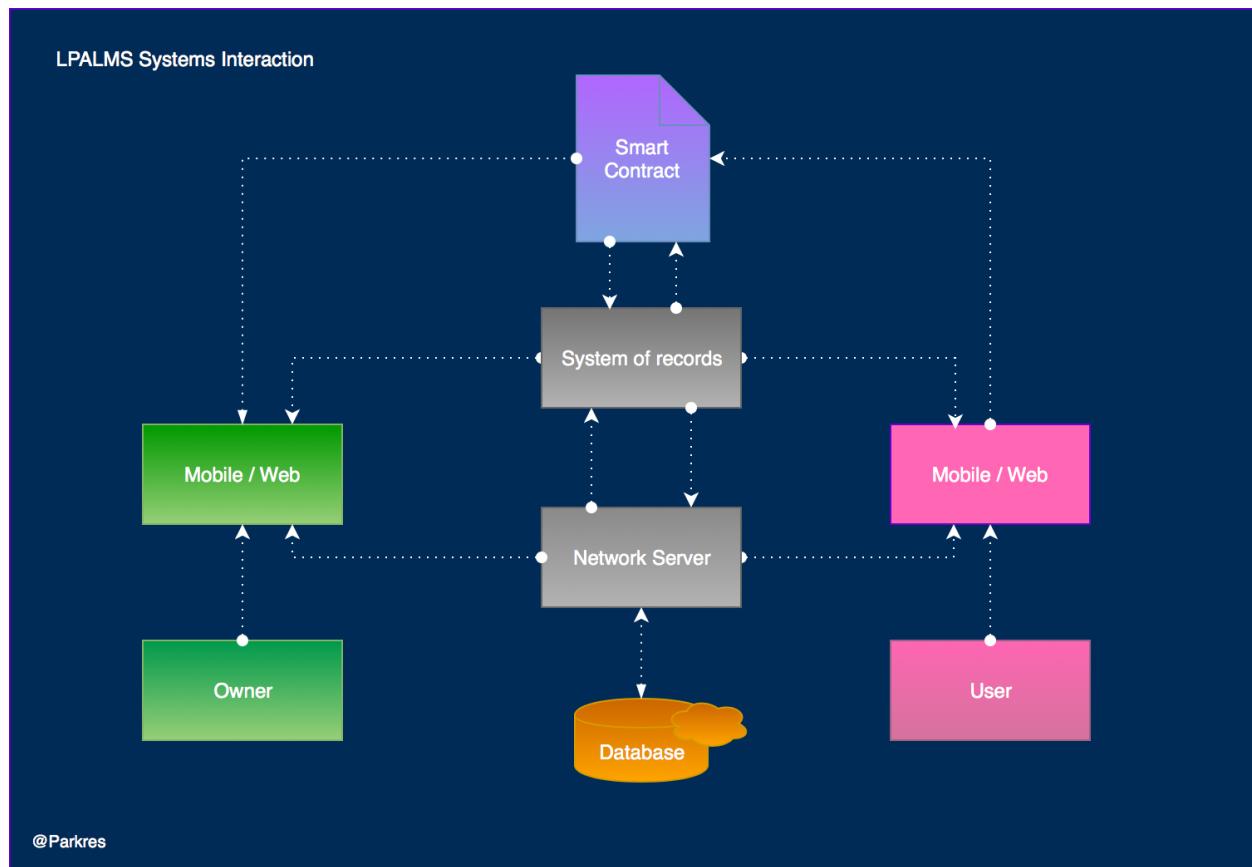
### 3.1.5 Third-Party Adapters

These will help other systems like Cars GPS systems, Tom-tom devices, and Google maps, App developers, parking providers, Software and hardware manufacturers to integrate seamlessly with the PARKRES systems.

## 3.2 LPALMS Platform

LPALMS stands for Local Parking Location Monetize Service. It works like Airbnb for the parking industry.

Users will be able to register their open parking spot on the PARKRES ecosystem thereby adding it to the pool of available parking locations. Customer will be able to book this parking spot and revenue will be sent to parking owner. We think this will be a revolution in the parking industry, where people will have the option to make use of their un-used parking space. This will also reduce the scarcity of parking locations to some extent.



### **3.2.1 End-to-End Solution – LPALMS platform**

1. Parking spot owner download LPALMS mobile app or opens website.
2. Owner creates a profile and registers their parking spots on the network.
3. Owners decide the parking rates or selects LPALMS auto rate calculator service.
4. Listing will be shown to all the users looking for an open parking spot in and around.
5. User would select this spot for specific interval, day, week, and month and initiate the transaction over blockchain.
6. Contract will hold the transaction and intimate owner about the booking notification.
7. Owner confirms the booking and sends the confirmation of booking details to user.

## **3.3 Business Model**

PARKRES business model is straightforward; we enable the user to use technology in their day-to-day life and help save their valuable time, money and energy from unnecessary jargons. We enable users to find their convenient parking spot as per their schedule and pre-book the same, saving them time and money. We are offering this green technology to the people, which will help save on fuel, time, parking slips and papers, and help save the environment. We are giving people back their valuable time, so they can spend it more productively with their family and loved ones.

### **3.3.1 Revenue Stream**

Parking today is like a lifeline, especially in the downtown, for every metropolitan city. Not just that it is a necessity and significantly important facility, but it is also a substantial source of revenues for almost all the sectors today. Hospitals, Airports, Train stations, Universities, Shopping malls, you name it. We are talking about bringing a new revolution in the parking industry. Today parking industry is estimated at about 500+ billion-dollar industry, and growing rapidly with increasing vehicles on street and demand for parking facilities.

#### **References: North America alone**

<b>Markets</b>	<b>Links</b>
Canada Research	<a href="https://www.ic.gc.ca/app/scr/app/cis/summary-sommaire/81293">https://www.ic.gc.ca/app/scr/app/cis/summary-sommaire/81293</a>
USA-Research	<a href="https://www.ibisworld.com/industry-trends/market-research-reports/other-services-except-public-administration/personal-laundry/parking-lots-garages.html">https://www.ibisworld.com/industry-trends/market-research-reports/other-services-except-public-administration/personal-laundry/parking-lots-garages.html</a>
US Market Forcast	<a href="http://thehill.com/policy/transportation/311993-parking-revenue-set-to-grow-4b-by-2018">http://thehill.com/policy/transportation/311993-parking-revenue-set-to-grow-4b-by-2018</a>

Parking revenue in the U.S. is projected to grow by \$4 billion over the next two years, according to a report released by NPA. The National Parking Association (NPA) estimates that

revenue from parking will increase from \$25 billion in year 2017 to nearly \$29 billion by 2018 in USA. Currently, private parking owners and public parking operators together employ more than 143,000 people, according to the NPA, and approximately 120 million Americans drive to work everyday. The two states bringing in the most parking revenue are California and New York, with \$1.4 and \$1.2 billion, respectively. The report says New York, Los Angeles, Chicago, Houston and Phoenix have the most parking growth potential.

The primary driver of the rising parking demand is population expansion, which is estimated to increase from 320 million in 2015 to 400 million by 2050.

Other economic and demographic factors underpinning parking growth include higher employment, more commuters, more people driving for vacations and municipalities increasing parking development. *[Source The Hill: NPA Research]*

Parking providers today earn money through commissions as they remit almost all the money paid by consumers to the parking authorities. Parkres would follow the model in early stages. However the goal of Parkres platform to evolve more as a ecosystem by creating demand for the technology and its use, so more and more people should be able to benefit from the innovation.

In long term, PARKRES would make money mostly from its API monetization. User subscriptions, licensing, franchise and revenue sharing model with parking providers. Parkres is the worlds first patented smart parking system, so any one creating similar product would have to take license from Parkres or take its franchise to operate. Parkres would provide all the infrastructure setup and app integration, console installation free of cost to the managed parking locations/partners; this will give parking provider more business and cutting edge technology at no costs, and will encourage masses to adapt to Parkres platform. In return Parkres will takes small revenue % (5%) from the parking providers?

Parkres would also allow user to download mobile app for free and use Parkres search features and only charge them when they make bookings. App developers would be able to integrate Parkres APIs into their applications and make use of these APIs by sending PARK tokens.

### **3.3.2 Potential Market**

Hospitals, Airports, Train stations, Universities, Shopping malls, complexes, Office premises, roadside parking and the list is endless. Potential of this system's growth is immense and there is no limit to its use in any sector that deals with vehicle management today.

In addition to the above practical application usage and customer base, PARKRES's potential customer is everyone who currently owns or wishes to own blockchain based assets and wants to effectively utilize them as means of payment outside of the cryptocurrency ecosystem.

While the total number of cryptocurrency users around the globe is difficult to assess with

reasonable accuracy, at the time of writing this figure, it is estimated to exceed 15 million and is likely to grow substantially in the future. As per analysis today only 8% of the population is aware and actively participating in the crypto market. There is still 92% yet to explore and invest in this market, so the potential is huge.

### 3.3.3 Use Cases

#### PARKRES for Car Rental Agencies

Best in class parking navigating and location mapping functionality for car rental companies and their customers. Navigation system with the optimal route calculation feature and traffic update inbuilt. PARKRES API's which can be integrated within partner applications for real time updates and reservations. Mobile application for parking - find and reserve will be available for free download.

By providing real time parking update to user, rental companies would be able to increase their customer base and provide parking navigations and spot availability right on the car dashboard or mobile application.

#### PARKRES for Real State

Easy integration of PARKRES system into existing mobile or desktop application or on website by exposed APIs. Tap into the 1000s of open parking spots available around the listing. Helps your customers and agent locate and reserve a free parking spot to save their time and money. Provide a rating system for real-estate and parking locations based on availability of spot, condition of parking space and ease of use.

#### PARKRES for Car companies

With the PARKRES APIs make your vehicle parking aware. Integrate the real time parking location updates in the cars navigation console. Giving your car an edge over all other competitors with a tag like "Our Car know where to park". Allow user to make a parking reservation right from their car navigation panel for a required timeslot.

#### Airports and Hospitals

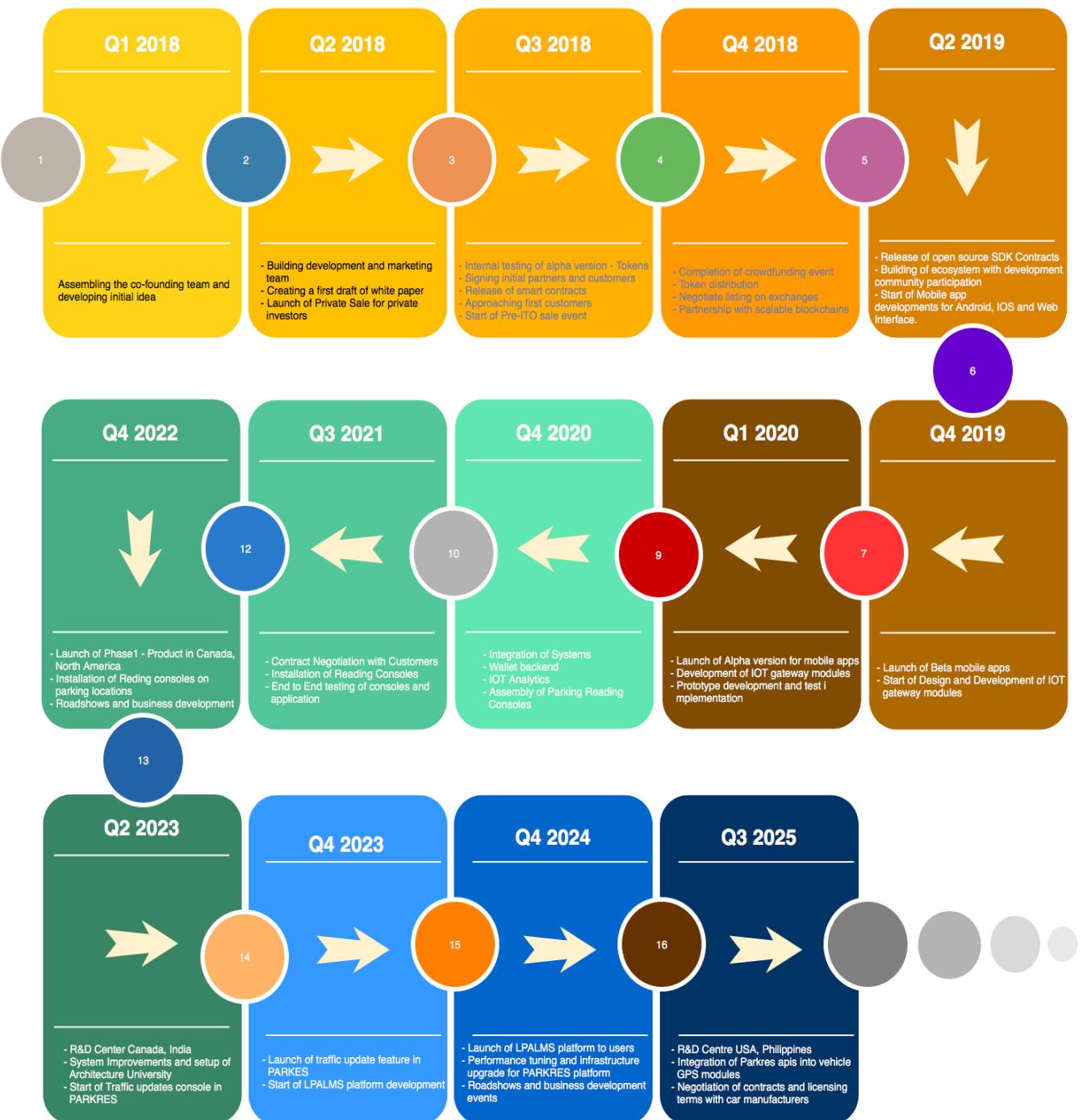
Protect your customers from going in circles in search of a parking spot. Integrate PARKRES system into existing mobile and web application to provide users with Find and Reserve functionality, allowing them to save critical time and fuel. Manage parking spaces more efficiently by identifying the spot, which are less used as compared to other spots.

PARKRES solution can be extended to several other customers and to every other industry. Above are just few examples.

## **Environmental Benefit**

- PARKRES system will help reduce vehicle traffic of parking hunters, which will help reduce pollution
- PARKRES will help user find reserve and location their parking spot easily, so they don't have to circle street and paring location this will save users lot of fuel and time, which will help protect the atmosphere and help reduce the pollution
- PARKRES system will remove the need for printing paper tickets, since users will be able to make reservations on mobile and get in and out of parking facility with their Encrypted Key / QR Code. This will reduce waste of paper and promote green revolution.
- PARKRES will allow user to register their open spot on the system, this will reduce scarcity of parking places in the city also burden on government to add more infrastructure for parking needs.

## 4 The PARKRES Roadmap



**Please note this is the first incarnation of a road map and May subject to changes depending on various conditions like SEC policies, ITO events and delays, Licensing issues, partnership delays, Patent office review process, code audits, contract audit and security processes etc.**

**However, we will try our very best to stick to our timelines and schedules.**

## 5 PARKRES ITO

### 5.1 ITO Plan and Key facts

PARKRES Token Symbol	PARK	
Token Standard	ERC20 (Ethereal)	
Tokens Issued	200 000 000 PARK	
Tokens available for ITO	85 000 000 PARK	
May 1st to May 30th (Private Sale)	10 000 000 PARK	Unsold tokens will be burned by smart contract automatically
Aug 15th to Sep 15th (Pre-ITO sale)	20 000 000 PARK	
Nov 1st to Nov 30th (Public sale)	55 000 000 PARK	
Bonuses	70% bonus - Private sale, 15% bonus – Pre-ITO 10% - Referral Bonus	
Token price at launch of sale	1 PARK = 0.5 USD	

*Accepted currencies for sale:* **BTC, ETH**

Token will be distributed after the ITO sale phase is over. Any unsold tokens from the previous phase will be carried over to next ITO sale phase. At the end of the ITO sale phase, all the unsold tokens will be burned.

### 5.2 PARKRES Token Contracts

All tokens that are not sold during each round of the ITO will be carried over to next phase of ITO. Tokens can be used as utility tokens on the PARKRES platform or staked for earning loyalty bonus.

PARK tokens that are reserved for PARKRES founders and team members will be frozen for 12 months and cannot be sold, exchanged or otherwise traded during this period. Similarly,

tokens reserved for PARKRES advisors will be frozen for 6 months upon ITO phase completion. All the tokens for tram members and advisor will be vested for the period of 6 month. And will be released to team/advisors as follows

30% after 2 months of main sale event;

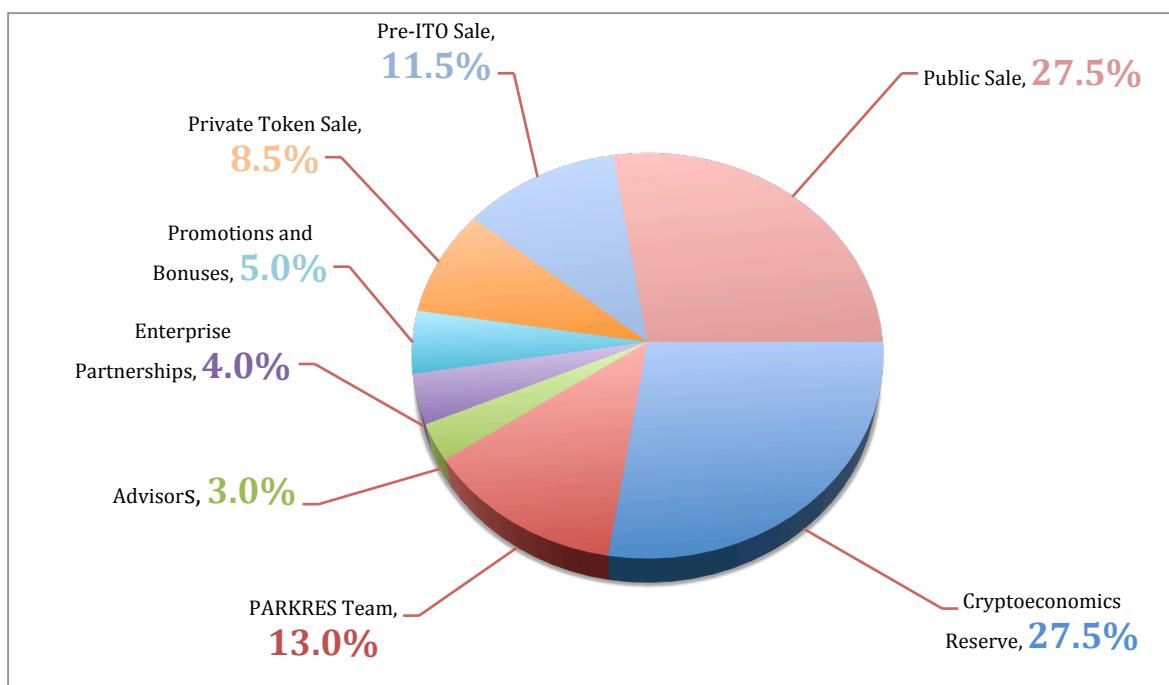
30% after 2 months of first token release date;

40% after 2 months of second token release date.

### 5.3 ITO Allocations

All funds received from the ITO will be used for the development, maintenance and deployment of PARKRES ecosystem. Specifically:

#### *Token Allocation:*



#### *Cryptoeconomics Reserve:*

On January 5, 2018, one of Ethereum's creators, Vitalik Buterin, published an exploratory idea aimed at improving the ICO model by merging the benefits of the Decentralized Autonomous Organizations ("DAO") with the Initial Coin Offering ("ICO") model. The goal of the concept, which is termed a "DAICO", centered on minimizes the complexity and risks for the Token Holder.

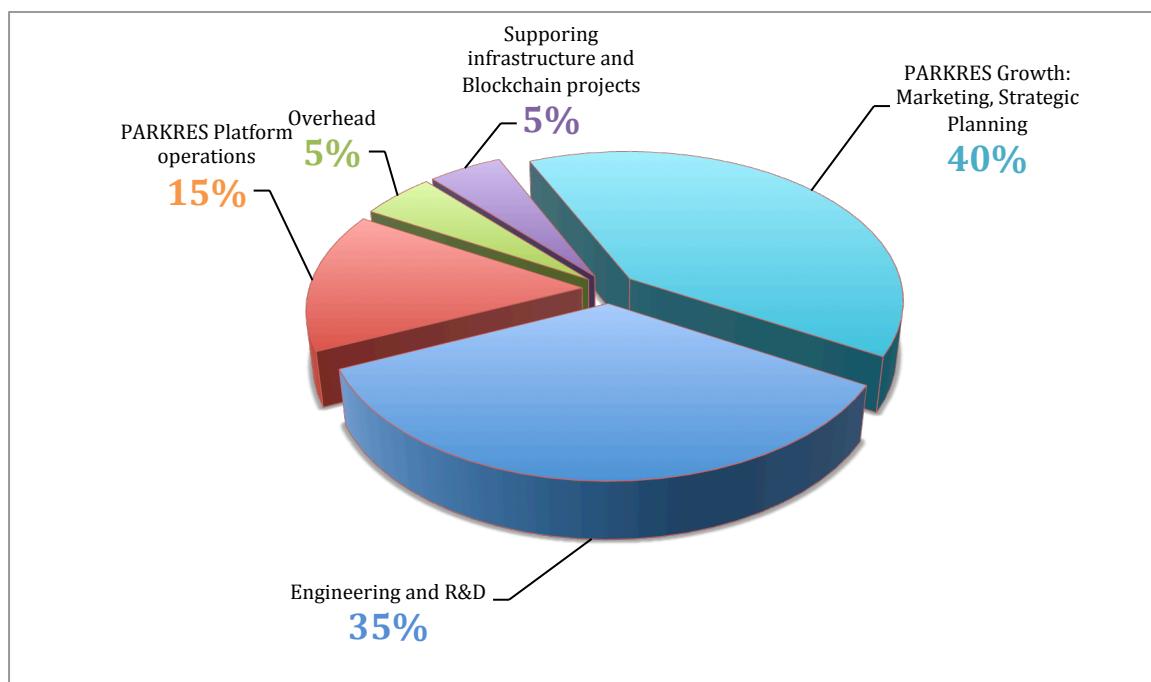
DAICO's have not yet become the standard in the realm of new cryptocurrency projects; however, the idea brought the concept of creating more Token Holder protections and introduced some novel crypto economic concepts. One concept Buterin introduced is a state variable called tap (units: wei / sec). The tap serves as a safeguard to token holders to hold the project's team accountable for meeting the milestones of the project. Setting the tap rate in

which the funds can be withdrawn from the project's contract to be spent on developing the project and meeting its milestones does this. The tap rate specifies the amount per second that can be withdrawn from the contract. If the project progresses and even if additional requirements arise, the tap rate can be voted on and increased. [Reference: original bitcoin whitepaper]

For this reason, we developed a Cryptoeconomic Reserve built into the smart contract of the PARKRES Public Token Sale. The purpose of this reserve is to have a mechanism that can be "tapped" in order to provide crypto economic incentives to important members of the PARKRES ecosystem. This ensures that the PARKRES system grows in the manner necessary to build a robust parking allocation network and eventually replace our primitive parking systems. In an ideal system, the PARKRES Cryptoeconomic Reserve would never need to be tapped; however because the PARKRES solution also has a concept of Technology University, it will continue to improve and enhance based on the ideas submitted to the University by open forum/community. Cryptoeconomic incentives may need to be rewarded to certain people, groups who could provide a breakthrough enhancement idea, which would benefit the entire ecosystem. Ideally, the Cryptoeconomic Reserve would never need to be tapped.

### ***Token Sale Proceedings***

Proceeds from the PARKRES Token Sale will be allocated in what we deem the best way to achieve our primary vision: providing parking reservation system. We believe the appropriate mix to make this happen is devoting our resources (which includes our funds, as well as the PARKRES ecosystem's focus) on the following areas:



## **5.4 Protection**

A global patent protects PARKRES ideas and solution. Patent applications in different geographies are in process and in review phase. We expect the patent filing and the formalities to be completed before the start of ITO sale. The first Patent application is filed in the USA. After seeing the demand of PARKRES system in different geo-locations, a patent will be filed in high demand geographies.

This mean, no one else will be able to create similar invention or system and will have to buy rights from PARKRES if they want to use this solution for commercial use. This also means that the PARKRES users and token holder will benefit from any and all the future engagements and license models under this protection.