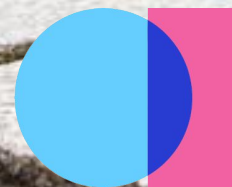


Digitising the kerb, unlocking value & optimising assets
CLFQP 29th October 2019



appyway

More is going to change
in the next 5 years than in
the last 100.



Global Mobility Problem for Cities

Cities are under immense pressure to accommodate new demands on the kerb.

- Today's economic, environmental and consumer needs
- Tomorrow's accessible kerbside essential for sustainable mobility.



London Mayor's Transport Strategy - March 2018

Making streets work for people...will free up space for the essential freight and commercial journeys that keep London's businesses functioning.

Improving the efficiency of freight and commercial traffic, alongside reductions in car use, will help to keep London's streets operating well for the benefit of the city's businesses and the Londoners who rely on them. Without action now, freight traffic in the central London morning peak is expected to increase by up to 10 per cent in the next ten years.

Accordingly, the Mayor aims to reduce freight traffic in the central London morning peak by 10 per cent on current levels by 2026, and to reduce total London traffic by 10-15 per cent by 2041.

Source: MTS, Vision Chapter. P22

West End Partnership will, 'focus on creating 'traffic free areas at peak times and flexible use of space at less busy times, for loading servicing and deliveries.'

Source: WEP Freight & Servicing Strategy March 2018 - Elizabeth Line Readiness Report (2018)

Common Problems



There are currently no standardised kerbside maps that exist in the world



No centralised marketplace means dozens of apps for payments and parking data.



Confusing Street Signage and suspensions



London spends £100m on enforcement and some councils don't cover costs.



Old fashioned paper receipts are issued from P&D machines.

*Connected cars will be stupid if the physical and digital infrastructure are not connected.
Who's accountable if a CAV gets a ticket?*



Today's accessibility Issues

BT 4G 09:47 83%

Maritime&Coastguard and 2 others

ParkNews Retweeted

David Zipper @DavidZipper · 1d
High five to the first American city that tries this:

"In Hamburg, Germany, trucks deliver containers full of packages to a drop-off site. From there, fleets of electric tricycles carry the packages to homes."



1.5 Million Packages a Day: The Internet Brings Chaos to N.Y. Streets
nytimes.com

In case you missed it



Today's accessibility Issues



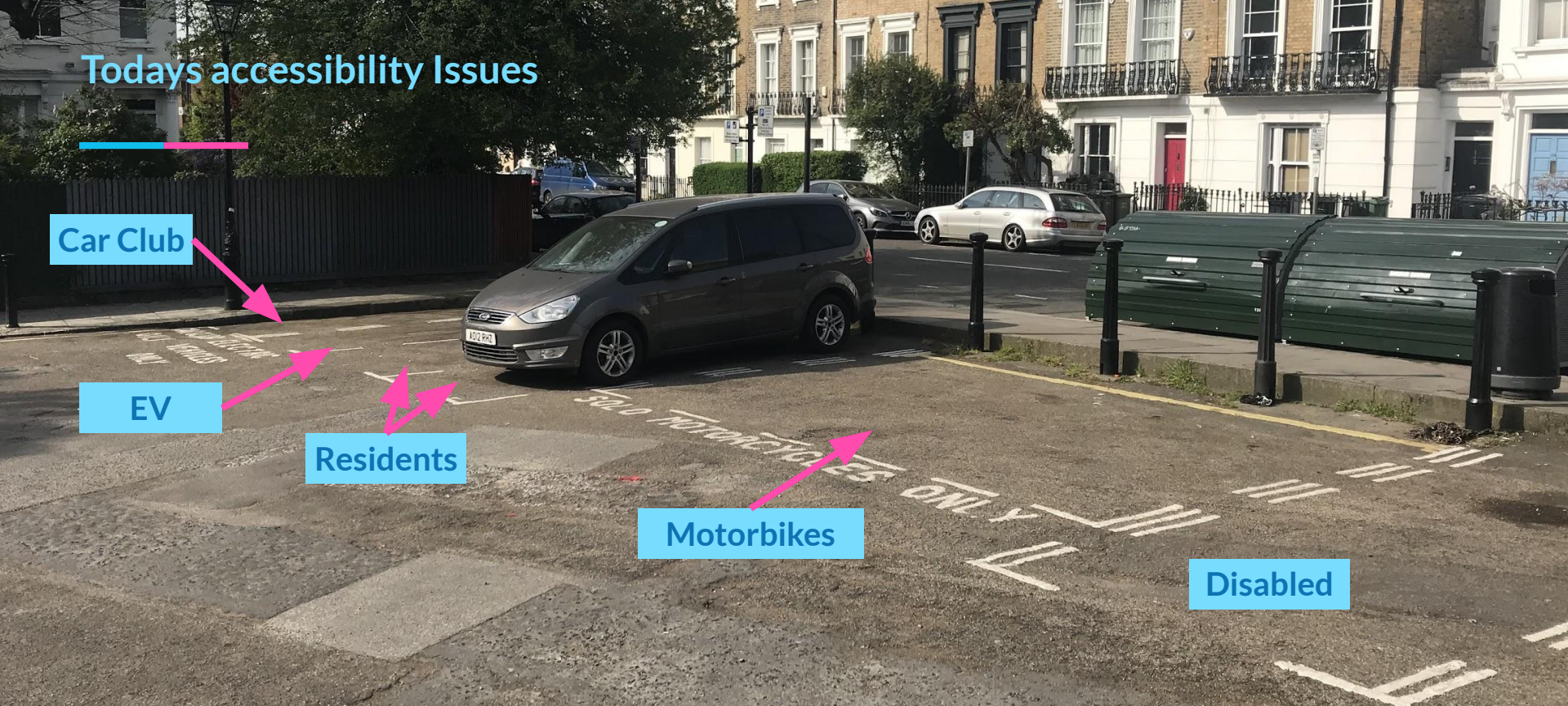
Today's accessibility Issues



Today's accessibility issues



Today's accessibility Issues



4 inches of vertical granite feels
like 4000 feet



UK kerbside management cost

Digital transformation can streamline today's protracted and costly processes and make the kerb work 30x more effectively.

£63m

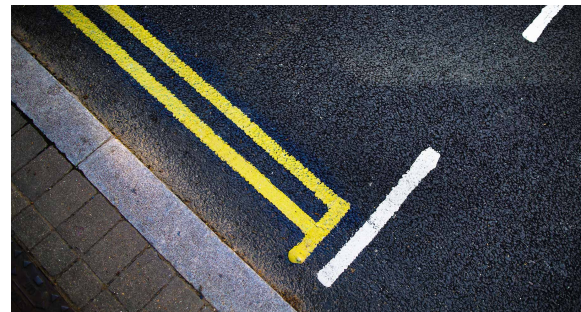
Annual spend by UK local authorities managing **Traffic Regulation Orders**

£700m

Annual spend by **418 UK** authorities individually managing parking services

£100m

Annual spend by 33 Greater London Boroughs on manpower **enforcement**



Council TRO Journey Map

ROLES: Public, Councillor, Cabinet Member, Property Developer, Officer/Engineer, Legal Officer, COMMS: In person, Phone, Letter, Email/Digital, Newspaper Advert, Printed Sign



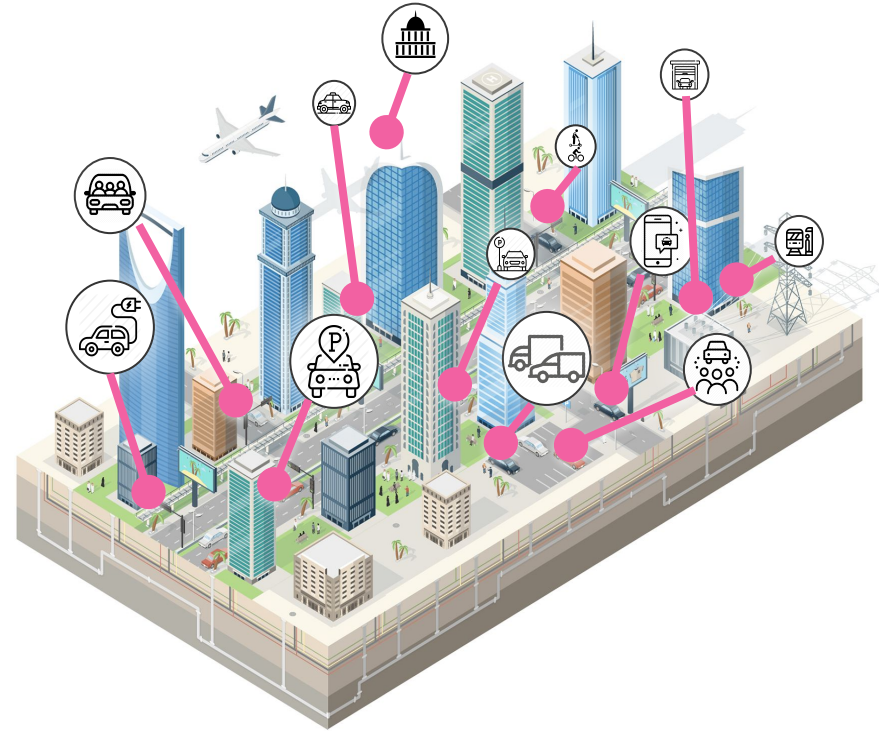
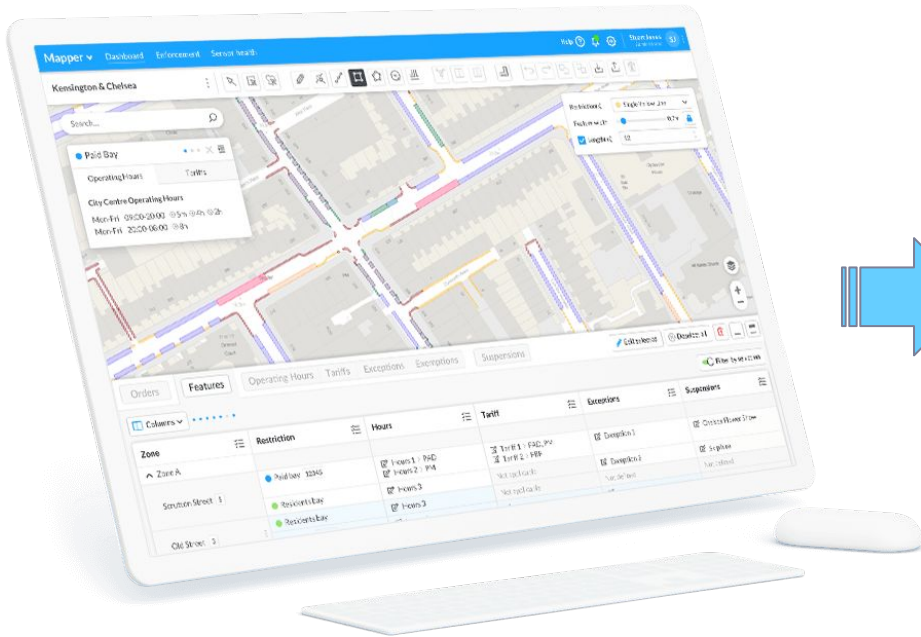
Traffic Regulation Order Cost Example

'Pain Chart' highlights today's protracted process required to change paint related to UK traffic regulation orders.

6 months
6 Public Servants
Local Newspaper Advertisement
Residents Comments
Average Cost = £5k per restriction change

AppyWay created Mapper - the next generation TRO solution

Meeting today's TRO requirements



Facilitating future smart city services

Providing 'Air Traffic Control' for Kerbside Management



KERBSIDE MANAGEMENT PLATFORM FOR SMART CITIES

- End-to-end big data, analytics, IoT and multi-vendor payments.

DATA FOR INTELLIGENT MOBILITY APPLICATIONS

- The world's first standardised HD Kerbside map
- Connected car technology offering frictionless pay-as-you parking.

GovTech & Private Sector Customers

KERBSIDE MANAGEMENT FOR CITIES

AppyPlatform - SaaS



DIGITAL GREASE FOR MaaS

KERBSIDE ACCESS FOR MaaS

Data and Payments - DaaS



14,000km of London's restricted road network

Rickmansworth

Loughton

Beaconsfield

Gerrards Cross

Brentwood

Billericay

Basildon

Stanford-le-Hope

South Ockendon

Grays

Tilbury

A revenue generating API

Residents Parking

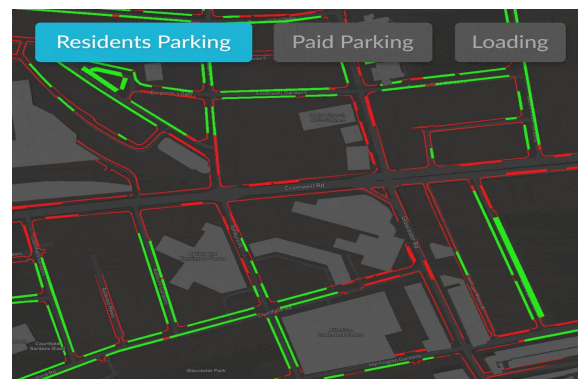
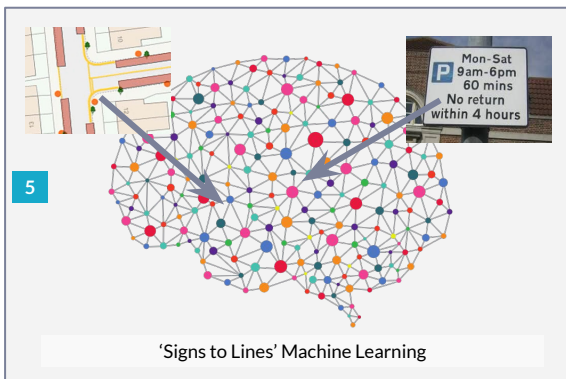
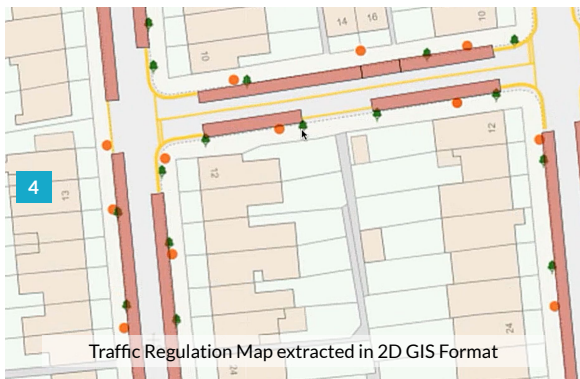
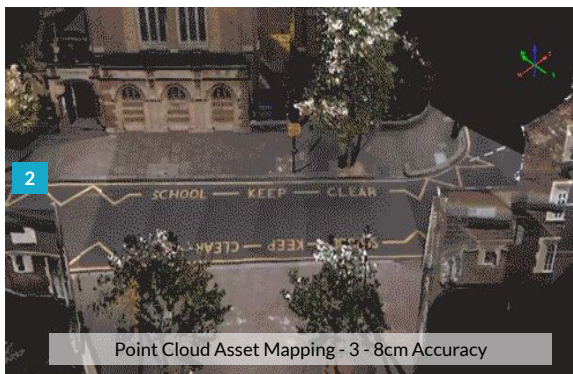
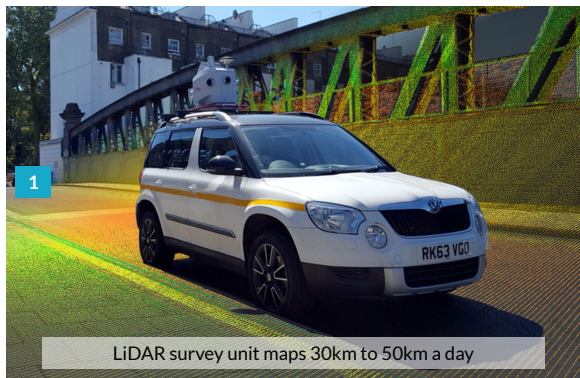
Paid Parking

Loading

UK Complete 2019nd



Patent Pending - HD Maps using 3cm accurate LiDAR & Ai



Asset Mapping - Marylebone High Street paid bay measurements



When you reduce congestion by 10%, GDP increases by 2%
London would experience £6bn+ uplift



Driver Benefits



No more overpayments



No more parking fines



Increased Productivity



Government Benefits



Increased parking utilisation



Revenue monitoring and optimisation



Improve customer satisfaction and reduce frustration



Increase parking revenues



Reduced enforcement costs



Reduce congestion and pollution

Happy drivers, with reduced operating costs



Driver Benefits



No more overpayments



No more parking fines



Increased Productivity



Fleet Operator Benefits



Increased parking utilisation



Revenue monitoring and optimisation



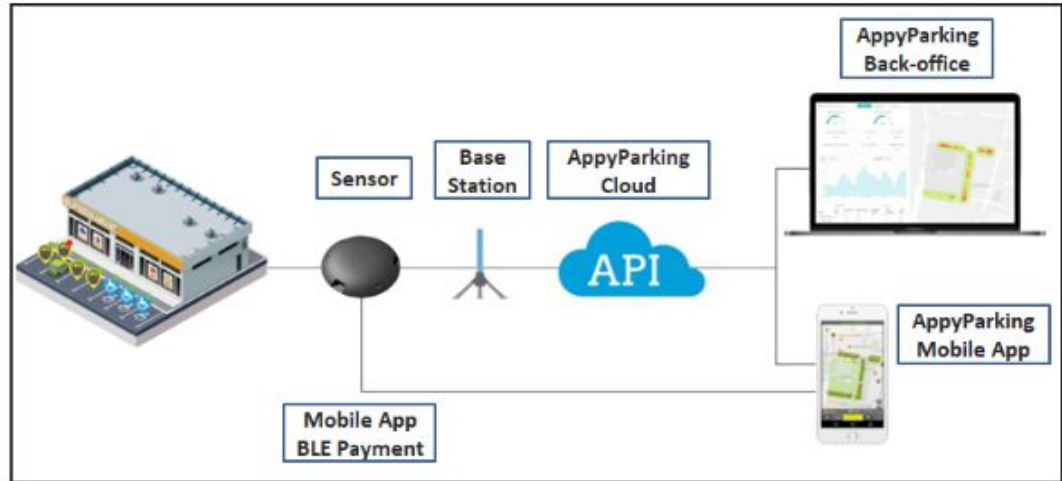
Improve customer satisfaction and reduce frustration



Reduce congestion and pollution

AppyWay sensors solution data capture, analytics & utilisation

- Patent Pending, Bluetooth payment technology
- Easy install surface mount
- Low Power Radio Technology
- One base station covers 3 miles urban radius
- 1000's of sensors connect one base station
- Dual Magnetic and Photonic detection
- All data is fully secure and encrypted
- Configurable to either bay occupancy or car count
- 5-8 year battery life as bay occupancy
- 2 years battery life as car count



'One Click Parking' - frictionless payments and digital permits

Seamless pay-as-you-go parking using on-street sensors equipped with bluetooth technology.

Drivers finds nearest available spot using real-time on-street sensors



Parking session begins with a single click



Car drivers away and session automatically ends



Driver only pays for the minutes of their stay



The world's largest deployment of intelligent sensors rolling out December 2018 - 14,000 sensors!

Harrogate
BOROUGH COUNCIL

 **Portsmouth**
CITY COUNCIL

Calderdale
Council

 **Worcester**
CITY COUNCIL

 **Dundee**
City Council

Logistics Hub & Corporate Estate Management

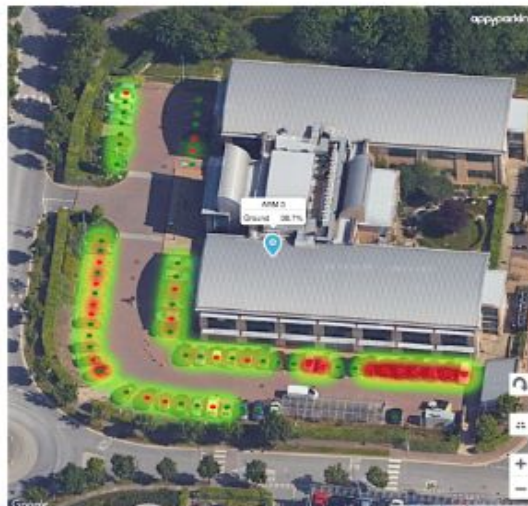
Current Analytics operation ARM, Cambridge deployed in 2018

ARM in Cambridge.

Real Time Management and Analytics portal supplied to ARM along with our sensors:



We are launching this in: Harrogate, Halifax, Portsmouth, Dundee, Heathrow and many more



Incentivise car share uptake via premium parking

Bay management for Car clubs

7 day management of real estate, rentals

Integration to local mobility services such as Taxi and EV.

Part of total industrial park mobility management

Delivering electric vehicle chargepoint management

Customer Journey - Real Time Availability, Combined Frictionless Payments and Enforcement Integration



1 Identify available EVCP bays via AppyParking or white-label mobile app



2 Bay occupancy detected by sensor. Parking session prompts user to activate EVCP



3 One Click Parking - combined parking and charging session via parking bay sensor



4 Sensor occupancy data and chargepoint data are merged to report parking compliance



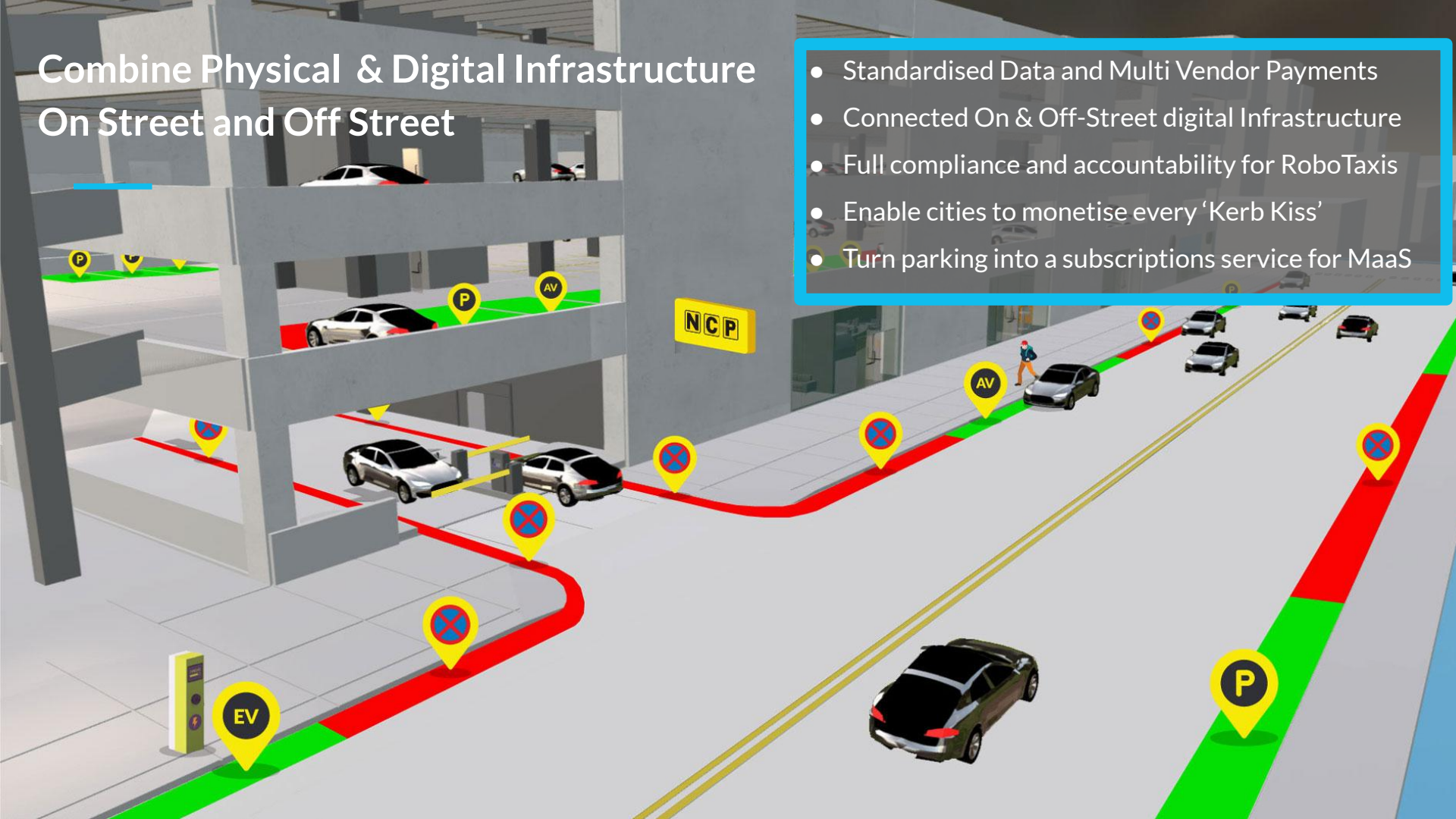
5 Option to receive notifications when vehicle is fully charged to encourage turnover of the bay



6 Session and payment end automatically after driving away. User billed once for parking duration and energy usage

Combine Physical & Digital Infrastructure On Street and Off Street

- Standardised Data and Multi Vendor Payments
- Connected On & Off-Street digital Infrastructure
- Full compliance and accountability for RoboTaxis
- Enable cities to monetise every 'Kerb Kiss'
- Turn parking into a subscriptions service for MaaS



Short, mid, long-term vision

Kerbside Management for B2G and operators

Provide Local Authorities with a powerful platform to digitise and manage their kerbside. This will create a digital infrastructure required for the future.



Kerbside Access for Intelligent Mobility

Local Authorities provide an authoritative source of data to CAV's allowing mobility operators to have fully compliant fleets at kerbside.




Air Traffic Control for Smart Cities to manage Robo Taxis



Integrated future HD mapping

- Last Metre Navigation
- Instant digital bay re-purposing
- Seamless pay-as-you-go payments
- Full Kerbside Compliance





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