

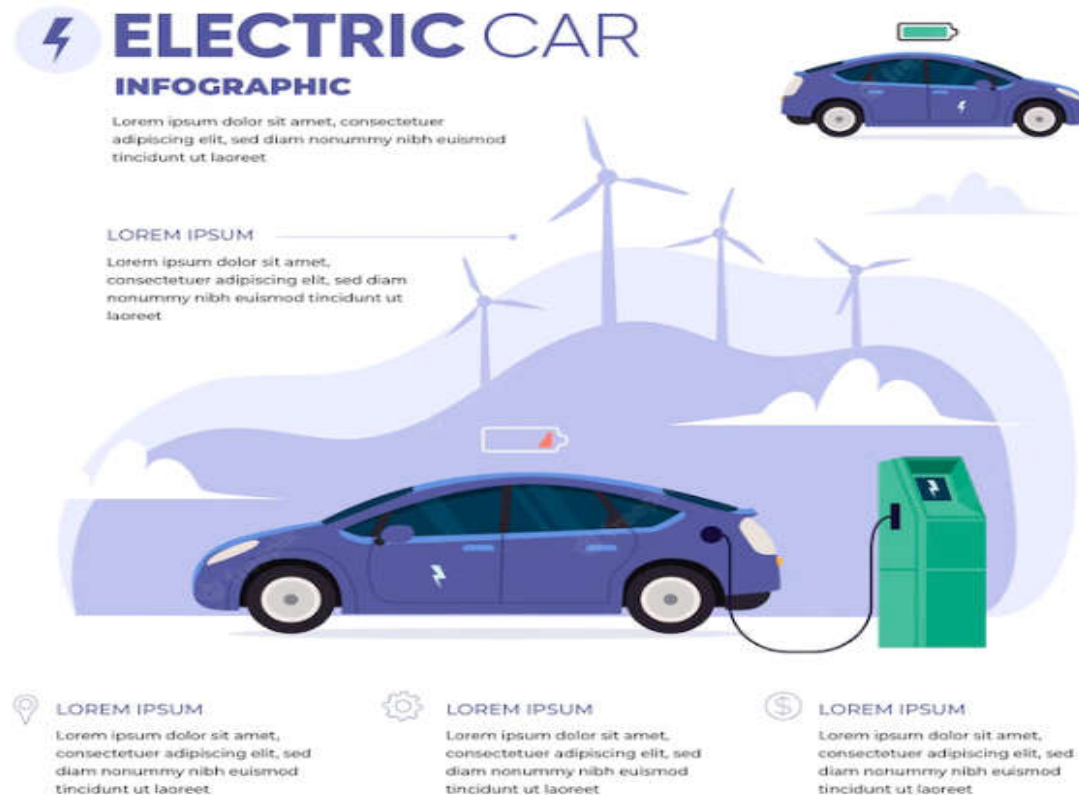
TTF Smarter Parking Forum 2022

Use of Digital Sensors to monitor EV bays

Friday 02nd December 2022



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TTF Smarter Parking Forum 2022

Use of Digital Sensors to monitor EV bays

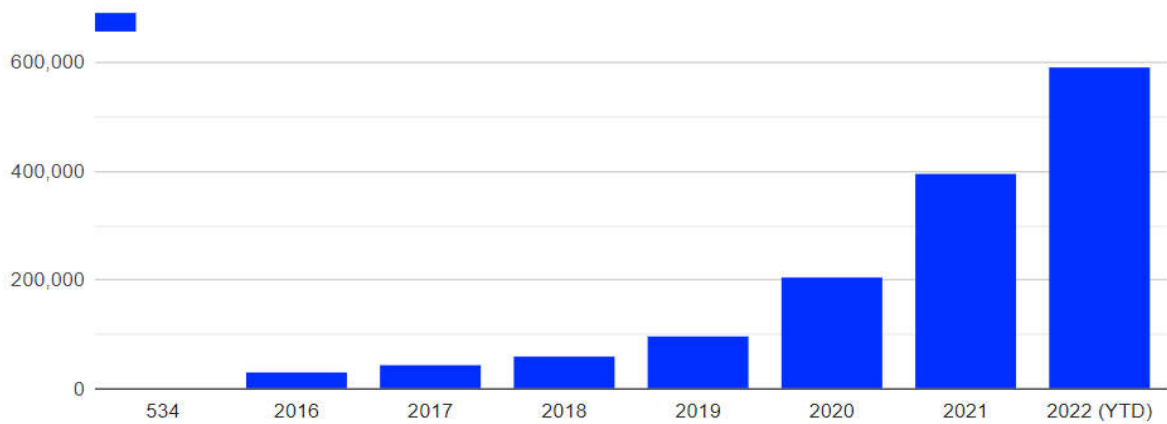
Who am I

- Shamala Evans-Gadgil: 3rd year part time PGR, with a Civil Engineering and Contract Management background
- Working as a consultant to Coventry City Council in a Senior Programme/Project Manager capacity on Innovation Projects in Transport and Innovation Division.
- Project Lead for:
 - ◆ Electric Vehicles Charging Infrastructure Strategy
 - ◆ All Electric Bus City
 - ◆ Renewable Energy and Battery storage.

Electric vehicle & charging device statistics: October 2022

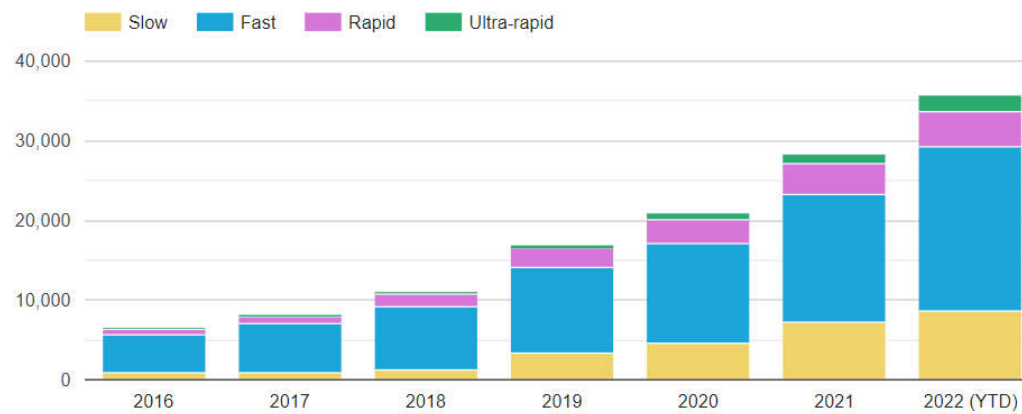
Car Registration

Cumulative number of battery-electric cars in the UK (2016 to date)



Source: SMMT, October 2022

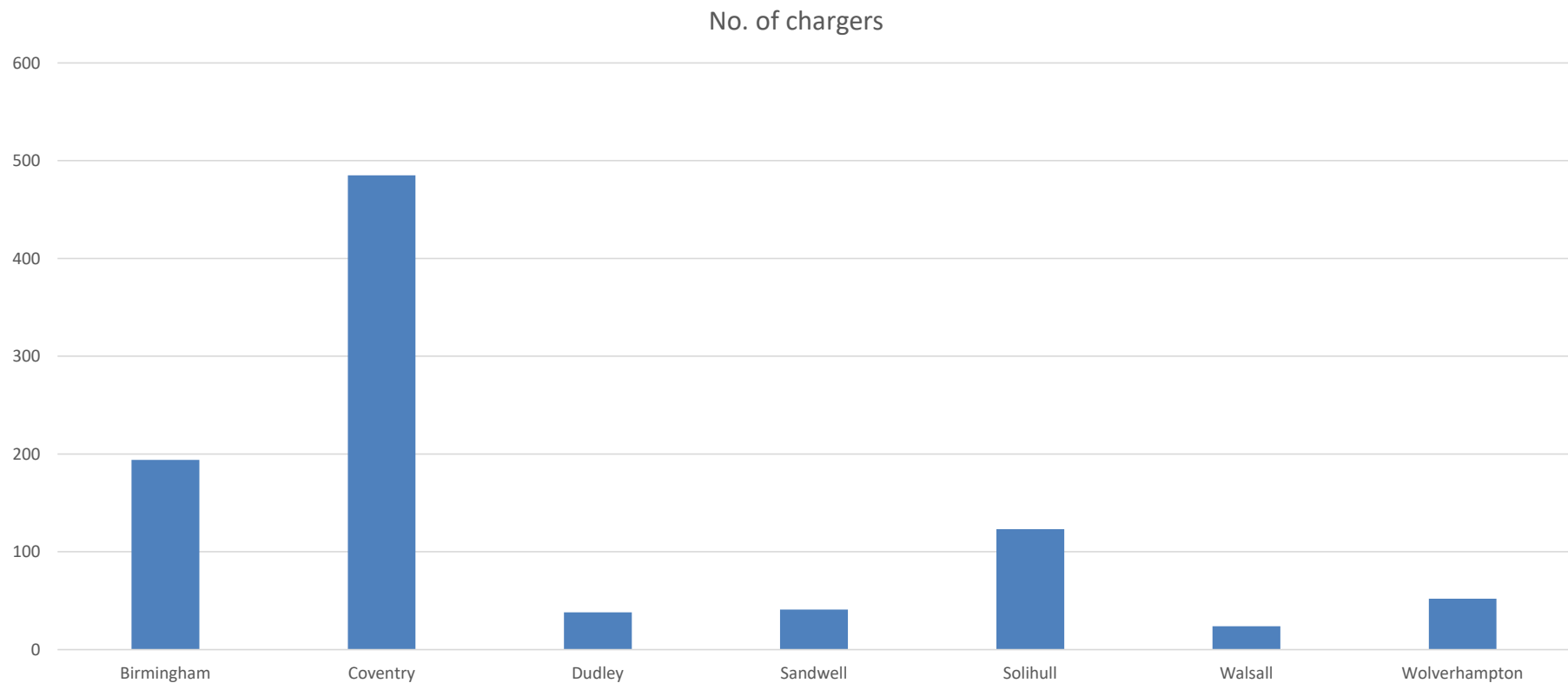
Number of public UK charging points by speed (2016 to date)



Source: Zap-Map database. Updated: 31st October 2022

Source: <https://www.zap-map.com/statistics/#points>

Dft Official Statistics: Electric vehicle charging device statistics: January 2022



Source: veh0131 - <https://www.gov.uk/government/statistics/electric-vehicle-charging-device-statistics-january-2022/electric-vehicle-charging-device-statistics-january-2022#:~:text=in%20April%202022,-,Headline%20figures,available%2C%205%2C156%20were%20rapid%20chargers>

What is the Local Authority's role in rolling out electric vehicle charging infrastructure

Local governments must actively participate in and provide the distribution of electric vehicle chargepoints in order to successfully facilitate the transition to ZEVs in their communities. facilitating the integration of the change with more significant local transportation and community demands

LAs' conurbation

Constituents
Business & services
Industry
Academia



Selection of type of chargers

**Residential
chargepoints
(home charging)**

For those who don't have
off-street parking facility

**On route
charging**

**Opportunity
charging**

Workplace charging

Coventry City Council

- Coventry has one of the most comprehensive EV charging networks outside London. 634 Public Chargers (includes single and dual sockets chargers) creating a total of 735 Charging Spaces
- Work Place Charging –44 fast chargers at Council's properties and Plug-in Coventry project to support charge point provision at business premises
- Ultra Low Emission Buses – Office for Zero Emission Vehicle (OZEV) grant funding of £2.255m for 10 electric buses in partnership with National Express – Launched end of August 2020
- All Electric Bus Town [AEBT] – Coventry secured funding of £50 million to fully electrify the bus fleet in the city and key corridors into Warwickshire – joint project with Warwickshire County Council and major bus companies. 130 double decker electric buses were ordered in January 2022 as first phase of the delivery programme.
- Electric Fleet First project – Coventry has been awarded funding by Highways England for a fleet of electric vans, pool cars and taxis for local businesses to try before they buy electric vehicles for their fleets.
- DynaCoV project – Dynamic Charging of Vehicles, a feasibility study project is underway, completed December 2021

Electric Vehicle Charging Infrastructure

Traffic Regulation Order

Permanent &
Experimental

- R & D on app allowing taxi's to pre-book (under ULEV Taxi Infrastructure project [ULEV TI])
- universal foundation (for both projects; ULEV TI and ORCS)
- functionality for CEO's to enforce restrictions via parking bay sensors
- underground infrastructure in LA's ownership
- Awareness piece
- <https://www.plugincoventry.org>



Coventry City Council

Enforcement and Monitoring

Coventry City Council

Smart Parking (IoT & Occupancy)

appyway.com



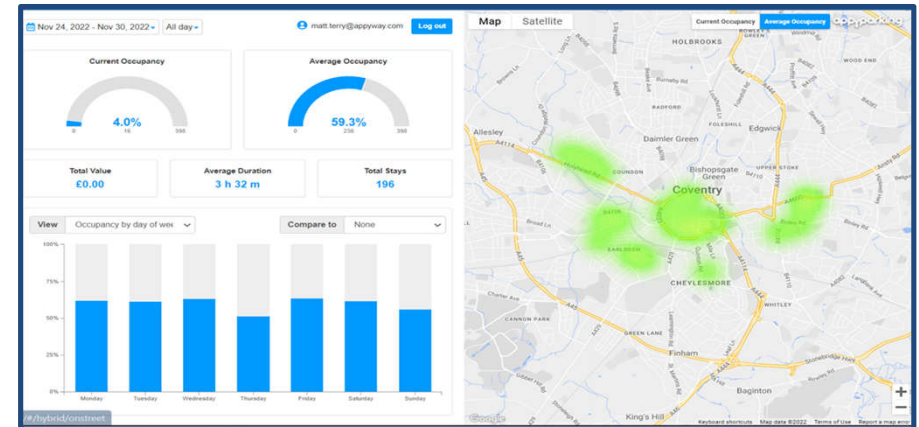
Coventry City Council

AppyWay Smart Cities

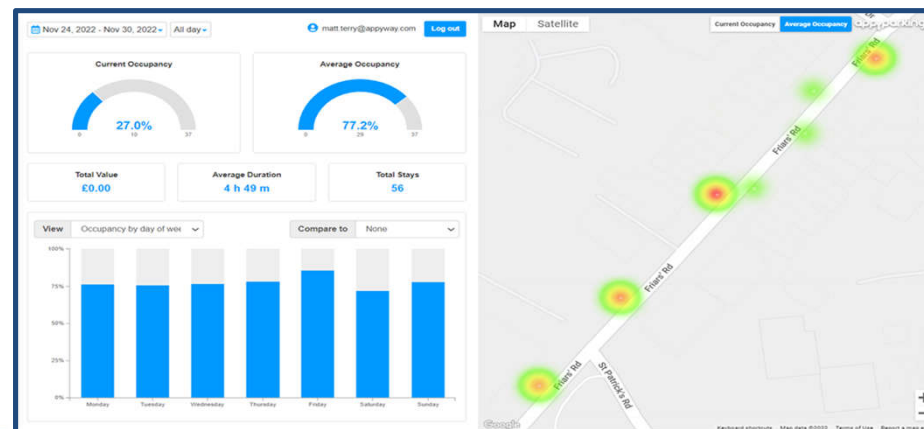
Insights Application - Friars Road

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AppyWay's Insights application provides real-time and historic bay occupancy insights for local authorities enhancing the decision making process for improvements to parking and kerbside strategies.



Coventry City Council is able to drill down to specific streets and bays, accessing granular data on usage statistics.



Coventry City Council

Coventry, AppyWay & Connected Kerb EV Bay Monitoring

Use case

AppyWay is working in collaboration with Coventry City Council's EV provider, Connected Kerb to deploy IoT sensors in over 500 EV Bays across the authority.

City Benefits

Bay occupancy data joined with ECPV status creates efficiencies for the enforcement of anti-icing in EV Bays. This will increase up-time of the charge points for residents. The data also provides powerful data insights to Coventry for monitoring ongoing EV adoption.

Resident Benefits

EV drivers will be able to see true real-time availability of EVCPs. Not only the status and whether the charge point is in use but also if the bay is occupied.

Bay Occupancy Sensor

Bay Occupancy Sensor

City back office

Resident mobile apps

Enforcement handhelds

Partners



Coventry City Council

AppyWay Platform

Surface mounted sensors

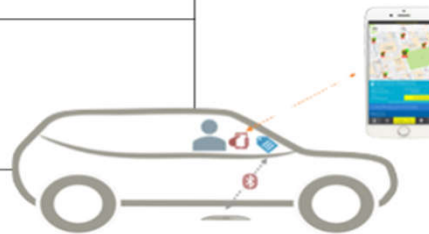


Surface mounted sensor detects vehicle occupancy and updates the platform

Real time parking bay occupancy data, back office analytics, and cashless management portal



Users utilise the mobile app to find available parking in advance and in real-time



VMS signs expose live occupancy for parking guidance



App and website real-time availability



Back office systems integration



AppyWay Platform

Surface mounted sensors







Thank You

Any Questions?