Smart Parking Bay Sensors in Cardiff

PROVIDING THE FUTURE OF PARKING TECHNOLOGY...TO DAY
The SmartPark System

- On-Street
  - OverHead Indicator Smart Sensors
  - SmartGuide Mobile App
  - Marshall's Handheld SmartSpot Base Stations
  - Pay & Walk
  - SmartTag
  - In-Ground Smart Sensors

- Off-Street
  - SmartGuide
  - SmartPermit
  - SmartPlate
  - SmartCloud
  - SmartRep
  - SmartData
  - SmartAPI
  - SmartRep
  - SmartCloud
Company Overview

Improving efficiency through accurate information

- Over 10 years of delivering real-time smart parking system solutions
- Delivering operational solution systems in 16 countries today
- Sophisticated, comprehensive solutions for a wide range of environments including:
  - Airports, Commercial parking sites, Universities
  - Supermarkets and Shopping Malls
  - Medium and Large scale municipal street environments
- Delivering Smart Parking technology products, End-to-End Solution systems and full service parking site operations
- ~70% global market share of working real-time smart parking systems
SmartZone – The Smart Cities Platform

Delivering multifunction, cost effective infrastructure for modern city and business environment IoT requirements

SmartSpot Basestations deliver modular and flexible units for connecting Smart Parking sensors and many other devices to internet cloud services

- Parking sensors + other wireless types of device connectivity
- Ethernet or Serial types of device connections

Proven functionality with lowest costs
Smartpark Components

Smart Sensors
Smart sensors monitor individual parking bays, and send live status to the SmartCloud platform to give real-time information of parking events.

Smart Guides
Smart Guides provide visual guidance and status indication at a glance within high density parking environments.

Smart Permit
Residential, taxi, loading and works bay usage can now be automatically monitored in real-time with the inclusion of RFID SmartTags in drivers’ vehicles.

Smart Apps
SmartApp delivers the smartphone apps that empowers the drivers parking experience with status, locations, payment, and more.

Smart Cloud
SmartCloud is the management and reporting system for delivering Smart Parking services. SmartCloud delivers a global scale suite of Smart Parking services.

Smart API
SmartAPI is an open data platform presenting real time occupancy data to the other in-house systems and also to 3rd party applications developers.
Smart Occupancy API

Welcome to the new world of parking!
Providing real-time parking availability for over 2,000 spaces in central London and parking information on over 40,000 spaces.
Empower your app or web site to make parking easier and quicker for users and help them to be in the right place, at the right time and do the right thing!
Captured 1547126 vehicle movements

Getting started
Register

Sample:

```json
[
{
    "LotCode": "sample string 1",
    "LocationCode": "sample string 2",
    "MaxStayPeriod": "sample string 3",
    "BayType": "sample string 4",
    "Street": "sample string 5",
    "Zone": "Sample string 6",
    "SubZone": "sample string 7",
    "Level": "sample string 8",
    "City": "sample string 9",
    "OperatingHourCode": "sample string 10",
    "TariffCode": "sample string 11",
    "PaymentProviderCode": "sample string 12",
    "BayCount": 13,
    "Latitude": 1.1,
    "Longitude": 1.1,
    "HasSensor": true
}
]```
SmartApp – Live in your hand

SmartApp provides users with real-time information from SmartCloud, helping them to find an empty space as quickly and painlessly as possible.

Live ‘red, amber, green’ status for parking spaces.

Filter parking bays by paid, disabled, residential, loading, taxi, motorcycle and more.

Sort results by price or distance and provides detailed information including number of spaces, operating hours and tariffs.

Directs users to the parking space.

Allows users to pay via mobile phone.
Cardiff Council – Aims of Proof of Concept trial

- Prove functionality of technology
- Promote an enhanced Customer Experience – reduce ‘circling times’
- Increase Occupancy and therefore increase revenue from compliant parking
- Better understanding of compliance and abuse levels.
Cardiff Council – Elements of the Solution

- 278 Smart Sensors installed in on-street bays
- Detailed trend analysis and reporting by bay type such as average stay times, average bay turnover, occupancy levels and availability in real time
- Deliver live occupancy data to a dedicated SmartApp and display bay availability to residents, city centre visitors, commuters and local businesses.
- Provide Support in the Promotion of the Guidance App
Cardiff Council – SmartRep display
100% system availability; at no time has an outage occurred

98.68% latency within 30 seconds i.e. the parking event has been recorded and captured within 30 seconds

Provision of real time data for 18 ‘lots’ of parking bays over a 15 month period.

Tender issued for rollout of technology across 4000 bays
Parking space monitoring & reporting
SmartCloud software collates and analyses live information on how parking space is being used. Accurate vehicle-by-vehicle, minute-by-minute data on actual usage of parking facilities gives the leading edge in day-to-day management and future planning.

Reporting and data analytics capability
Data for analysis is available in 3 forms:
- Data export for further analysis
- Real-time state information via SmartAPI
- Open integration via Server Web Service APIs
Smart Parking Benefits

Cost Reductions

- Reduce Pay & Display machines acquisition and implementation costs by 60%
- Reduce P&D Maintenance and Cash Collection costs by 60% p.a.
- Reduce/eliminate vandalism and cost of theft from P&D machines
- Reduce administration, helpdesk, debt collection, parking ticket complaint handling, and additional back office costs by increasing compliant parking.
- Avoid construction and significant associated costs of additional car park provision
- Eliminate Parking Survey Costs
- Reduce Enforcement Officers by 10% - 50% or re-deploy to increase enforcement efficiencies. One authority has reduced enforcement costs by 20% in year one.

Please note that cost savings vary from Local Authority to Local Authority due to unique parking portfolios, geographies and strategies.
Parking guidance apps are proven to reduce traffic congestion by 20%-30%

Improves motorists driving experience by reducing driver stress, fuel consumption, etc.

Data provides ability for Parking and Planning departments to accurately plan for future parking provision

Improve streetscape – less parking signage and P&D machines required

CO₂ Reduction – direct correlation to reductions

Extremely Low Maintenance Costs

Navigate traffic to under-utilised bays and away from congested areas

Support local businesses by increases in local parking use turnover

Increased road safety – drivers spend more time focusing on driving as opposed to concentrating on looking for available parking spaces.