

Using **Google Cloud Platform**, Smart Parking has become a data-intelligence solutions business provider running an IoT platform that supports smart city solutions.

## System overview

Smart Parking's core product is a sensor-based system called SmartPark. We offer a range of sensors that use advanced detection techniques to reliably register a vehicle's arrival and departure events, and presence within parking spaces.

This information is communicated via a gateway, called a SmartSpot, and every deployment uses a meshed cluster of these, creating entire zones of connectivity. This means that once a SmartPark system is installed, city operators have an IoT communications platform with the ability for other smart city services to be connected at a later date.

SmartCloud – powered by Google Cloud platform – is the innovative, overarching service platform that gathers data sent via SmartSpots and processes it into valuable live information, reporting, and events.

Thanks to SmartCloud, operators are able to fully integrate the SmartPark system that controls parking, guidance, payment and analytics. And, due to the open nature of the platform,

## Running on Google Cloud Platform

- Installation time and operational burdens cut by at least half
- Transition to delivering vital data-intelligence for users
- Expanding understanding of smart city ecosystem requirements
- Platform operates at metropolis scale
- Affords an unprecedented view of events and interactions taking place across a city
- Enabling extensible and open interoperability for comprehensive smart city services



can integrate and control other smart city services such as lighting, public WiFi, surveillance, air quality and more - all via the same data intelligence platform.

## Smart city movement

The natural progression of more comprehensive information services has lead Smart Parking to extend our technology and services to meet smart city solution requirements. By installing a SmartPark system, we establish a powerful common foundation that is perfectly placed to deliver many other services.

Parking is just part of a very complex ecosystem that requires sophisticated interoperability and powerful analytics. The biggest trend in the space is towards the Internet of Things (IoT) – the integration of a large number of generic and specialised devices. This has led us to shift from the idea of our devices being the centre of the universe. Instead, we put data intelligence at the core.

John Heard - Smart Parking CTO

## Running on Google Cloud Platform

Smart Parking wanted to develop a cloud-based platform that would enable cities to manage and react to information from a connected network of IoT devices. By introducing the SmartCloud platform based on an event-driven architecture, we are able to connect any device that sends or receives a sequence of data events for various types of use.

The development team at Smart Parking chose to create SmartCloud on Google Cloud Platform due to its highly integrated support for sophisticated big data management and machine learning in a completely serverless architecture. The power of GCP delivers the ability to manage internet-scale datasets with live responsiveness.

Using GCP capabilities within the SmartCloud Platform architecture has made data accessible in powerful ways that were difficult in previous systems, and these benefits are being extended to customers via the SmartCloud solution services.

This democratised approach has already realised considerable benefits. With data analysts able to rapidly create on-demand reports via Google Data Studio, we've found examples like simply changing the maximum stay time by a small amount can impact the percentage of parking utilisation. This is an example of a significant insight made possible by quick access to mountains of live and accurate data.

As a result of being able to dramatically decrease our traditional development burdens by using GCP, Smart Parking can now offer a number of exciting new capabilities, which will continually be added to and expanded on.

