Parking system in Singapore

Parking.sg is a mobile application that allows users to pay for short-term parking charges through their mobile devices. It is an app that serves as an alternative mode of payment to paper parking coupons and so can substantially reduce existing coupon and stickers-based public car park payments.

Objectives

In 2014, the government aimed to develop a digital parking mobile application to allow motorists to pay parking charges through their mobile devices.

The benefits of the app included:

- Paying for parking digitally: Motorists can use the app to key in their vehicle number, select the car park, indicate their parking duration and start parking.

- Calculating parking charges automatically: The app automatically calculates the charges that drivers have to pay based on their parking duration on a per minute basis. A refund is given if drivers choose to end their parking session earlier.

- Extending parking session remotely: The app allows drivers to track the validity of their parking session. They can extend the duration of their parking session at their own time and convenience.

Description

In 2014, a systematic installation of sensors was undertaken throughout Singapore. The data collected from this sensor network constitutes an open data platform, with the primary goal of optimising the city's transportation system, including parking.

Singapore rolled out its Parking.sg application which has produced changes in parking payment in the city. Users may enter basic information (such as vehicle number, car park code, and payment info) to pay for a public parking space on a per-minute basis. The app sends users notifications about meter status and enables people to view their full parking history. Users of all kinds, ranging from motorcyclists to operators of heavy vehicles, can use the app.

Singapore is also adding new, automated parking structures, including the Speedy Automated Parking System. This includes a car elevator, along with eight vehicle parking platforms. Users must only drive their vehicles into this Elevator Tower Parking, where the parking procedure is handled automatically. When it's time to retrieve their vehicle, they simply enter a four-code pin number into a touch screen. The elevator will then find and deliver the car to the driver, with the characteristics similar to a vending machine.

Impact & outcomes

Test trials have shown that the App has been a success: in 2018 more than two million parking sessions have been logged by about 250,000 vehicle users on local parking app Parking.sg since its launch in October 2017.

The numbers were revealed by the Ministry of National Development (MND), in a written parliamentary response in March 2018.

Another outcome from the App has been the delivery of better information to drivers about parking prices in the area. When users are given the liberty to select the duration of the session, based on a 30-minute block, the amount will automatically appear once done. With the app, comparing car park prices and other alternative carparks nearby has become much easier.

Another co-benefit is the reduction in paper consumption as paper coupons are no longer required.

Barriers / constraints and how they have been overcome

Payment mechanisms were modified as an outcome of the trials. For example, the system management team considered different options for how to implement per-minute parking. Several trials were undertaken in order to find out the most effective ones.

The most obvious method, which was simply to let users end the parking session the minute they return to their vehicle, had a major flaw—many users would rack up sky-high parking charges by forgetting to end the session before driving away. Instead, the app now requires users to input a parking duration upfront, giving a refund for any unused minutes.

Time for planning and implementation

Three years for planning and implementation 2010-2013

Rough costs and resources

The Parking.sg App was developed by the Government Technology Agency of Singapore (GovTech), using public funds in the context of funding the transition to a Smart City in accordance with the Smart Nation initiative. The overall amount of resources is about US$1.7 billion over four years, of which only a minor part has been devoted by the Parking.sg App.

Good Practice

Further information available at / from

Parking.sg is the end-product of a collaboration between Urban Redevelopment Authority (URA), Housing Development Board (HDB) and Government Technology Agency of Singapore (GovTech).

www.tech.gov.sg › products-and-services › parking-sg

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