



# Singapore Urban Mobility

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# Data Analytics for Land Transport

## SENSORS

## BENEFITS



**Farecard Data**



Understand commuter travel demand & behaviour



**Bus Data**



Identify hotspots and allocate resources to meet demands



**Taxi Data**



Better matching of passengers to taxi availability



**WiFi / Telco Data**



Manage crowd distribution in train stations using WiFi sensors

# Bus Service Enhancement Programme



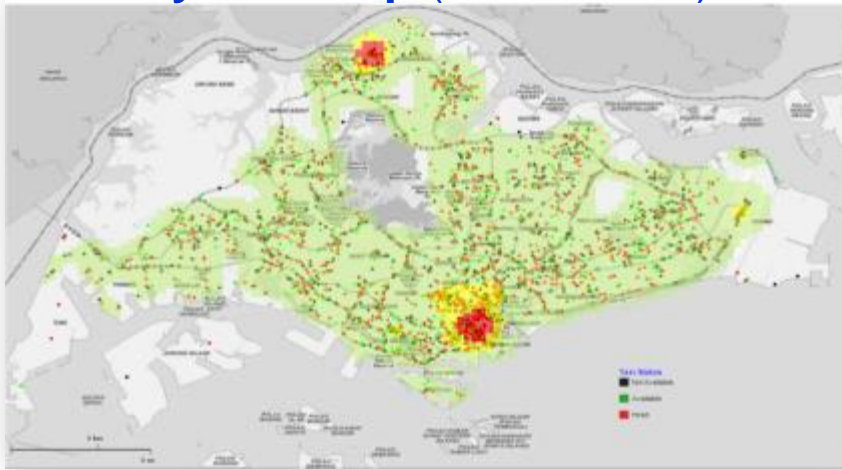
- Use of data analytics to identify routes with demand-supply mismatch
- Support resource deployment where & when they are needed most
  - City direct bus services
  - Peak period short services
- Further improvements of bus frequency and shorter waiting time



- Providing navigation aid to bus driver
- Dynamic re-routing of bus services
- Ensuring headway adherence

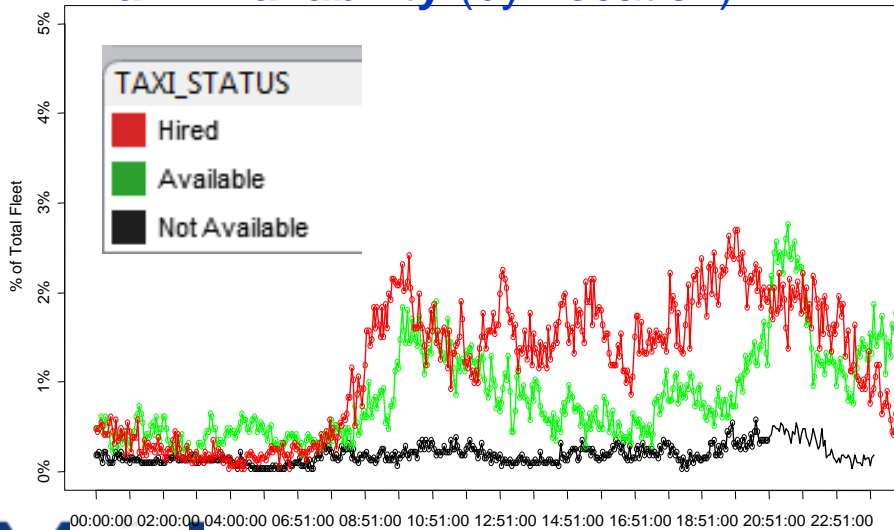
# Using Taxi Location Data to Improve Demand Matching

## Density Heatmap (Island-Wide)



- Plans to improve matching of taxi availability to passengers:
  - Informing taxi drivers where passengers are
  - Informing passengers of nearby taxi stands with available taxis
- Regulating fleet operators' performance to ensure operational efficiency

## Taxi Availability (by Location)



# Shaping Commuter Behaviour Through WiFi@MRT



MRT Station Crowdedness



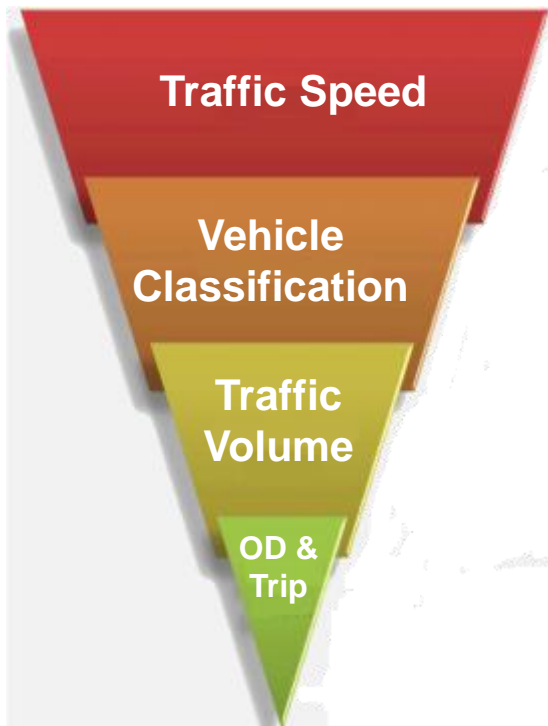
MRT Platform Heatmap

- Install WiFi at train platforms to distribute passenger crowds evenly
- Enable targeted notifications and messages to passengers with WiFi connections
- Complement WiFi data with Telco data to provide lifestyle content to enhance travel experience e.g. nearest Starbucks café, nearest ATM, nearest taxi stand

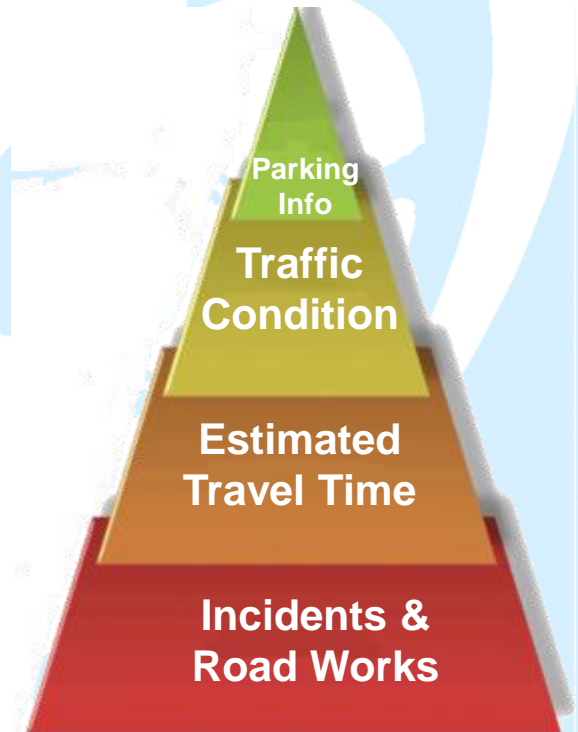
# Managing Traffic Congestion Through Electronic Road Pricing (ERP II)

First City in the World: Launched in Sep 1998

## Traffic Info Collection



## Traffic Info Dissemination



Each vehicle becomes a sensor on the road

- Expand data collection coverage
- Enhance traffic data quality

# MyTransport.SG - Your Personal Travel Companion



- Provide a one-stop mobile service with real-time land transport info
- Share land transport data with the public
- Engage citizens and communities to co-develop and co-create innovative transport solutions



Voted Most Popular Government Mobile App (2013)



جائزة أفضل خدمة حكومية عبر الهاتف المحمول  
BEST M-GOVERNMENT SERVICE AWARD



<p><b>For Commuters</b></p>	<p><b>Provides inter-modal transport information</b></p> <ul style="list-style-type: none"> <li>• Real time bus arrival</li> <li>• Schedule &amp; routes</li> <li>• Transport commute guide</li> </ul>
<p><b>For Motorists</b></p>	<p><b>Provides real-time traffic advisory</b></p> <ul style="list-style-type: none"> <li>• Traffic cameras</li> <li>• Traffic speed &amp; condition</li> <li>• Road pricing</li> </ul>
<p><b>For Cyclists</b></p>	<p><b>Promotes cycling as mode of transport</b></p> <ul style="list-style-type: none"> <li>• Island-wide cycling paths</li> <li>• Links to park connectors for recreational cycling</li> </ul>