



The 16th ITS Asia-Pacific Forum FUKUOKA 2018
Everyone's Mobility by ITS

Transformative ITS In Malaysia's Transport Sector

Executive Session
8 May 2018

Datuk Ir Dr. LEONG Siew Mun
ITS Malaysia



Size: 330,000 sq.km Population : 32 million

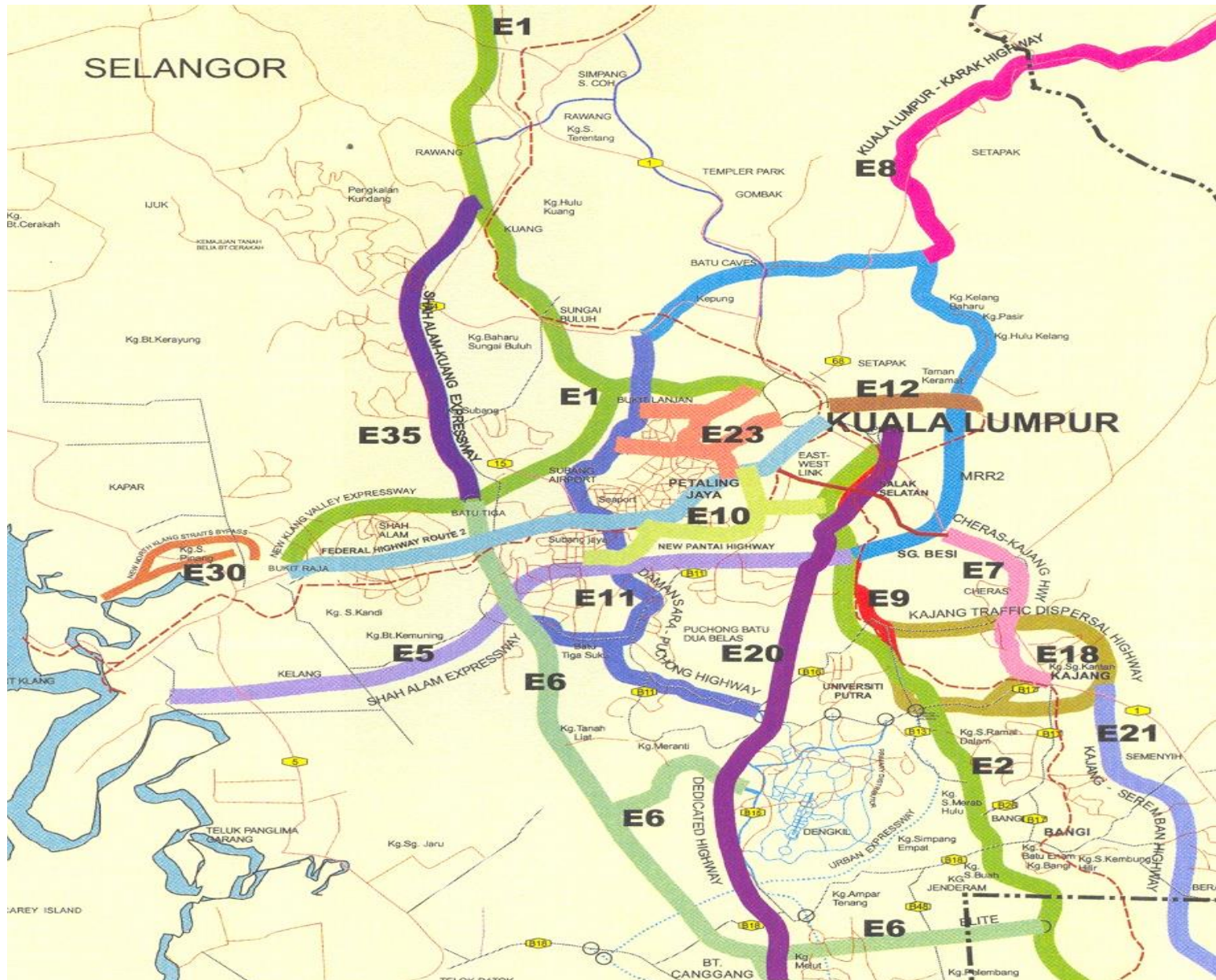
•Malaysia has 19 urban areas with more than 100,000 people: one urban area of more than 2 million people (Kuala Lumpur), two between 1 million and 2 million people (George Town and Johor Bahru), five of 500,000 to 1 million people, and 11 urban areas of between 100,000 and 500,000 people.

NETWORK OF MAJOR INTER URBAN HIGHWAYS IN PENINSULAR MALAYSIA



30 Expressways ~ 2000 kms

NETWORK OF URBAN HIGHWAYS IN KLANG VALLEY, PENINSULAR MALAYSIA



Major Challenges in Urban Cities of Malaysia

- **Congestion**
 - Car driven society with double digit growth in vehicular ownership
 - Ring and radial configuration of urban cities lead to heavy influx of corridor traffic from/to city centres
 - Resource constraints in managing, controlling and enforcing traffic flows in the city.
- **Low Public Transport Modal Split**
 - Low public transport patronage Vs unreliable public transport services
 - No urban rail services but only road based

National Transformation Programmes

- Enhancement of road network infrastructure
- Provision of rail network as backbone of public transport
- Improvement of road based urban public transport operations
- Adoption of advanced ICT technologies for an integrated, seamless and connected transport system

Rail Network Development

- Intra-Urban Rail Network : LRT/MRT/Monorail
- Inter-urban Rail Network: MRT/Electric Commuter Trains
- Interstate Rail Network: Electric Train Services/ ECRL
- Cross Border Rail Network: HSR



The ITS Deployment Focus

- **Tolled Highway Operations**

- Toll collection system
- Incident management

- **Urban Road Network Operations**

- Traffic control system
- Traffic information system
- Traffic incident management

- **Public Transport Operations**

- Public transport information system



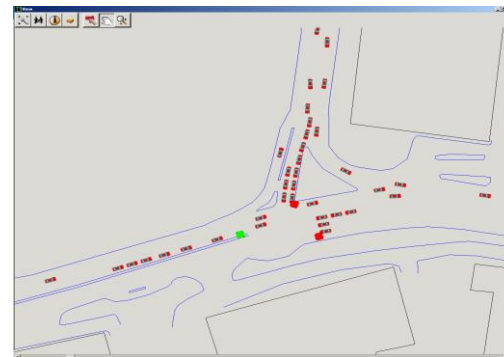
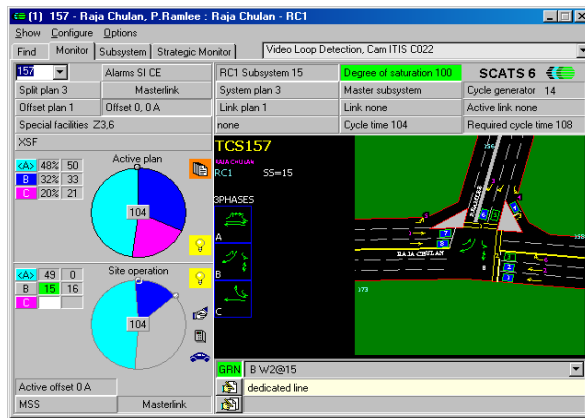
Current ITS Deployments in Malaysia

- Transport Management Centres
 - Integrated Transport Information Centre – City Hall Kuala Lumpur
 - Traffic Control Management Centre – Highway Authority Malaysia
 - Public Transport Performance Monitoring Hub – Land Transport Commission
 - Traffic Control and surveillance System Centres – Toll Concessionaries



Current ITS Deployments in Malaysia

- Dynamic Traffic Signal Control System



- Electronic Toll Collection Systems



Current ITS Deployments in Malaysia

- Automated Awareness Safety Systems

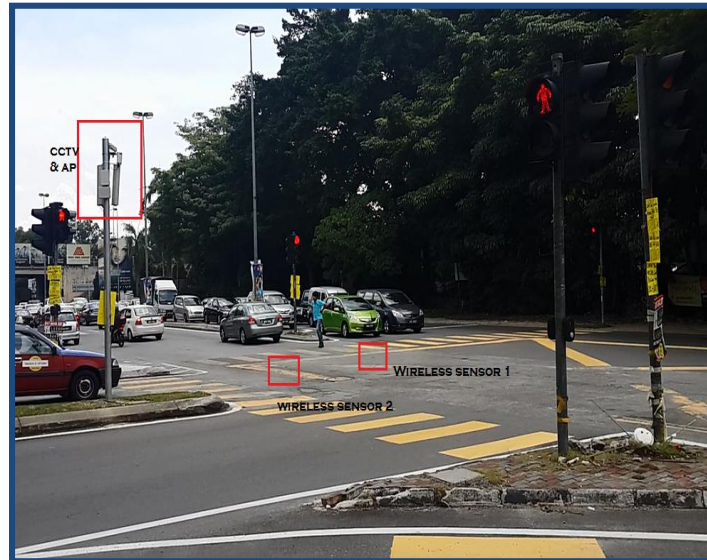


Enforcement Systems



Red Light Enforcement, Speed enforcement, Automatic Number Plate Recognition

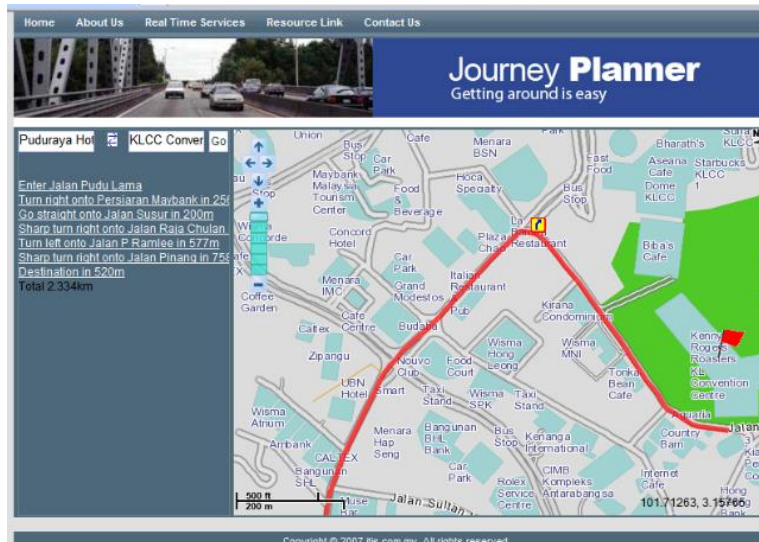
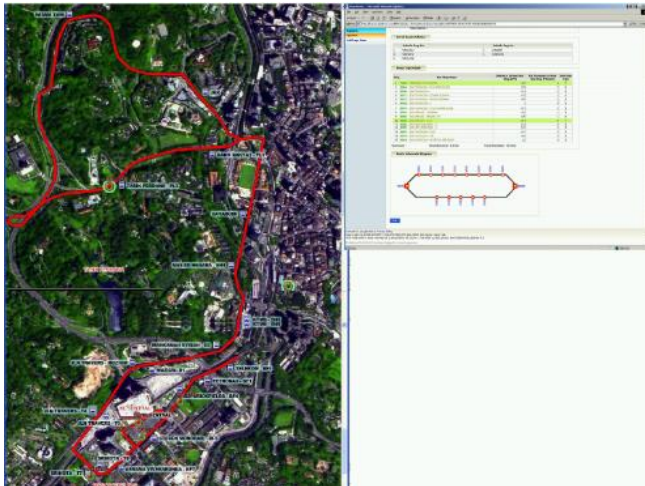
Yellow Box Alert System



Current ITS Deployments in Malaysia

Traveller Information Systems

Route guidance, traffic and travel time advisory services, congestion map



Current ITS Deployments in Malaysia

- Outdoor Parking Guidance Systems



- Indoor Parking Management and Monitoring System
- Off-street Parking Management System

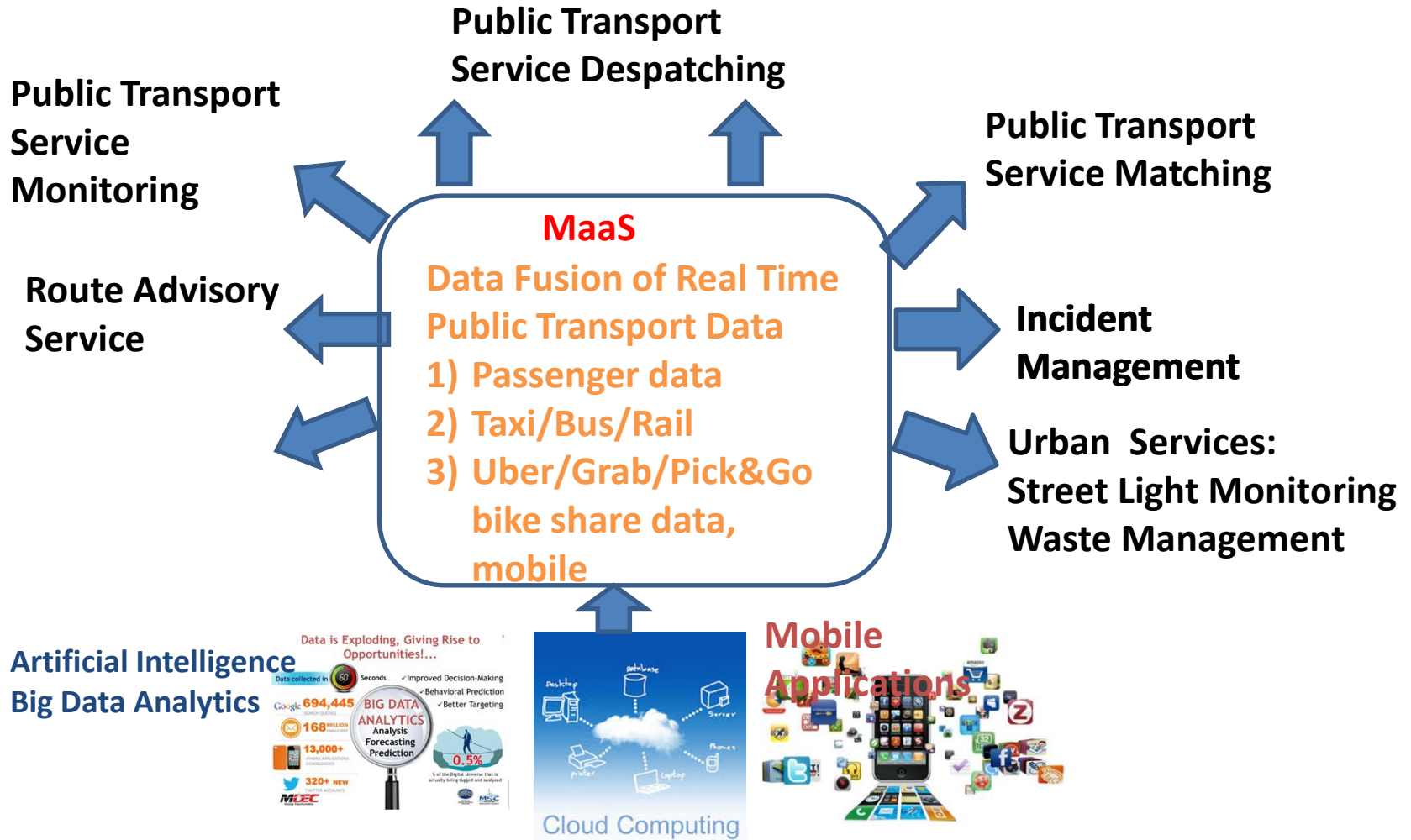
The Emerging Transformative ITS

- Immense Development in transport sector
 - Rail transport
 - Road Transport
 - E- Hailing Ride Services
- New Technological Breakthrough & Enhancements for ITS
 - Cloud Computing
 - Big Data Analytics
 - Mobile Apps
- Growing Emphasis on Digital Economy for SMEs
 - Digital Free Trade Zone (DFTZ)
- Policy for a Cashless Society
 - Multi Card Payment for all transport services

Mobility as A Service

- Integrating Platform for All Public Transport Modes
 - Rail
 - Bus
 - Taxi
 - Hailing services (Uber/Grab/PicknGo)
 - Bike share

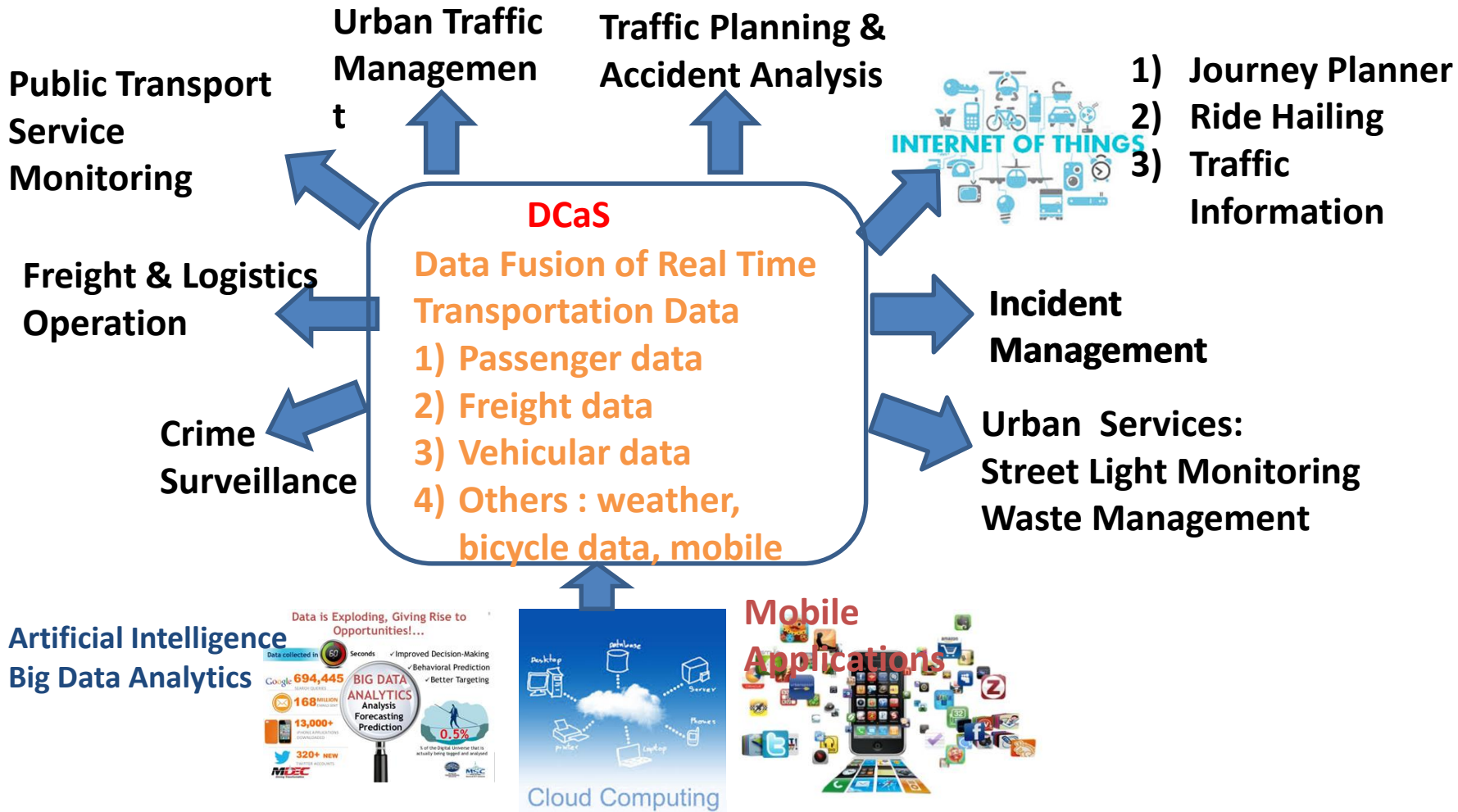
Operating Framework for Mobility as A Service (MaaS)



Data Centre As A Service

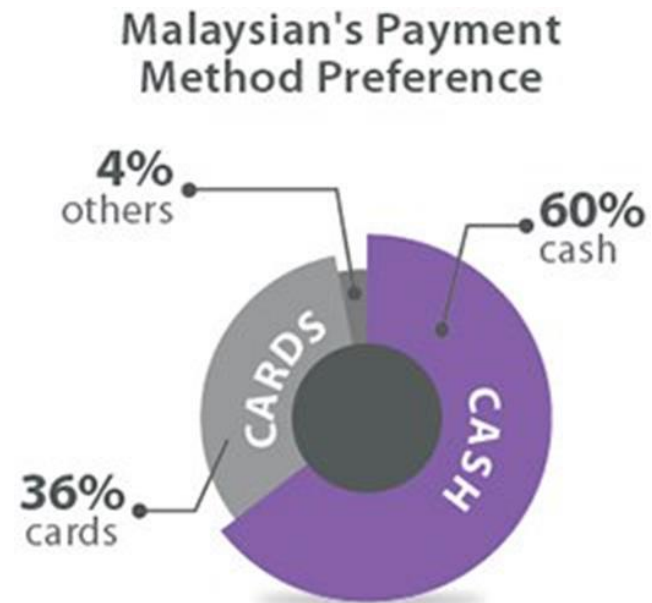
- Integrating Existing ITS Operation Centres
- Integrating and data fusion of all transportation information
- Big data Analytics

Operating Framework of Data Centre as A Service (DCaaS)



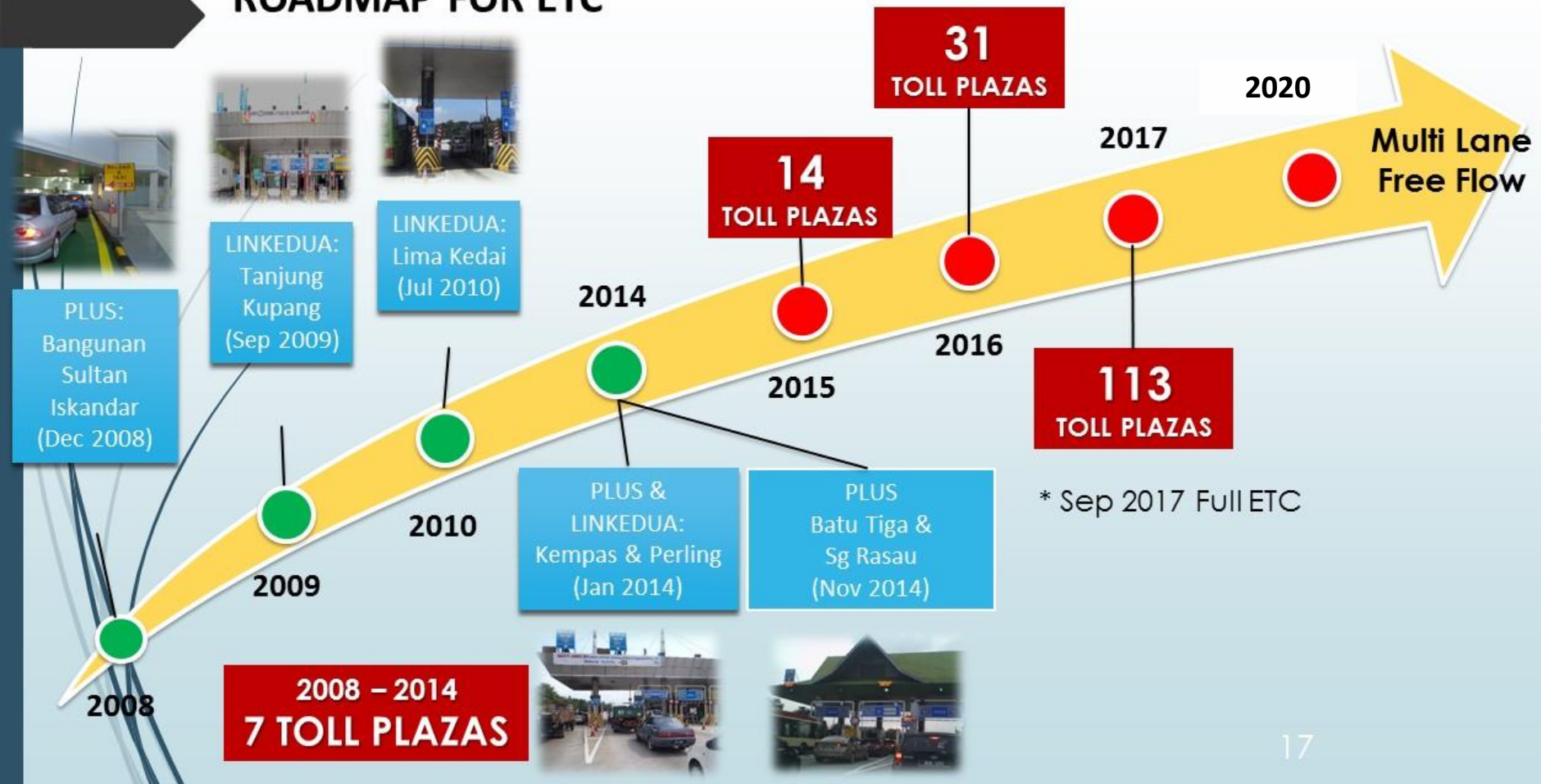
Current Payment Methods on Transport System

- 8 interstate toll expressway within Peninsula Malaysia
- 22 intra urban tolled highway within Klang Valley
- 6 different Rail systems
- Cash + card payment systems for hundred of bus and taxis companies
- Payment methods
 - Cash collection
 - Pre-paid card payment
 - ETC



ELECTRONIC TOLL COLLECTION (ETC)

ROADMAP FOR ETC



Integrated Payment for Transport System

- Integrated Payment System Opportunities for
 - Electronic Toll Payment
 - Multi-lane Free Flow
 - Public Transport (Rail+Bus+taxi) Fare payment

THANK YOU



ITIS Integrate
Transportation
Information
System

The Clear Way To Go