



Mobile360
Digital Societies

APAC IoT INNOVATION SUMMIT

Kuala Lumpur 24-26 Sept 2019



#MOBILE360

Connectivity Sponsor: **maxis**



Kuala Lumpur 24-26 Sept 2019

Session 3: IoT Capability Beyond Connectivity

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Session 3: **STARS - Smart Traffic Analytics & Recognition Systems**



Azrin Aris

Director, Emerging Solutions &
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Dr. Megat Zuhairy Megat Tajuddin

Head of Competency, Innovation and
Performance Division
Public Works Department Malaysia

IoT Capability Beyond Connectivity



Azrin Bin Aris
Director, Emerging Solutions & Innovation
TM ONE

Operator Innovator of the Year Award
Leader of the Year Award



TM IS NOT JUST ABOUT CONNECTIVITY..



TM is an enabler beyond connectivity



INTRODUCING



Ir. Dr. Megat Zuhairy
Head of Competency, Innovation and Performance
Public Works Department Malaysia (PWD)



Objective

Chairman of Industrial Revolution 4.0 (IR4.0) Task Force; responsible in establishing strategies for the organization in facing the challenges and opportunities of IR4.0 particularly in the construction industry. Internet of Things and Big Data are the two key areas that the Tasks Force is focusing on.

We're not
scientists,
but we totally
got space.

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DESIGN THINKING WORKSHOPS

Sharing pain points & challenges



With the challenges using the conventional way, it is hard to maintain the operating cost at optimum level while growing the services. Each of the services expansion will require to train people to monitor and manning the services.

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OUR METHODOLOGY

Technology should be the last, not the first consideration. Citizen is the first consideration.

WHAT
PROBLEMS
ARE WE
SOLVING?

WHOSE
PERSONA
ARE WE
ADDRESSING?

HOW CAN
THE
SOLUTION BE
SUSTAINED?

needs of people

WHO ARE THE PLAYERS WITHIN THE **EXISTING ECOSYSTEM** THAT WE CAN LEVERAGE ON?

empower existing players to ensure a healthy **ecosystem**

WHAT **TECHNOLOGY** CAN ADDRESS ALL OF THE ABOVE CONSIDERATIONS?

the technology choice should enable the solution to **intuitively adapt and respond** to the problem

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INTRODUCING TM ONE Smart Traffic Lights Solutions

Smart Traffic Lights Solutions is a service that **enhances existing traffic control system** by providing central monitoring, data visualization & analytic through a **single platform**

TM ONE Smart Traffic Lights Solutions

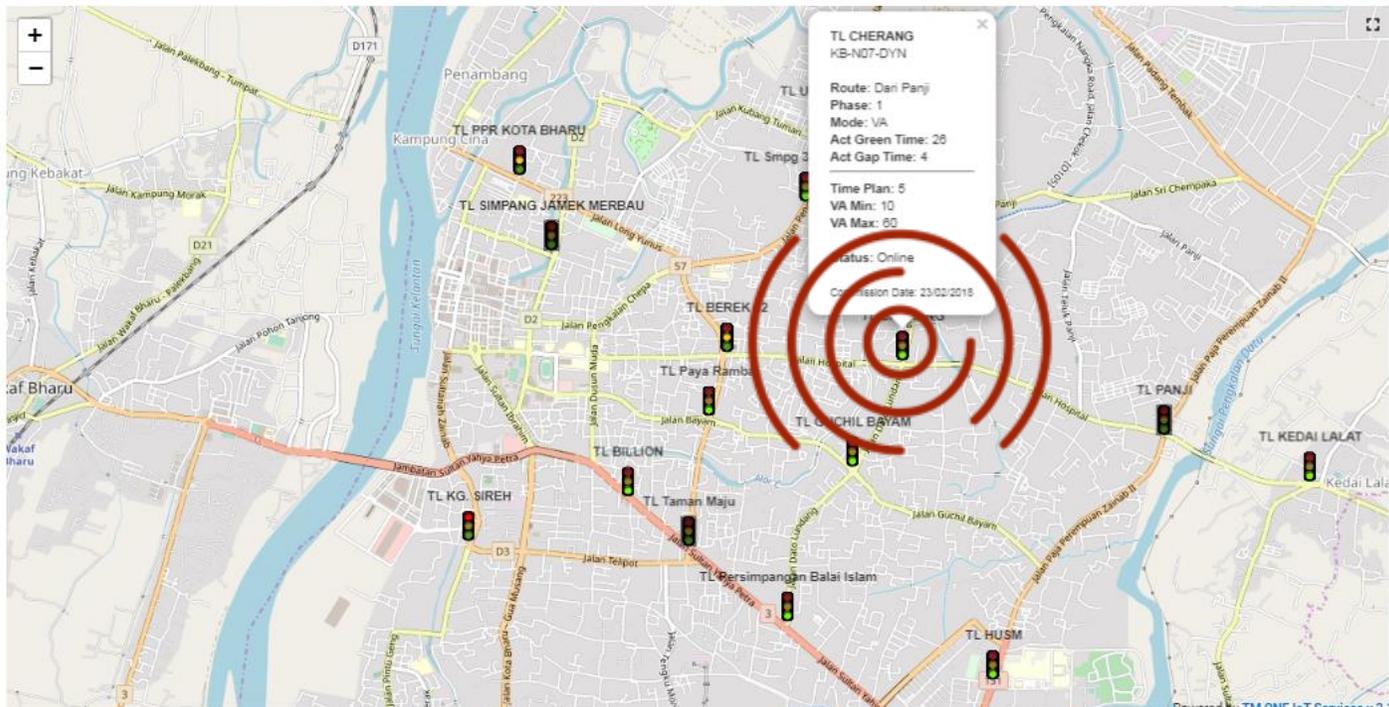
Overall Map View indicates Location of Traffic Lights and Real Time Status
Alarm trigger via Telegram to traffic light provider and Local Councils




**CKE
KELANTAN**

**Smart Traffic Lights
Solutions**

STARS TCUs	↑	Description
KB-D02-DYN		TL PPR KOTA BHARU
KB-D108-DYN		TL GUCHIL BAYAM
KB-F01-DYN		TL PANJI
KB-F01-PPK		TL Taman Maju
KB-F02-PPK		TL HUSM
KB-F07-DYN		TL BILLION
KB-F14-DYN		TL SIMPANG JAMEK MERBAU
KB-F18-DYN		TL Limbat
KB-F19-DYN		TL Peringat
KB-F21-DYN		TL Pasir Tumbuh
KB-F24-DYN		TL Persimpangan Balai Islam
KB-F57-DYN		TL UDA MURNI
KB-FT34-DYN		TL JAMBATAN KG PEROL



**TL CHERANG
KB-N07-DYN**

Route: Dari Panji
Phase: 1
Mode: VA
Act Green Time: 28
Act Gap Time: 4

Time Plan: 5
VA Min: 10
VA Max: 80

Status: Online
Commission Date: 23/02/2018

4:16 LTE

STARS@CKE-Kelantan
6 subscribers

2 STARS_Central, 6:16 PM

Today

STARS@CKE-Kelantan
[NEW ALARM] @ PM-F03-DYN
Type : AMBER ALERT
Time : 19/9/2019 - 1:46:18
Detail : System is running on AMBER

Location : [TL Pasir Mas Bypass](#)
1 STARS_Central, 1:46 AM

STARS@CKE-Kelantan
[RESOLVED] @ PM-F03-DYN
Type : AMBER ALERT
Time : 19/9/2019 - 10:6:23
Detail : System is back to normal
Resolve Time : 8h 20m 5s

Location : [TL Pasir Mas Bypass](#)
2 STARS_Central, 10:06 AM

STARS@CKE-Kelantan
[NEW ALARM] @ KB-N006-DYN
Type : MP ALERT
Time : 19/9/2019 - 15:49:38
Detail : Phase 1 is running MP
Route : undefined

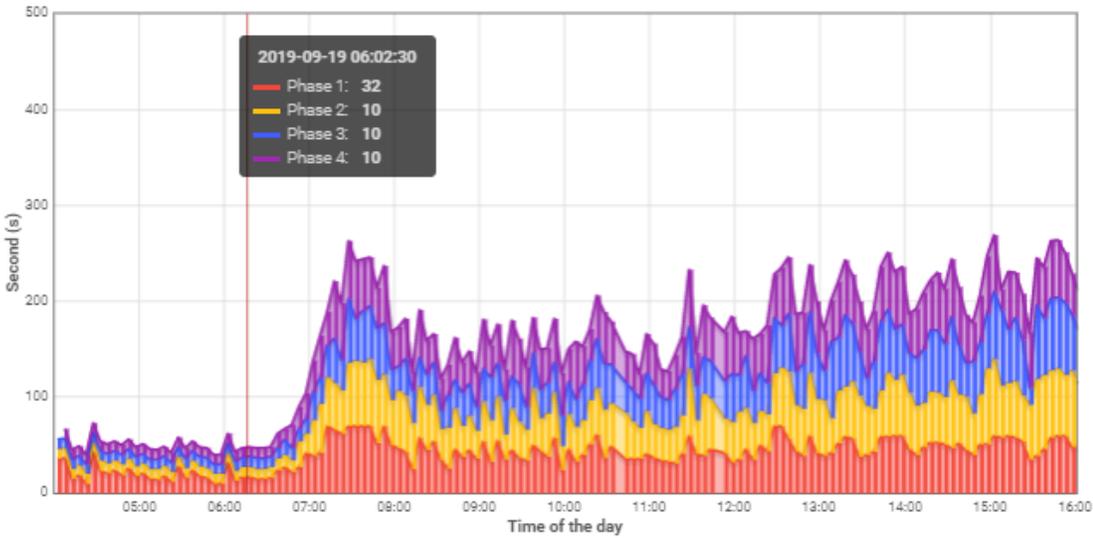
Location : [TL BINJAI](#)
1 STARS_Central, 3:49 PM

Broadcast

Smart Traffic Lights Solutions Dashboard with real time data analytic

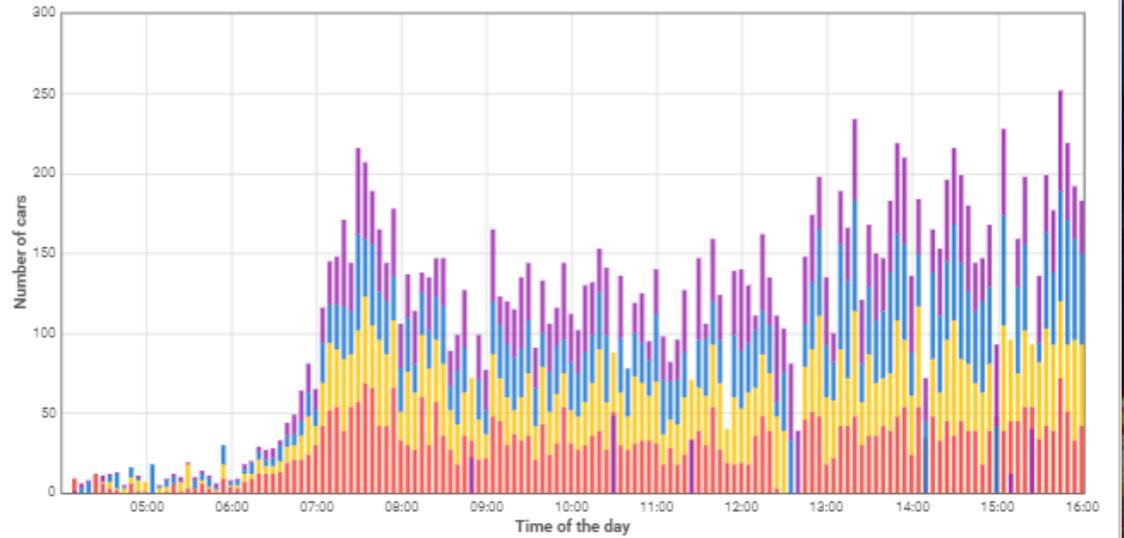


Total Green Time - Current Junction



	min	max	avg	total
Phase 1	10	70	41	5863
Phase 2	10	80	41.48	5766
Phase 3	10	80	36.67	5207
Phase 4	10	60	38.44	5382
Phase 5				
Phase 6				
Phase 7				
Phase 8				

Total Car Count - Current Junction

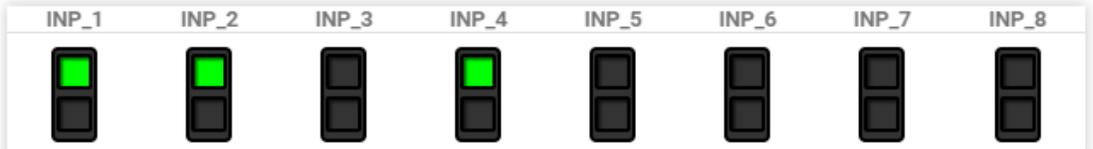


	min	max	avg	total
Phase 1	0	72	30.41	4227
Phase 2	0	72	29.24	4123
Phase 3	0	78	29.59	3935
Phase 4	0	63	27.14	3881
Phase 5				
Phase 6				
Phase 7				
Phase 8				

KB-N07-DYN



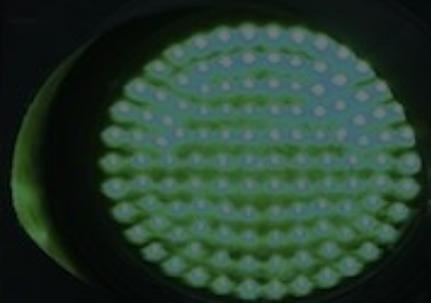
KB-N07-DYN



ACCOLADES

30th International Invention, Innovation & Technology Exhibition (ITEX'19), Malaysia (2 – 4 May 2019)
Award Category: Information and Communications Technology, Telecommunications, Audio Visual

Hari Inovasi JKR Malaysia (2 Oct 2018)
Award Category: Kumpulan Inovatif & Kreatif (KIK)



TCU – Traffic Controller Unit



PAHANG RAHISHAM ABDUL RAHMAN, NURUL NADIAH ABDUL HALIM, DANIAL MOHAMED

GROUNDING CRYSTAL GOLD

ITEX'19

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INFORMATION AND COMMUNICATIONS TECHNOLOGY, TELECOMMUNICATIONS, AUDIO VISUAL			
ORGANISATION	INVENTORS	INVENTION	AWARD
JABATAN KERJA RAYA MALAYSIA	MOHD RUZUAN BIN ARIFFIN, AZIMI BIN CHE SOH, AHMAD NASRUDDIN BIN MOHAMED, ZAIHAN BIN AWANG, NIK LUQMAN NOORAIMAN BIN MOHSIN, WAN AZIZ BIN WAN AHMAD, MOHD NAZMI BIN HUSSIN, MOHD FAIZOL BIN GHAZALI	SMART TRAFFIC ANALYTICS & RECOGNITION SYSTEM (STARS)	GOLD



TM ONE & JKR TOGETHER... WHAT'S NEXT?



**Smart Building
Management Solutions**



**Smart Street Lights
Solutions**



Many more...

A long-exposure photograph of a city at night, showing a dense grid of buildings and streets. The image is dominated by vibrant, multi-colored light trails in shades of blue, cyan, magenta, and white, which create a sense of motion and energy. A semi-transparent white horizontal bar is centered across the image, containing the text 'THANK YOU' in a bold, black, sans-serif font.

THANK YOU