Global Future Cities Programme

SIMMS for Optimising the Transport Network in Iskandar Malaysia

25 February 2021
1.00pm – 1.30pm

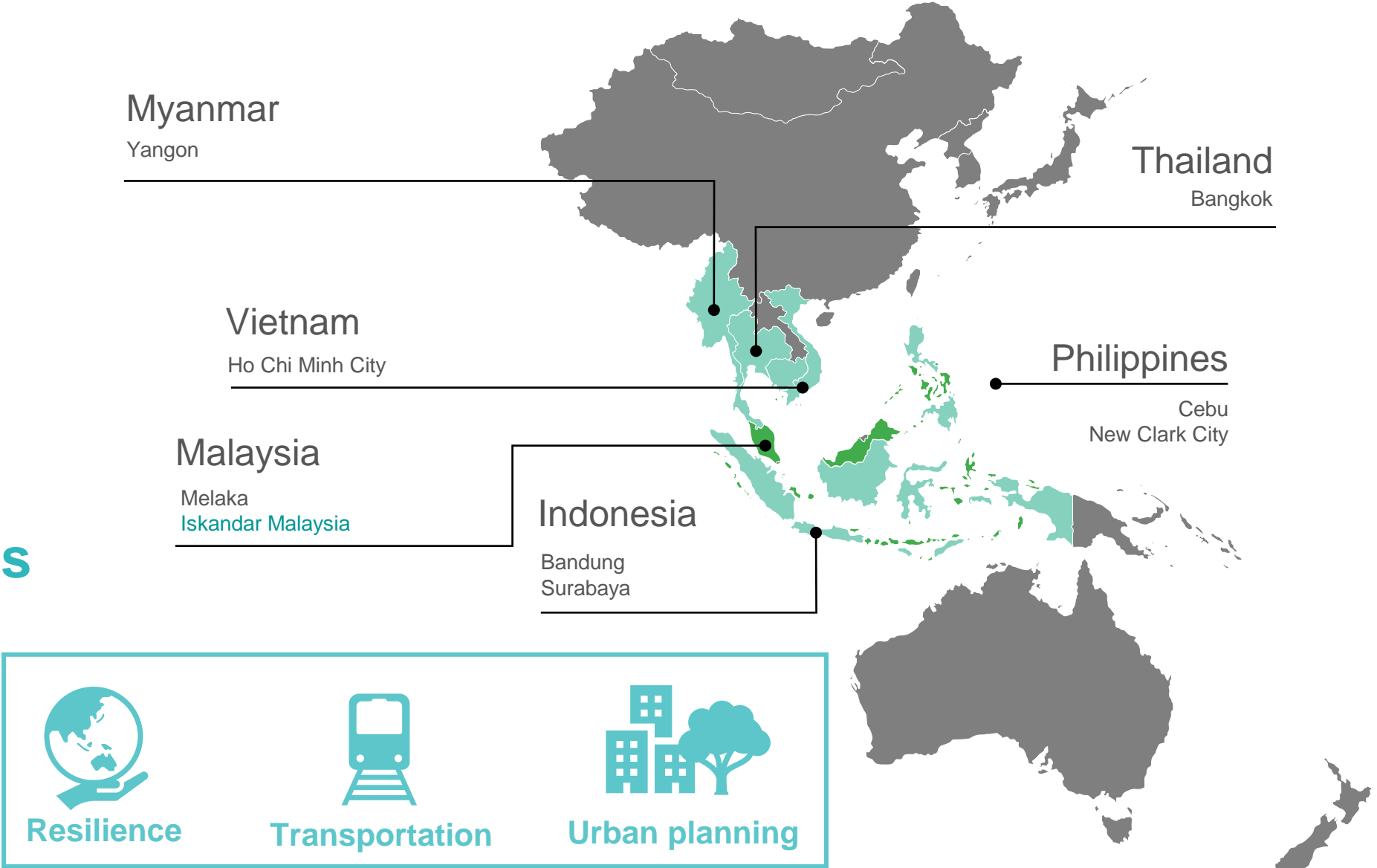# Global Future Cities Programme

13 projects

9 cities

6 countries

3 years

Myanmar
Yangon

Vietnam
Ho Chi Minh City

Malaysia
Melaka
Iskandar Malaysia

Indonesia
Bandung
Surabaya

Thailand
Bangkok

Philippines
Cebu
New Clark City

Resilience   Transportation   Urban planning

Introduction to the Speaker

Sujatra Jayaraj CEng MIMechE

- +14 years in EPCM industry globally
- Airports, Rail and LNG
- PM, Engineering, Project Controls

- Mott MacDonald
- Team Lead - GFCP Iskandar Malaysia SIMMS
- Developing an Implementation Strategy for a Smart Integrated Mobility Management System (SIMMS)

M M

MOTT MACDONALD

Global Future Cities
Programme

Iskandar Malaysia
Smart Integrated Mobility Management System (SIMMS)

25 February 2021

Agenda

1. Iskandar Malaysia

2. Smart Integrated Mobility Management System

3. Challenges and Opportunities

4. Q&A

Learning Outcomes

By the end of this session, you should be able to:

1. Gain an understanding of what SIMMS is; and

2. Gain an understanding of how SIMMS will enable Evidence-Based Urban and Transport Planning.

Iskandar Malaysia: Overview

- An economic development corridor in the Southern Johor, Malaysia.
- Established in 2006, under IRDA
- Encompasses an area of 2,217 sqkm, which is 3 times bigger than Singapore.
- Encompasses 5 local planning authorities

Iskandar Malaysia: A Case for Change

- Economic growth
- Population
- Transboundary economic activity (Singapore)
- Urbanisation (95% by 2040)

- Significant mobility and transportation challenges to come.
- Need a solution to support sustainable growth to avoid negative socio-economic and environmental impacts.

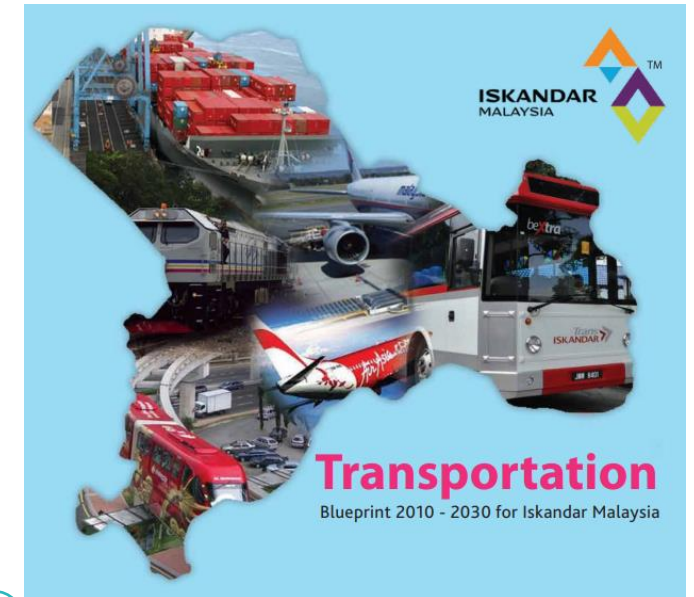# Iskandar Malaysia : Case for Change

Labour force expected to grow from **1.5 mil to 1.8 mil by 2030**.*

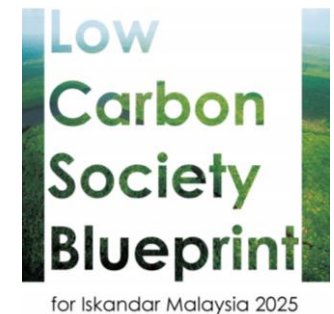Public transport modal split expected to decline from **15% to 10% by 2030**.*

Auto-ownership expected to grow from **500 cars/1000 population to >800/1000 population by 2025**.*

Volume on major transportation corridors at IM will be **3x more congested, at 1.5 capacity**.*

15.5 million tonnes of GHG emitted in in 2015 rising **to 45 million tonnes** in 2025, interventions will reduce this by **57% to 19 million tonnes**.**

SMARTCITY
ISKANDAR MALAYSIA
[Edition 2.1]

The 6 Dimensions for Smart City Iskandar Malaysia

SMART ECONOMY
SMART MOBILITY
SMART GOVERNANCE
SMART PEOPLE
SMART ENVIRONMENT
SMART LIVING

SMART MOBILITY
1 Efficient Road Accessibility
2 Non-Motorised Accessibility
3 Availability of ICT Infrastructure
4 Efficient Public Transportation

COMPREHENSIVE DEVELOPMENT PLAN ii
Iskandar Malaysia
2014 - 2025

Transportation
Blueprint 2010 - 2030 for Iskandar Malaysia

Low Carbon Society Blueprint
for Iskandar Malaysia 2025

*Transportation Blueprint 2010-2030 for Iskandar Malaysia
**Low Carbon Society Blueprint for Iskandar Malaysia 2025
***Smart City Iskandar Malaysia

Two Mobility Focused Interventions:

1. **Provide an Implementation Strategy for a Smart Integrated Mobility Management System (SIMMS)**

   - Optimise road network.

   - Minimise traffic congestion, reduce GHG, air & noise pollution.

   - Attain efficiency gains for travel time and cost, mobility management.

   - Allow data collection for Evidence based Urban and Transport Planning (E-bUTP).

2. **Create Enabling Conditions for Data Utilisation and Management for Evidence-based Urban and Transport Planning (E-bUTP)**

   - Integrate and utilise data for sustainable planning.

   - Improved understanding of travel needs of GESI groups.

   - Better understanding of how to promote modal shift to public transport.

   - Efficiency gains in planning processes.

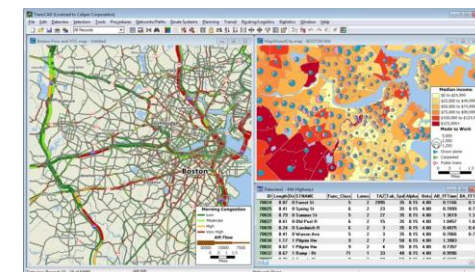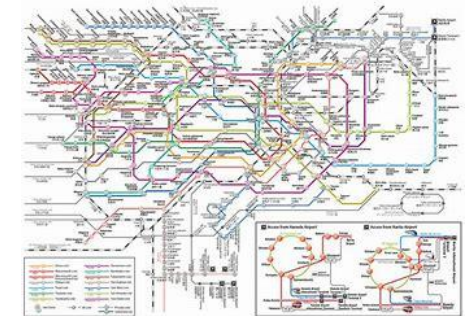   - Data sharing across different sectors & authorities.

What is SIMMS?

Smart Integrated Mobility Management System (SIMMS)

- **Smart**
- **Integrated**
- **Mobility Management**

Bringing it all together as SIMMS:
- SIMMS is a system that uses data (via smart technologies) to allow for management of transportation networks at Iskandar Malaysia.
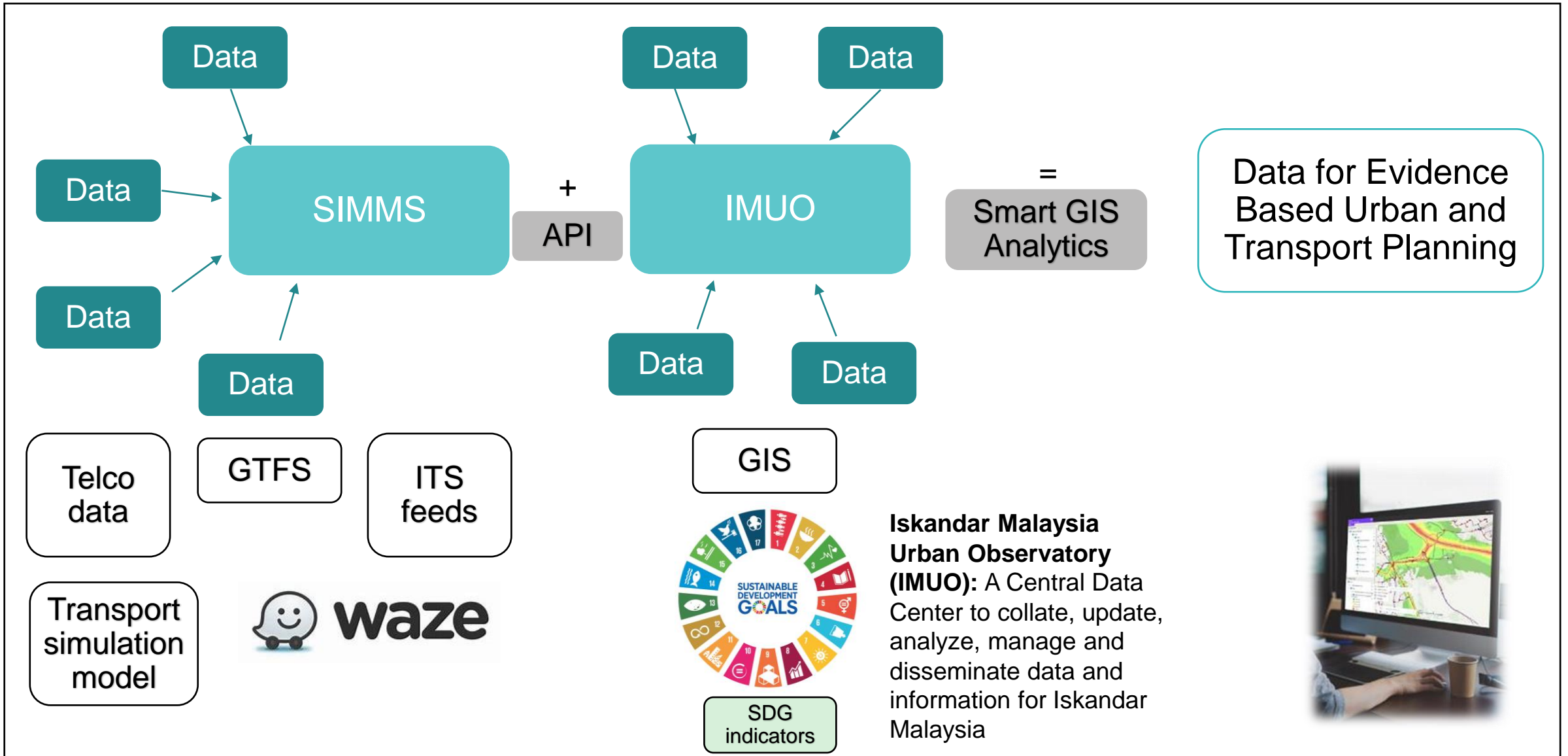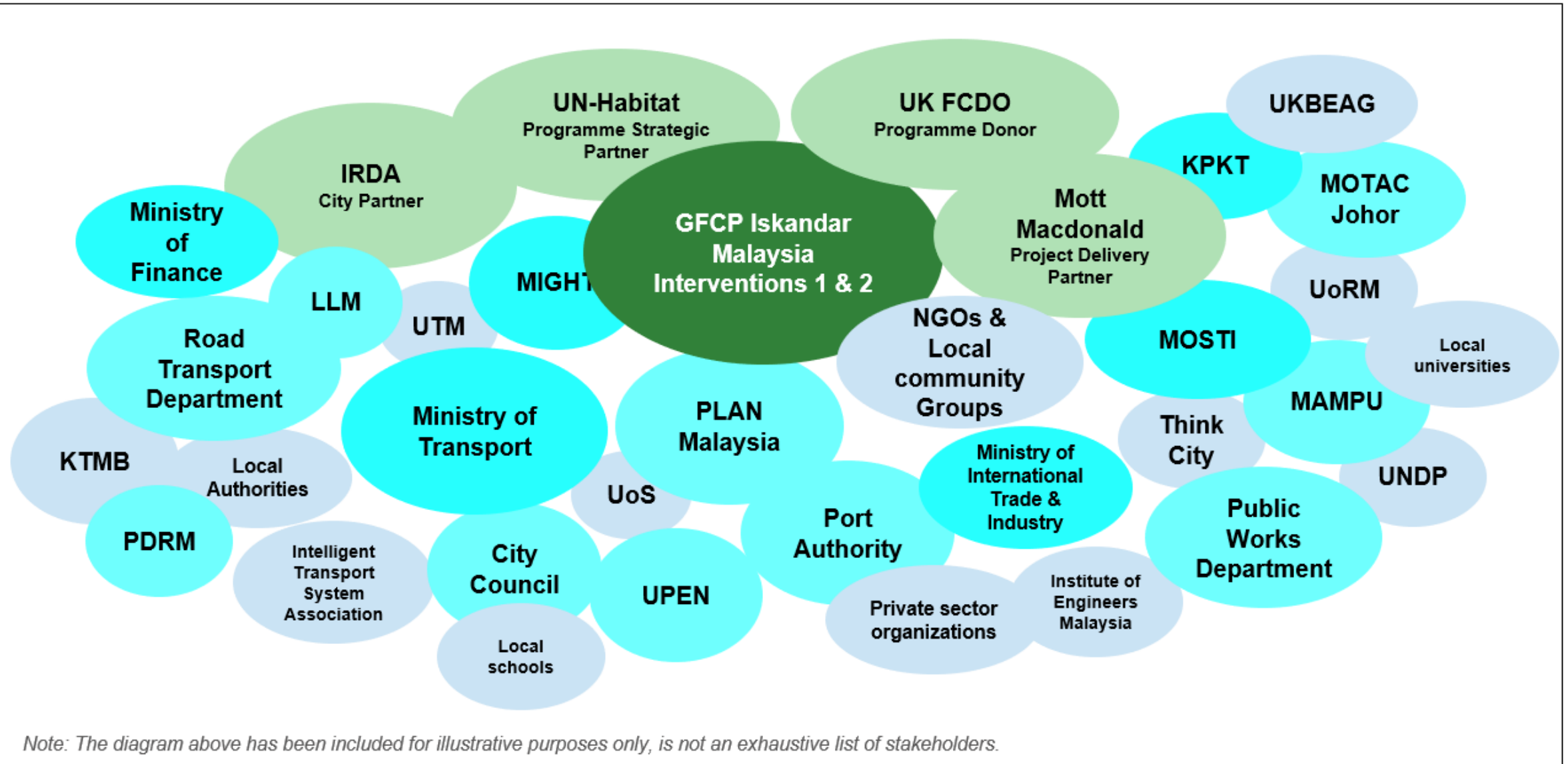
What is SIMMS?

Smart Integrated Mobility Management System (SIMMS)

But there is more…

SIMMS + API + IMUO = Smart GIS Analytics → Data for Evidence Based Urban and Transport Planning

Telco data, GTFS, ITS feeds, Transport simulation model, Waze → SIMMS

GIS, SDG indicators → IMUO

Iskandar Malaysia Urban Observatory (IMUO): A Central Data Center to collate, update, analyze, manage and disseminate data and information for Iskandar Malaysia

Who has this data?

Note: The diagram above has been included for illustrative purposes only, is not an exhaustive list of stakeholders.

Incorporating GESI (Gender Equality & Social Inclusion)

- **Gender Equality** means the social differences between women and men and boys and girls. Not sex or the male-female biological difference.

- **Social Inclusion** involves being mindful and including those groups that are left behind – marginalized.

- Groups that have been identified as marginalized in Transport Planning and Design include:

  1. Women
  2. Children
  3. Youth
  4. The Elderly
  5. The Indigenous
  6. The Urban Poor
  7. The Rural Poor
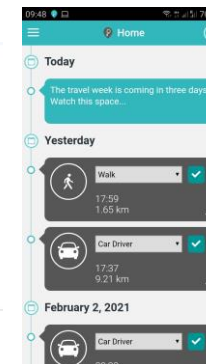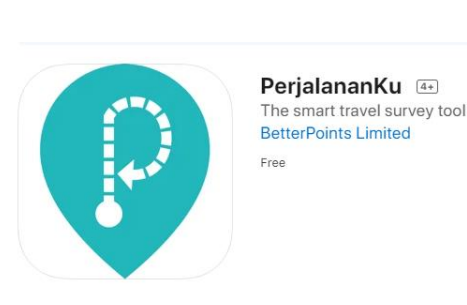 8. Persons with Disabilities
  9. Migrant Workers

Challenges & Opportunities

Challenges

- Data
- Covid-19
- GESI – Gender equality & social inclusion
- Infrastructure readiness
- Multiple stakeholders

Opportunities

- Implement best practices (UK GDS, UK TAG)
- GIS adoption
- Novel approach to data collection
- Open data

Recap of learning outcomes:

1. Gain an understanding of what SIMMS is.

2. Gain an understanding of how SIMMS enables Evidence-Based Urban and Transport Planning.

Additional Resources

www.gtfs.org - GTFS data specification

www.gov.uk/service-toolkit - UK GDS technology & digital standards

perjalananku.app – PerjalananKu mobile app

www.gov.uk/guidance/transport-analysis-guidance-tag - UKTAG
(Transport Analysis Guidance)

www.globalfuturecities.org – Global Future Cities Programme info