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FCDO GLOBAL FUTURE CITIES PROGRAMME ISKANDAR MALAYSIA



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Senior Vice President, Resilient Environment 14 December 2021





ABOUT ISKANDAR MALAYSIA

- Established in 2006. Iskandar Malaysia (IM) is an *Economic Development Corridor* booming in Southern Johor, Malaysia.
- Strategically located at the crossroad of East-West Trade lanes, centrally located in the heart of East Asia.
- Current development encompasses an area of 2,217 sqkm. In 2019, the federal government has extended the *development area* to *4,749 sqkm*.
- Iskandar Malaysia has been recognized by CDP Global Ranking as *Cities A-List in 2019 & 2020* due to our *leadership & transparency on climate action* especially in our effort to reduce Greenhouse gas (GHG) emissions and build resilience against the impacts of climate change.
- Our Vision is: To be a strong sustainable Metropolis of International Standing.





DELIVERING VALUE THROUGH GOVERNANCE

IRDA, a Federal Statutory body, was established through an Act of Parliament to provide *direction, policies, and strategies* in relation to the development of Iskandar Malaysia







DEVELOPING A SUSTAINABLE ISKANDAR MALAYSIA





Government funding on hard & soft infrastructure Government support on ease of doing business



A HOLISTIC DEVELOPMENT PLAN

Being one of the largest single development ever in southeast asia, Iskandar Malaysia's integrated development is guided by *Comprehensive Development Plan (CDP)*.

We adopt the elements from the *Circle of Sustaina bility* which is a holistic and resilient ecosystem anchored by core elements comprising of *Wealth Generation, Wealth Sharing & Inclusiveness, and Resource Optimization & Low carbon* in a continuous cycle.



Formulates the key directions to strengthen the physical, economic & social development of IM

CIRCLE OF SUSTAINABILITY



TARGETS BY 2025







Avg. household income **RM10,000 pa**



Iskandar Malaysia Holistic Eco-system

Promote economy that improve social well being and at the same time reduce impact to environment reduction in GHG Emissions Intensity

GFCP ISKANDAR MALAYSIA : **INTRODUCTION**





ISKANDAR REGIONAL DEVELOPMENT AUTHORITY

MALAYSIA

SINCE 2006

- 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.* BAU
- 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 2015 rising to 45 million tonnes in 2025, interventions will reduce this by 57% to 19 million tonnes.** Major contributors are industry, transportation and commercial.

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

iskandarmalaysia.com.my



GFCP ISKANDAR MALAYSIA : 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 Evidencebased 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 the modal shift to public transport.
 - Efficiency gains in planning processes.
 - Data sharing across different sectors & authorities.





GFCP ISKANDAR MALAYSIA : MOBILITY FOCUSED INTERVENTIONS

Contributor in combating climate change (SDG13)

The objectives and outcomes are aligned to SDGs

reducing inequalities (SDG 10)

making Iskandar Malaysia a more sustainable and resilient region (SDG 11)and more. SIMMS will be the data backbone for the region and provide the necessary evidence base to improve urban and transport planning.



GFCP ISKANDAR MALAYSIA : KEY OUTPUTS & MILESTONES

Item	Output
1	Baseline Assessment and Analysis (For Interventions 1 & 2)
2	Intervention 1 - Implementation Strategy for Iskandar Malaysia's Smart Integrated Mobility Management System (SIMMS)
3	Intervention 2 - Creating enabling conditions for data utilisation and management for evidence based urban and transport planning
4	Governance Framework (For Interventions 1 & 2)
5	Operational, Business & Financial Model (for Interventions 1 &2)
6	SIMMS Pilot Project
7	Monitoring Framework and social, Environmental and Economic Impact Assessment (For Interventions 1 & 2) - deferred

Milestone Description

M1 - Baseline data and information has been collected, analysed, shared with the Steering Committee.

- M6 Pilot project has been chosen by Steering Committee.
- M2 Consensus is reached on functionalities of both interventions
- M7 Pilot project has been Implemented

M3 - Consensus is reached on the Implementation Plan for both interventions

M5 - Consensus is reached on procurement methods and business model.

M4 - Consensus is reached on the future regulatory and institutional frameworks for the interventions.

M8 - Acceptance of Monitoring and Evaluation Framework by Steering Committee (deferred till June 2022)





GFCP ISKANDAR MALAYSIA : SOCIAL AND ENVIRONMENTAL IMPACT



deficient in terms of capacity or reliability, have an economic cost such as **reduced or missed opportunities and lower quality of life**. Efficient transport systems provide economic and social opportunities and benefits that result in positive multiplier effects



Improved planning within Iskandar Malaysia will contribute towards the region's commitment to reducing carbon emissions

Environmental impacts of SIMMS



Changes in land use development patterns coupled with improved transit and transportation options can achieve more notable reductions in greenhouse gas emissions, ranging from 9 percent to 15 percent.

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Changes in land use and investments in improved transit and transportation options can improve the efficiency and quality of travel, reduce trip lengths, and reduce greenhouse gas (GHG) emissions.

GFCP ISKANDAR MALAYSIA : PILOT PROJECT



GFCP ISKANDAR MALAYSIA : PILOT PROJECT

Proposed SIMMS Pilot: MBIP Traffic Management along Jalan Sutera Danga

- Problem: Heavy congestion along Jalan Sutera Danga.
- Objective: To mitigate congestion by implementation of green waves for better traffic flow between junctions and traffic lights. Improve road safety and emergency response.
- Site conditions: 5.5km, 2 lane, 2-way traffic. 7 intersections.

Key Considerations:

- Addressing congestion provides a visible outcome to local authority and community.
- Fewer stakeholders involved, provides for easier approvals for decision-making.
- Allows adoption of a common GIS platform with benefits not limited to transportation.
- Transport model area includes main intersections, these can be further developed.

Key Risks:

- Funding availability and timing has limited the scope of the pilot.
- Covid-19 conditions are not representative of 'normal' mobility habits.

The SIMMS Pilot will consist of the following components:

- 1. Smart GIS portal (includes a link to the IMUO Iskandar Malaysia Urban Observatory).
- 2. Transport model.
- 3. Traffic management application data sets (i.e. no software).

SIMMS Pilot Area – Jalan Sutera Danga







GFCP ISKANDAR MALAYSIA : PILOT PROJECT COMPONENTS



ITS Infrastructure Implementation

• The pilot project provides an evidence base for the rollout of the Intelligent Transport elements of the SIMMS system.

Cycling & PwD Accessibility Applications





Transport Model Generation

- Macroscopic models were built based on available data and, with comparisons made with observed data where possible
- Where data was not collected due to the Covid-19 pandemic then demand-side inputs were estimated.



Smart GIS Development

- Metrics for urban and transport planning
- Over 150 metrics considered; grouped into: Transport planning, Urban planning, Economics, Environment, Quality of Life etc.
- Incorporate survey results too
- Advanced data processing PTAL, Sentiment Analysis



Citizens' Feedback Portal

- To overcome the limitations of existing and future data collection
- To facilitate and provide an alternative ways to collect and convert data to GIS format
- Produce a data display
- Describes better information, easy to understand and detailed information administrator





Traffic light audit app and database

- Digitisation of detailed ITS asset inventory with accurate spatial data on JSD for pilot.
- Opportunity to expand to a comprehensive pilot of traffic light database with asset inventory, as well as information on timing, junction diagram, etc. as a data source for SIMMS.



GFCP ISKANDAR MALAYSIA : SCALING UP TOWARDS FULL IMPLEMENTATION

Interventions 1 & 2 leading to full realization of SIMMS & enabling conditions for E-bUTP



GFCP ISKANDAR MALAYSIA : **TECHNICAL SPECIFICATIONS**





GFCP ISKANDAR MALAYSIA : TECHNICAL SPECIFICATIONS

SIMMS [goal] is to integrate available information to facilitate evidence-based decision-making for urban and transport planning.





GFCP ISKANDAR MALAYSIA : ITS MASTERPLAN INTERVENTIONS



SINCE 2006

GFCP ISKANDAR MALAYSIA : ITS MASTERPLAN INTERVENTIONS





Local Interventions

- Smaller schemes aimed at improving road user experience and public transport journey times
- Complements the IMBRT network **Regional Interventions**
- Schemes targeting region-wide issues such as managing traffic heading to Singapore and managing freight traffic to and from ports.



ITS Masterplan Local Interventions



Regional Project 1 - Smart Parking Signs for IMBRT Park and Ride Sites



Regional Project 3 – Journey Time Information System





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Regional Project 5 – Truck Route Management System

GFCP ISKANDAR MALAYSIA : SIMMS GOVERNANCE FRAMEWORK



GFCP ISKANDAR MALAYSIA : GOVERNANCE AND REGULATORY FRAMEWORK





PRIME MINISTER'S DEPARTMENT







THANK YOU



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