

Promoting Low Carbon by Decarbonisation urban development in Malaysia. S2A approach

9-10 December 2016, 1110-1230

Ohyama Memorial Hall, NIES Tsukuba, Japan

Session 3 : Roadmap toward low carbon Asia

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Faculty of Built Environment
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Malaysia

Land Area: 332,000 km²

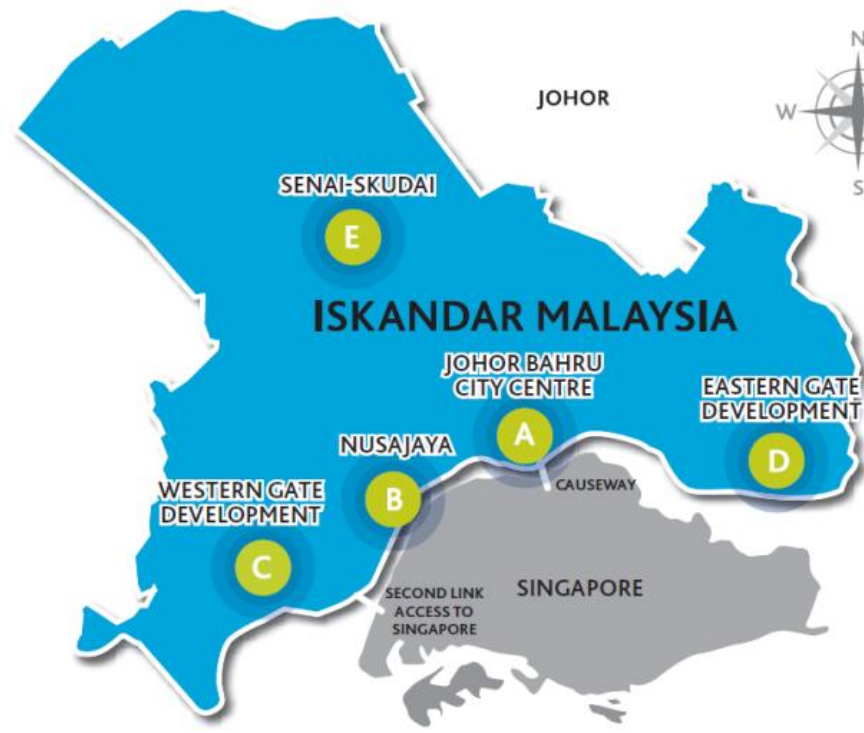
Population: 28.28 million (2010)

GDP: 247.5 billion USD (2010)

45%

Reduction in GHG
Emissions Intensity of
GDP by 2030

Iskandar Malaysia LCS 2025 Background



FLAGSHIP A

JOHOR BAHRU CITY CENTRE

- Central Business District (CBD) as heritage and cultural city
- Customs, Immigration and Quarantine Complex (CIQ)
- Johor – Singapore Causeway

FLAGSHIP B

NUSAJAYA

- Kota Iskandar
- EduCity
- Medical Park
- International Destination Resort
- Southern Industrial & Logistics Clusters (SILC)
- Puteri Harbour

FLAGSHIP C

WESTERN GATE DEVELOPMENT

- Port of Tanjung Pelepas (PTP)
- Tanjung Bin Power Plant
- 2nd Link Access to Singapore
- RAMSAR World Heritage Park
- Tanjung Piai – Southernmost Tip of Mainland Asia
- Maritime Centre

FLAGSHIP D

EASTERN GATE DEVELOPMENT

- Tanjung Langsat Industrial Complex
- Johor Port
- Tanjung Langsat Port
- Pasir Gudang Industrial Park

FLAGSHIP E

SENAI-SKUDAI

- Senai Airport City
- Senai High-Tech Park
- Sedenak Industrial Park
- MSC Cyberport City
- Johor Technology Park
- University Technology Malaysia (UTM)

ISKANDAR
MALAYSIA



Iskandar Malaysia LCS 2025 Background



<http://iskandarmalaysia.com.my/wp-content/uploads/2015/12/Education-pdf-pg81.jpg>

Table 1: Projected main socio-economic variables

	2005	2025	2025 /2005
Population (1000)	1,353	3,000	2.22
Household (1000)	303	706	2.33
GDP (Bill. RM)	35.7	141.4	3.96
Gross output (Bill. RM)	121.4	438.9	3.61
Primary industry	1.5	2.4	1.59
Secondary industry	86.2	274.0	3.18
Tertiary industry	33.7	162.5	4.82
Passenger transport demand (Mill. passenger-km)	9,565	59,524	6.22
Freight transport demand (Mill. ton-km)	8,269	26,054	3.15



S2A

W e b e l i e v e i n

Science

to Action

i n m a k i n g

Low Carbon Society

a R e a l i t y



S2A

Our Principles

- Society at the core
- Decoupling,
decarbonising +
co-benefits
- Holistic: techno-fixes +
people-centric,
socially-rooted
programs +
environmental
countermeasures

Iskandar Malaysia LCS Blueprint 2025



ISKANDAR
MALAYSIA



OKAYAMA UNIV.

Research Team: Universiti Teknologi Malaysia (UTM), Kyoto University (KU), Okayama University (OU), National Institute for Environmental Studies (NIES)

Joint Coordinating Committee: Iskandar Regional Development Authority (IRDA), Federal Department of Town and Country Planning (JPBD), Malaysia Green Technology Corporation (MGTC)

Sponsorship: Japan International Cooperation Agency (JICA), Japan Science and Technology (JST)

Period: 2011 - 2016

Research Output:

- i. **Methodology** to create LCS scenarios which is appropriate for Malaysia is developed.
- ii. **LCS scenarios** are created and utilized **for policy development** in IM.
- iii. **Co-benefit of LCS policies** on air pollution and on recycling-based society is quantified in IM
- iv. **Organizational arrangement of UTM** to conduct trainings on LCS scenarios for Malaysia and Asian countries is consolidated, and a network for LCS in Asia is established

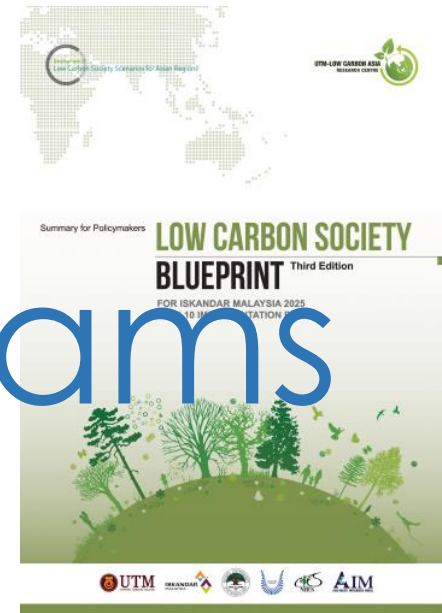
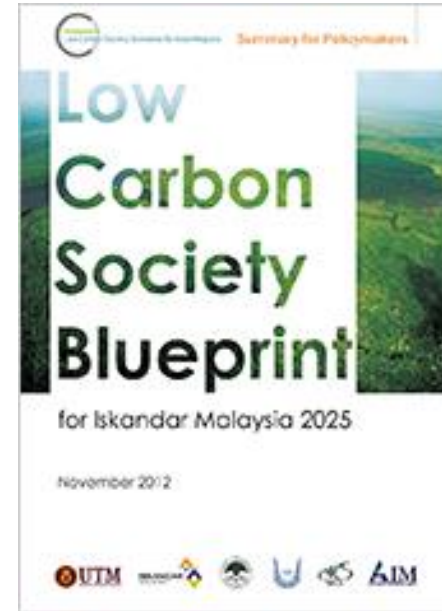
Iskandar Malaysia LCS Blueprint 2025

12

Actions

281

Programs





Iskandar Malaysia

2,216 km²

1.64 million people (2010)

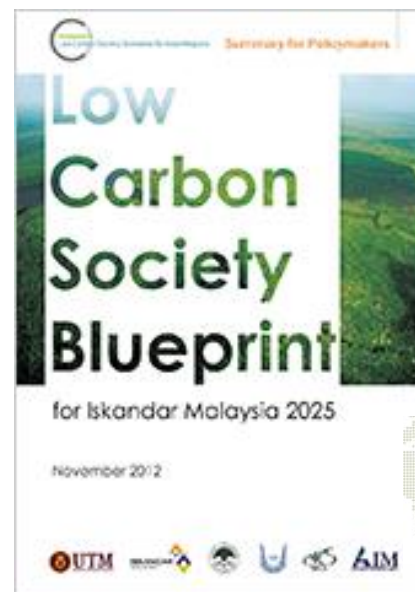
3 million people (2025)

58%

Reduction in GHG
Emissions Intensity of
GDP by 2025

Iskandar Malaysia

main southern development
corridor in Johor, Malaysia



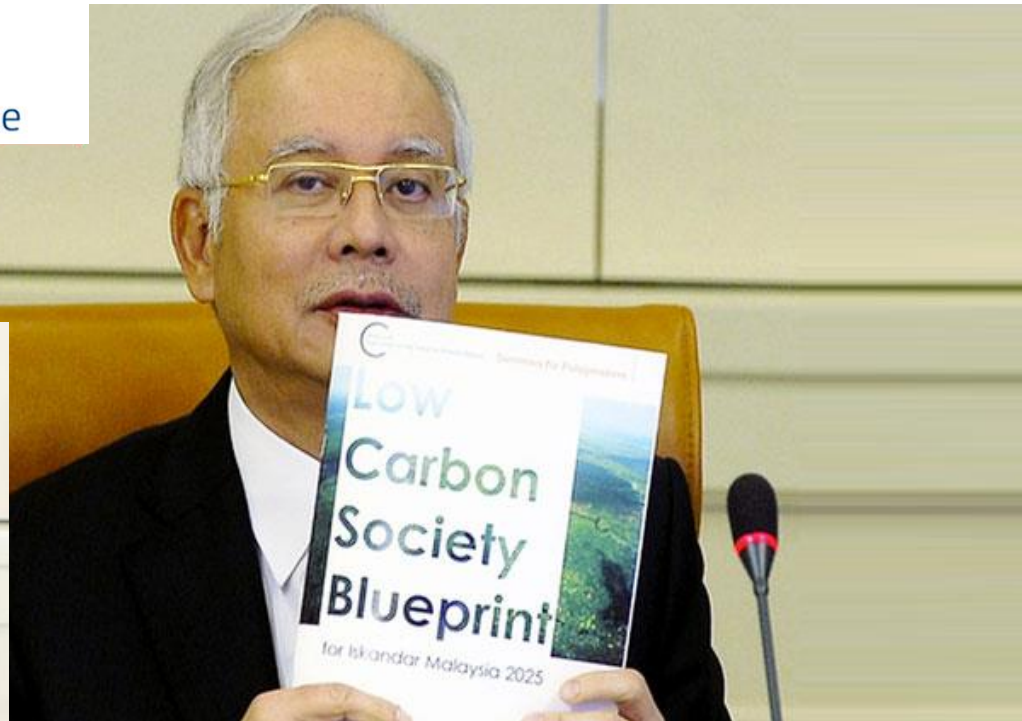
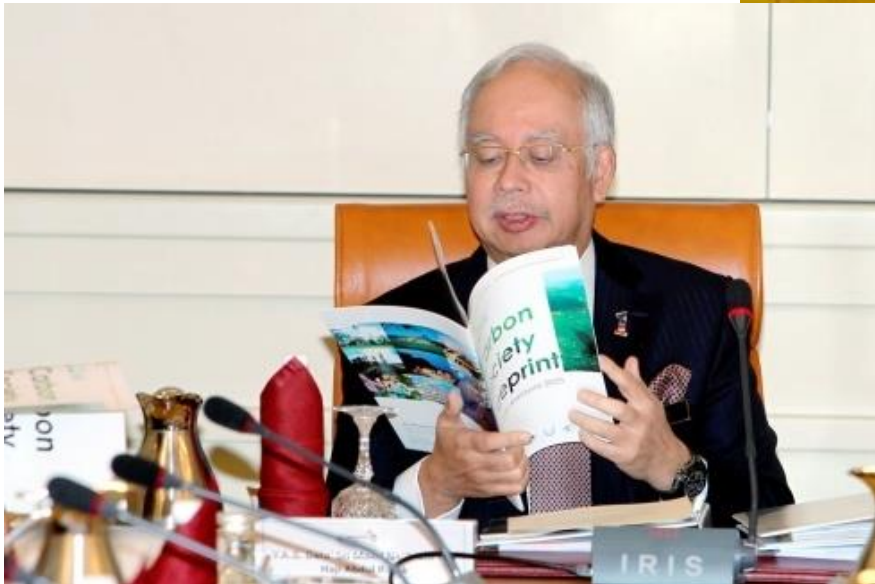
Iskandar Malaysia LCS Blueprint 2025



DOHA 2012
UN CLIMATE CHANGE CONFERENCE
COP18|CMP8

United Nations Climate Change Conference

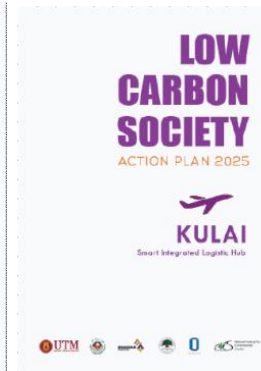
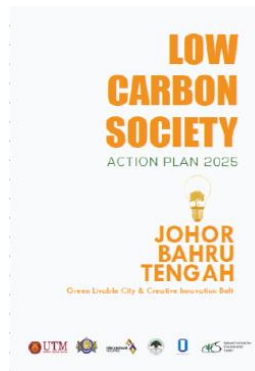
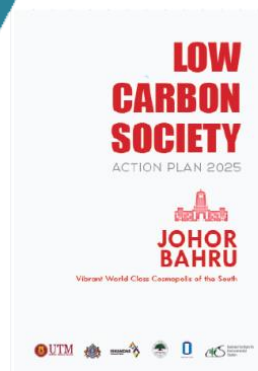
Officially launched @ COP 18,
Doha, Qatar on 30 Nov. 2012



Launching officially endorsed by
the R.H. Prime Minister of Malaysia
on 11 Dec. 2012

Iskandar Malaysia

(5 Local Authorities)



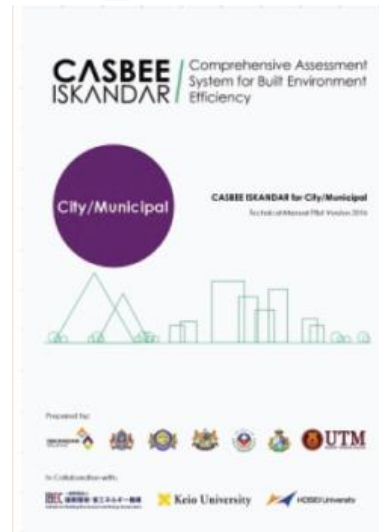
Iskandar Malaysia

main southern development
corridor in Johor, Malaysia



Iskandar Malaysia

main southern development
corridor in Johor, Malaysia



Prepared by:



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

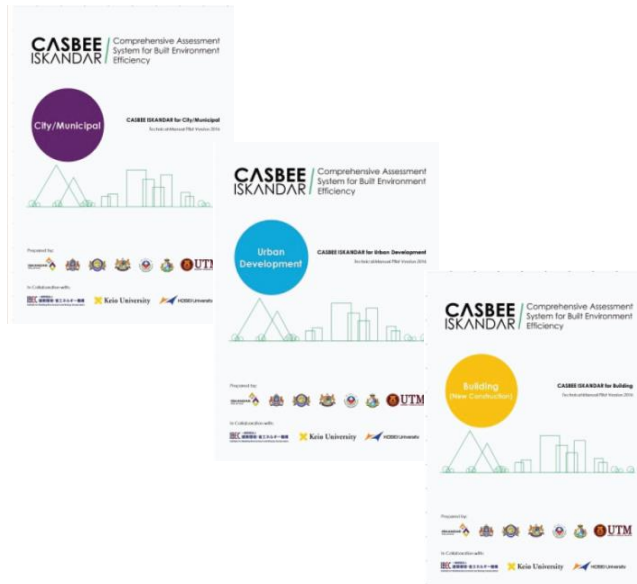
In Collaboration with:





Iskandar Malaysia

main southern development corridor in Johor, Malaysia



Supporting Documents

1. Site Plan
2. Floor Plans
3. CD with Photos to Support Application
4. Energy Bill
5. Water Bill
6. Green Building Rating System Results (LEED, GBI, CASBEE etc)

In addition to the required documentation above, applicants must also provide information about building efficiency indicators that cover the following green building criteria:

- Energy Conservation and Efficiency
- Water Conservation and Efficiency
- Materials / Reduce, Reuse, Recycle
- Biodiversity / Land Use
- Indoor Environmental Quality (IEQ)
- Renewable Energy / Green Energy Alternatives
- Liveability and Resilience

The GAIA application form is available for download at Iskandar Malaysia's official website starting 15 May 2016. All applications must be submitted:

via e-mail to:
shahrinaz@irda.com.my

or mailed to:
IRDA
G-01, Block B, Danga Bay, Jalan Skudai,
80200, Johor Bahru, Johor, Malaysia

Closing date for submissions:
All applications must reach IRDA by 5 pm, 5th July 2016

Language:
All entries should be in Malay or English.

Judging:
Assessment of eligible submissions will be made by an independent panel of professionals in the green building and construction industry. The Organiser's decision is final and no correspondence or communication will be considered following its final decision. The results and grading details are confidential and will not be shared.

www.iskandarmalaysia.com.my

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Green Accord Initiative Award 2016



Putrajaya

49 km²

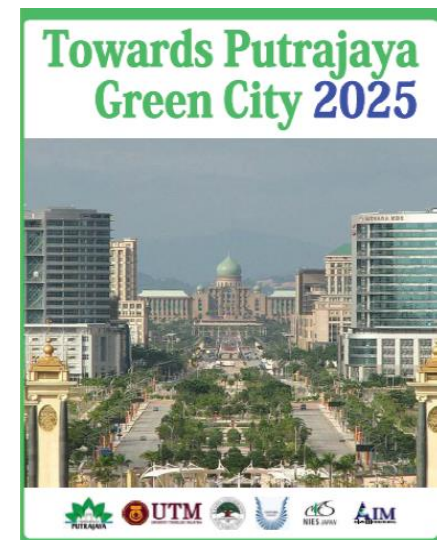
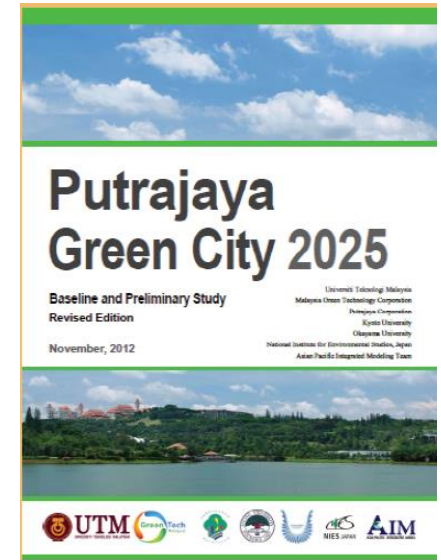
348,000 people (planned)

60%

Reduction in GHG
Emissions Intensity of
GDP by 2025

Putrajaya

federal administrative centre
of Malaysia



Kuala Lumpur

242 km²

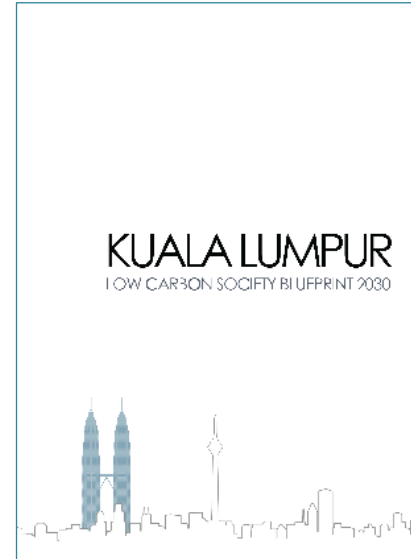
1.67 million people (2010)

2.49 million people (2030)

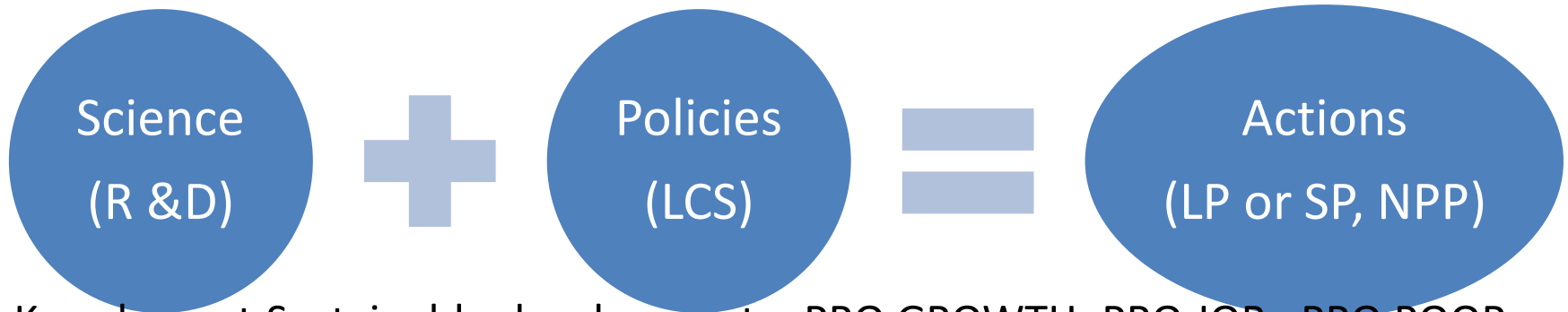
70%

Reduction in GHG
Emissions Intensity of
GDP by 2030

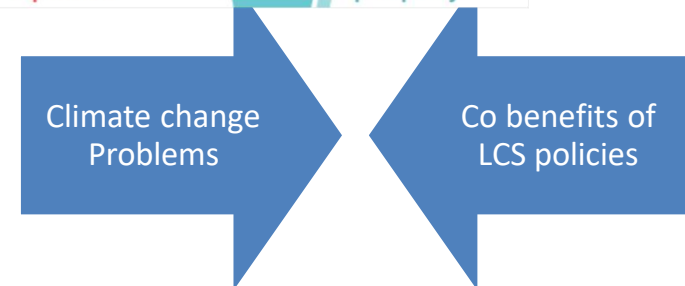
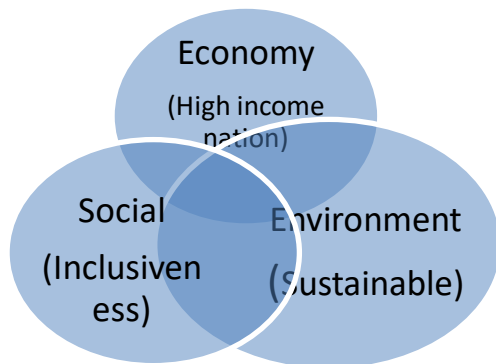
Kuala Lumpur
national capital of Malaysia



Low carbon society to decarbonise urban development approach



Key element Sustainable development = PRO GROWTH, PRO JOB, PRO POOR and PRO ENVIRONMENT



ISSUES AND VISION

CURRENT ELEVENTH MALAYSIA PLAN 2016-2020

Eleventh Malaysia Plan 2016-2020



Pursuing green growth for sustainability and resilience

- Green growth
- Competitive cities
- Inclusiveness society
- Consumption & Production (SCP)
- Digital nation



This word cloud captures important concepts and themes, and terms commonly used in the Eleventh Malaysia Plan

Game Changer

Embarking on green growth

Why is green growth important for Malaysia?

Malaysia, like many countries across the world, is grappling with the challenge of balancing a growing population and demand, with a natural environment that is increasingly under stress. In the global context of increasing intensity and frequency of extreme weather events, adopting green growth has now become an imperative for Malaysia. It represents Malaysia's commitment to renew and, indeed, increase its commitment to the environment and long-term sustainability.

What will success look like?

A successful green growth trajectory will ensure:

- Detrimental impact of socio-economic activity on environmental systems is reduced;

- Natural capital, including forested areas, biodiversity, and water resources as well as its ecosystems, is valued and sustainably managed;
- Development gains are protected, thus ensuring wellbeing of people across generations; and
- Energy use is efficient and renewable energy is widely used.

How will this be achieved?

Achieving these aspirations requires a fundamental shift away from a 'grow first, clean up later' development model towards one that views resilient, low-carbon, resource-efficient, and socially inclusive development as an upfront investment that will yield future gains over multiple generations to come. This requires fundamental changes across every major dimension including how policy is determined, how institutions are regulated, how responsibilities are shared, and how people value their environment.

PM and MB Johor launched the Low Carbon Action Plans on Dec 15 2015 during Meeting of Authority in Putrajaya



Johor Bahru Low Carbon Society in the Making (2015 Flashback)



Low Carbon Action Plans for 5 local authorities in Iskandar Malaysia @ COP 21, Paris

Placing 5 LAs of Iskandar Malaysia in world agenda

By CE IRDA on behalf of MB Johor – 7 Dec 2015

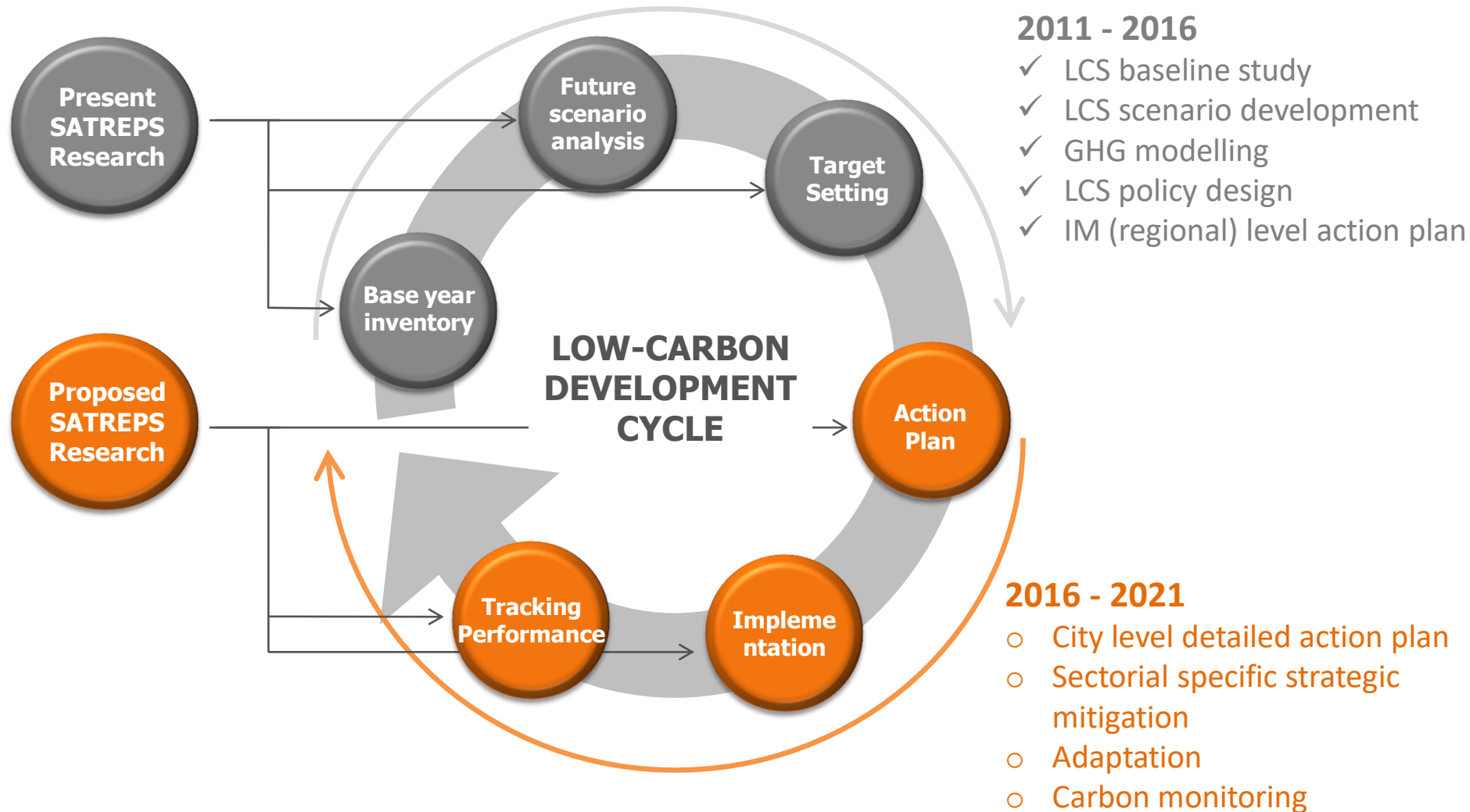
The 5 local authorities in Iskandar region - Low Carbon Society in the Making



Low Carbon Action Plans for 5 local authorities in Iskandar Malaysia @ Kota Iskandar
Officially Handed Over to Datuk Bandar and YDPs of 5LAs/PBTs

By MB Johor – 25 Feb 2016

(The importance of Implementation and Monitoring)



Beyond IM LCS 2025? – Scaling the Non-linear Learning Curve towards Full Decarbonisation

- ❑ Several cities such as Iskandar Malaysia, Putrajaya, Kuala Lumpur and Malacca adopts *progressive decarbonisation* of their economic growth and development up to 2025/ 2030
- ❑ *Adequate technological and financial support with strong high-level and local political will* are indispensable
- ❑ "Science to Action" (S2A) is the way forward (ensuring good, *scientifically grounded and community-rooted LCS policies* are materially acted upon, yielding real cuts in GHG emissions with simultaneous *socioeconomic co-benefits* for the people)
- ❑ *Simultaneous top-down and bottom-up actions* with better integration and coordination are essential
- ❑ A non-linear transformation towards full decarbonisation will be a *non-linear learning curve* (becoming ever steeper) for these cities.
- ❑ UTM-Low Carbon Asia Research Centre is committed to learning, supporting and contributing to national and global LCS initiatives

Please contact us

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