GREEN TECHNOLOGY APPLICATION FOR THE DEVELOPMENT OF LOW CARBON CITIES (GTALCC) PROJECT

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OBJECTIVE OF INCEPTION WORKSHOP OF GTALCC PROJECT

a) To inform the stakeholders the starting of the project.
b) To update the project objectives, program & activities.
c) To get update on the current initiatives by the stakeholders.
d) To suggest new inputs that related to the project objective.

What is Green Technology Applications for Low Carbon Cities (GTALCC) project ?

A project to facilitate the implementation of low carbon initiatives and to showcase a clear and integrated approach to low carbon development in Malaysia.

It is a 5 years project.

International Partnership	**United Nations Development Program (UNDP)**
	Sponsored by Global Environment Facility (GEF)
Government of Malaysia	**Economic Planning Unit (EPU)**
- Executing Agency	**Ministry of Energy, Green Technology & Water (KeTTHA)**
- Implementing Agency	**Sustainable Energy Development Authority (SEDA)**

OBJECTIVE OF PROJECT

GTALCC project objective is **to support the low carbon cities program**, especially the Low Carbon Cities Framework by KeTTHA, which currently involves some of the local authorities in Malaysia.

The objective will be achieved **by removing barriers to integrated low carbon urban planning & development** through 3 components;

a) **integrated low carbon urban planning and development policy support,**
b) **awareness and institutional capacity development, and**
c) **demonstration on low carbon technology investments**

Expected to generate GHG emission reductions of;
- 346,442 ton CO2eq by end of project.
- 2,152,032 tonnes CO2eq over the lifetime of project investment.

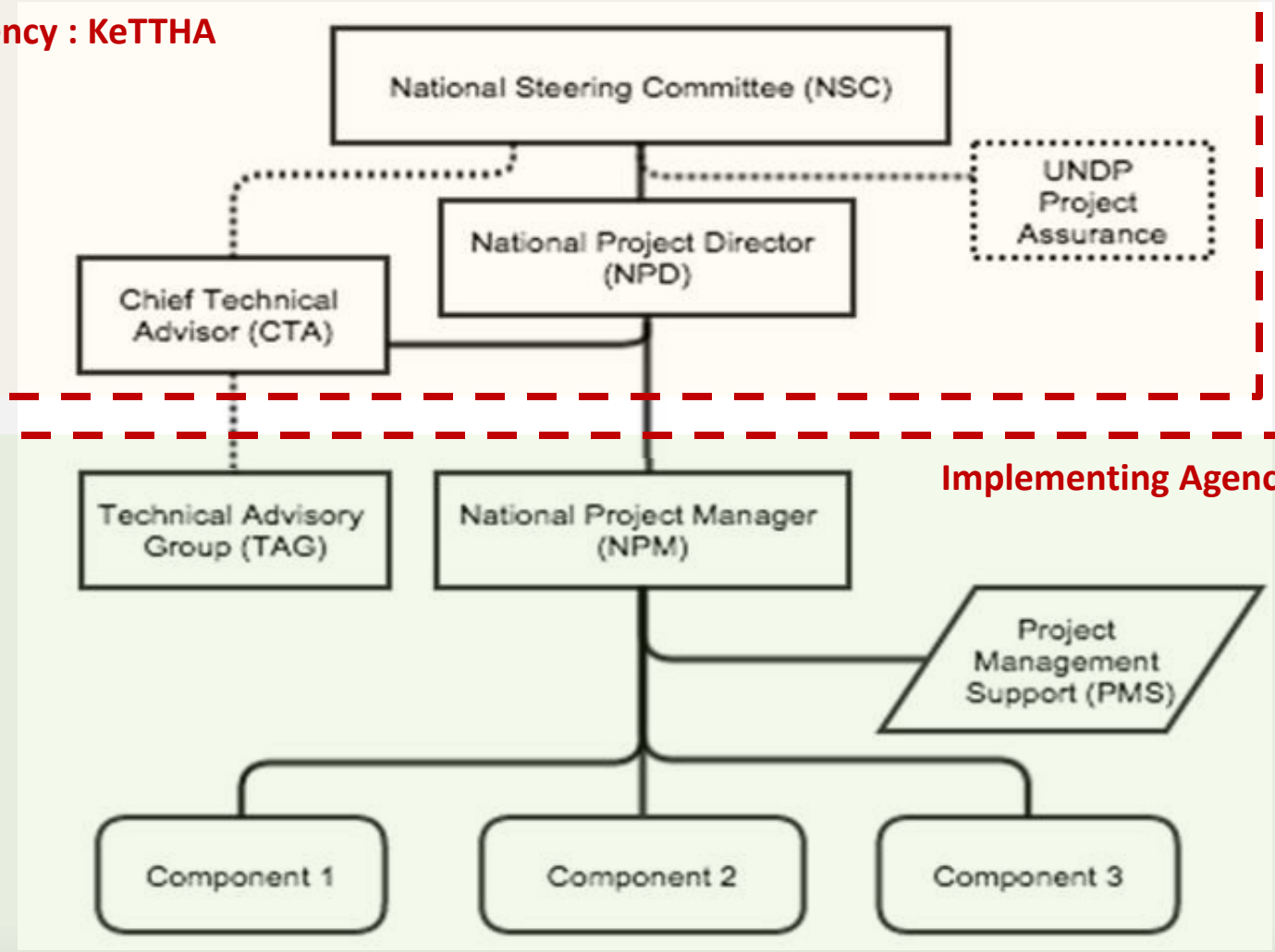
OUTCOME

Sustainable & resilient development : Implement of national development agenda that enables low carbon green growth through climate-resilient measures, sustainable management of energy & natural resources.

- Major cities implement and adopt development plans or programs integrated urban low-carbon;
- Establish the assessment, approval and implementation of programs and projects under the integrated and strategic development;
- Planning and implementing integrated green technology application for a low-carbon city development;
- Increased investment and the application of green technology towards low-carbon development; and
- Urban low carbon infrastructure projects implemented.

Management Arrangement

Executing Agency : KeTTHA



Implementing Agency : SEDA

Chronology and Consultation Process

Chronology and Consultation Process

21 Feb 2011: GEF5 National Consultation - idea on a project on Low Carbon Cities to support the application of the Low Carbon Cities Framework (LCCF) mooted

May 2012 : GTALCC Project Initial Form (PIF) drafted

Dec 2012 : Final draft PIF submitted to GEF

April 2013 : PIF and Project Preparation Grant (PPG) approved by GEF

May 2013 : Appointment of Consultants by UNDP

Nov 2013 : Stakeholders Awareness Workshop on GTALCC project (Cyberview Hotel)

Dec 2013 : Logical Framework Analysis Workshop & stakeholders consultation workshop organized (Sama-sama Hotel)

May 2014 : Stakeholders' Validation Workshop (Shangri-La Hotel)

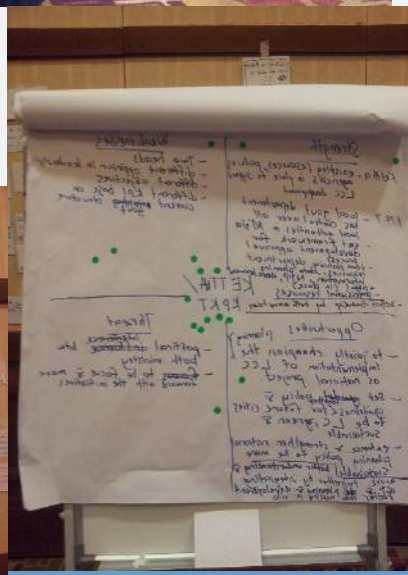
Q3 2012 – Q4 2014: Various meetings conducted, co-financing letters received

Jan 2015 : Final draft Project Document submitted to GEF

April 2015 : Project Document approved by GEF

7 May 2015 : LPAC Meeting

Consultations



Situation Analysis

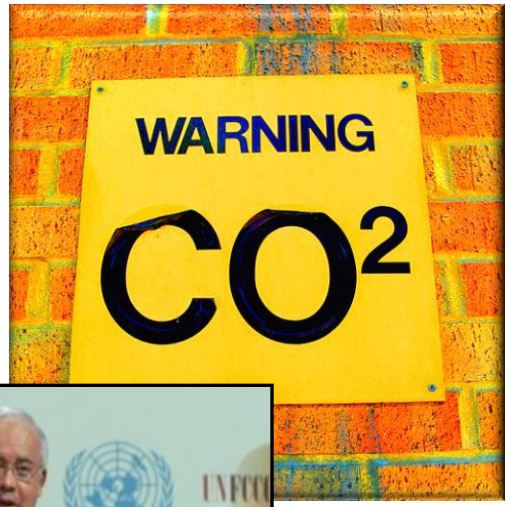
Low Carbon Development Commitment

2009 : COP 15 in Copenhagen

Speech by Datuk Seri Najib Tun Razak,
Prime Minister

"...Malaysia is adopting an indicator of a voluntary reduction of up to 40% in terms of emissions intensity of GDP by the year 2020 compared to 2005 levels."

17 December 2009



2015 : COP 21 in Paris

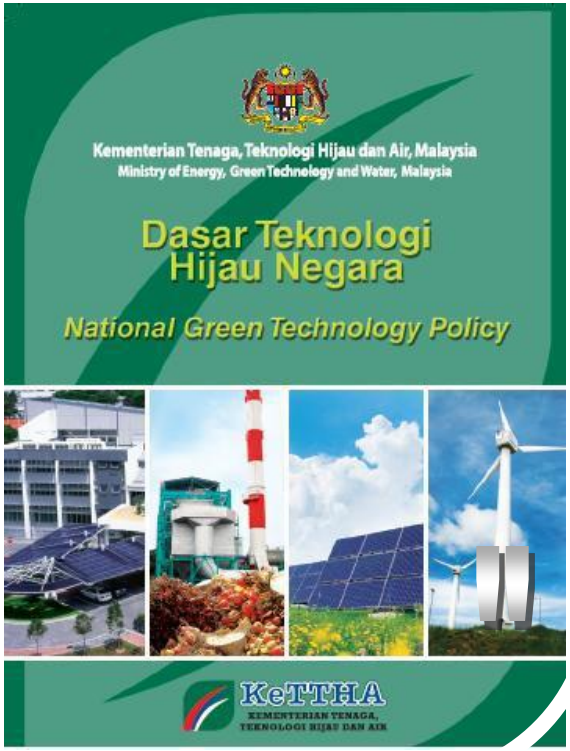
"... Malaysia intends to reduce its greenhouse gas (GHG) emissions intensity of GDP 45% by 2030 relative to the emissions intensity of GDP in 2005."

COP15
COPENHAGEN
UN CLIMATE CHANGE CONFERENCE 2009

2010 : Green Technology Policy to support green and low carbon development

Green technology is the development and application of products, equipment, and systems used to conserve the natural environment and resources, which minimises and reduces the negative impact of human activities

- Minimises the degradation of the environment.
- It has zero or low green house (GHG) emission.
- It safe for use and promotes healthy and improved environment for all forms of life
- It conserves the uses of energy and natural resources; and
- It promotes the use of renewable resources.



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Low Carbon Cities Rationale

Globally:

- Cities and urban buildings are responsible for around two-thirds of the world's energy use – for heating and cooling of buildings, for cooking, as well as for transport and industrial production.
- Cities account approximately 67% of global energy demand.
- Waste contributes to around 3% of global emissions in Asia-Pacific cities.
- Rising affluence the middle classes are creating increasing volumes of waste that are either burned to produce CO2 or dumped in landfill sites that are significant sources of methane.

Low Carbon Development in Malaysia

More People Living in Urban Areas/Cities

Population Malaysia

18 million (1990) to 27.6 million (2010) - increase by 53%
(Source: Census Data, 2010)

Urbanization Rate

- 27% in 1960, 42% in 1990, 54% in 1994, 61.8% (2000) for Malaysia, 65.4% (2000) for West Malaysia
- Expected to grow to 75% by 2020 *(Source: RFN 2001)*
- Urban sprawling poses obstacles to GHG reduction.

Energy

- Energy Consumption – 61,279 metric tons (2005) (40% transportation & 40% building & industrial)
- Energy Produced – 99,917 metric tons (2005)
- **2006 – CO2 emission – 187 million tons 7.2 metric tons/person**
- **2004 – 5.9 metric tons/metric [World 4.4 metric tons/person]**

People will use more energy & resources

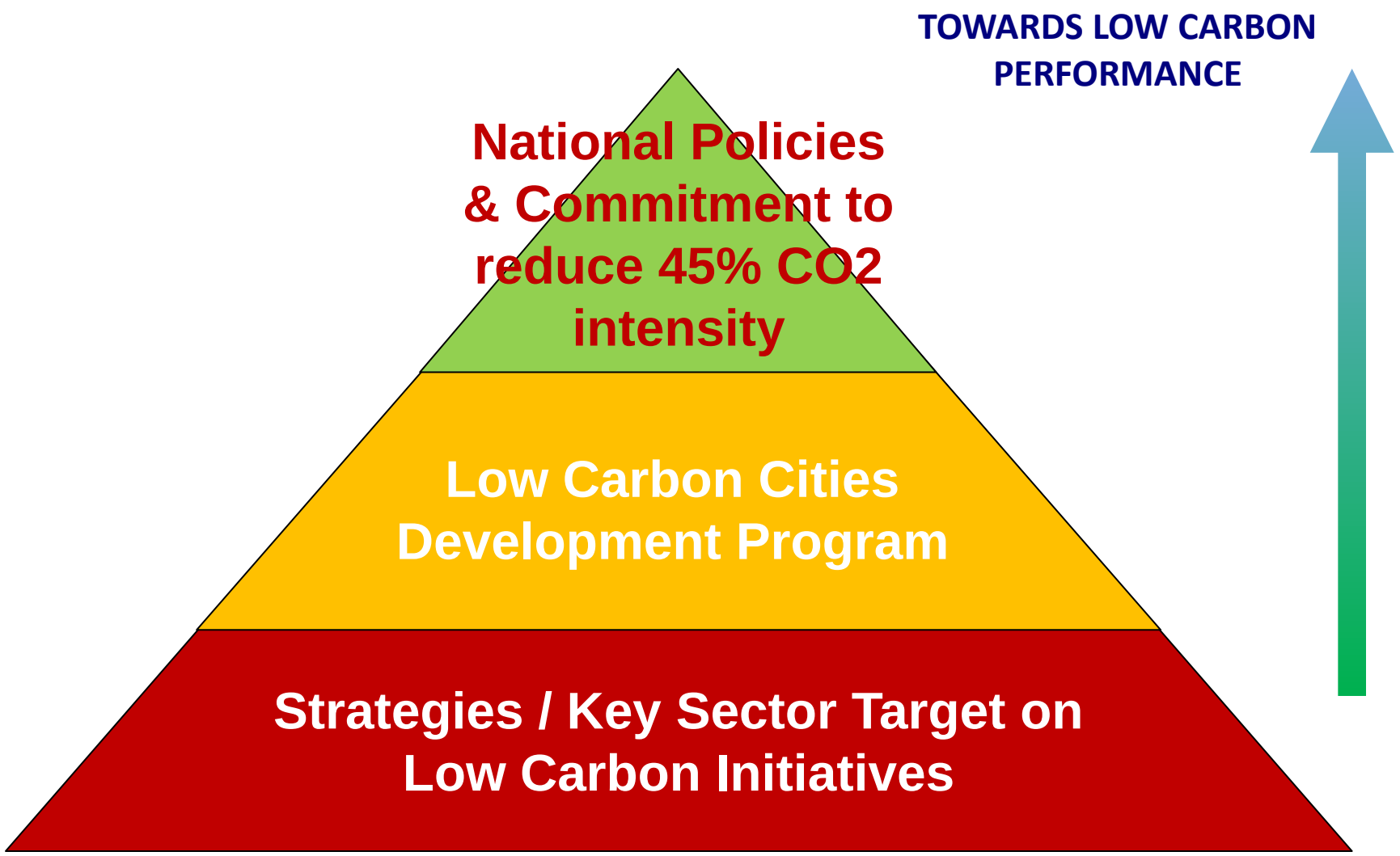
Info from Malaysia Inst. Of Planners (Mdm Norliza)

Table 12. Options for low-emissions development in Malaysian cities

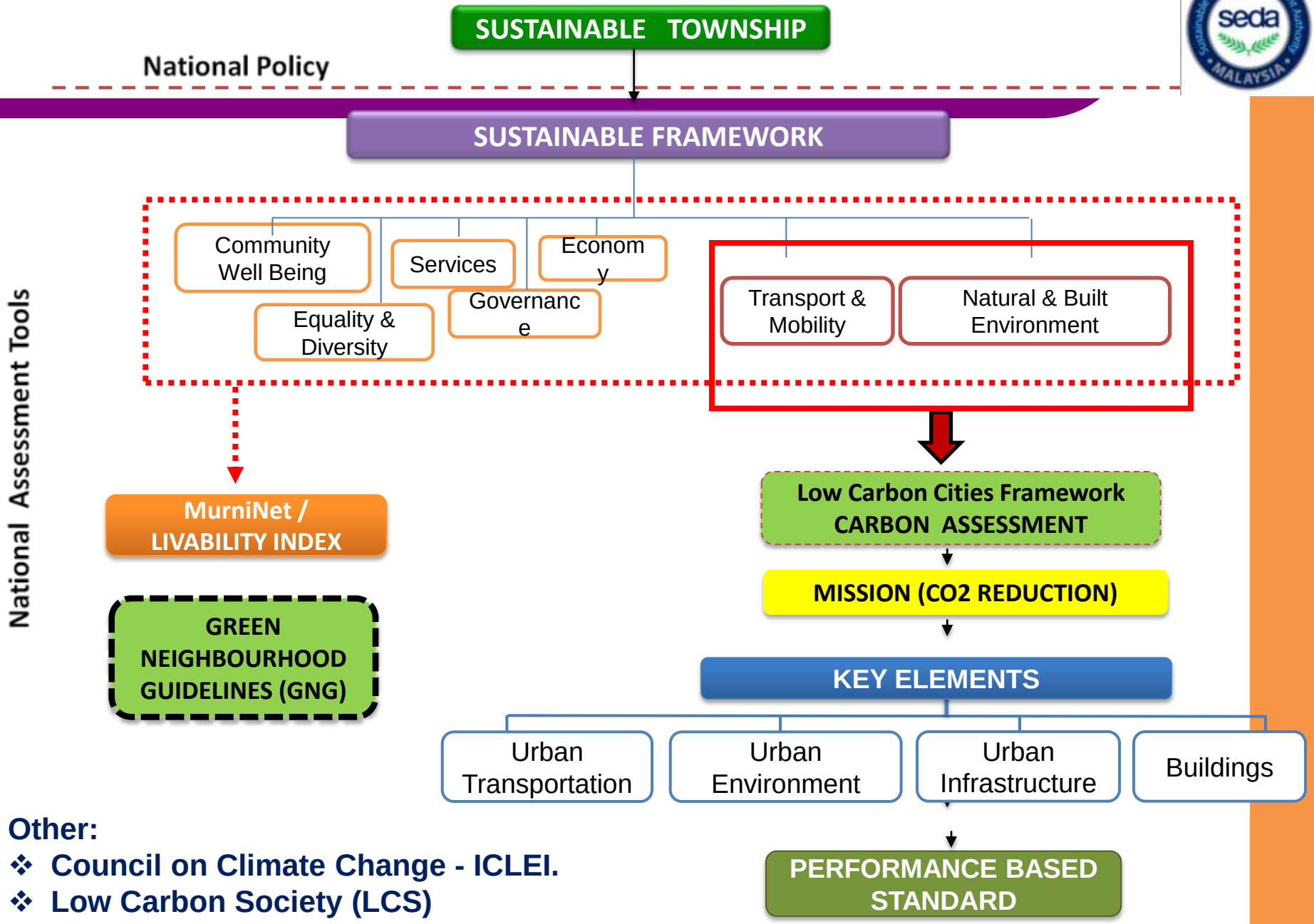
Focus Area	Options for Action
Compact urban form	• Fundamental shift in urban planning approaches to favor density over sprawl, including higher floor area ratios, and promoting mixed-use and transit-oriented developments • In-filling of low-density/under-utilized plots of land in existing urban areas • En-bloc redevelopment of brownfield sites
Clean energy and energy efficiency	• Mandatory building codes for new buildings that include energy efficiency measures • Mandatory retrofitting of existing buildings to increase energy efficiency • Green building certification that emphasizes energy efficiency • Energy efficiency standards and labeling for household appliances • On-site renewable energy generation, e.g. solar panels and rooftop PVs • Rebates and tax credits to encourage individual measures above • Landfill gas to energy • Purchase of electricity generated from renewable sources
Urban transportation	• Greater density of rail transit • Bus rapid transit • Fuel economy standards for new vehicles sold • Phase-out of fuel subsidies and introduction of fuel taxes • Additional incentives for hybrid / electric vehicles • Road pricing / congestion charging

Source: World Bank Economic Monitor, Nov 2011

From Policy To Implementation



Sustainable Framework for Low Carbon Cities

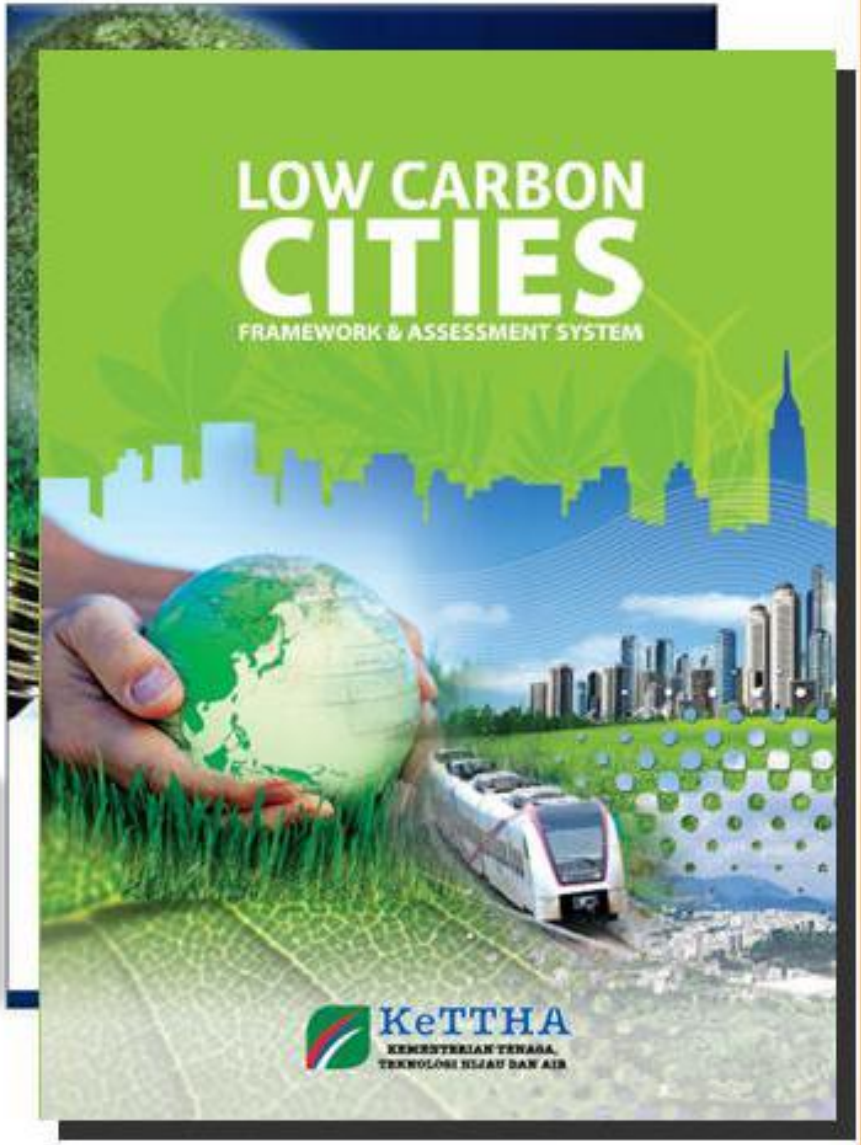


Other:

- **Council on Climate Change - ICLEI.**
- **Low Carbon Society (LCS)**

Low Carbon Cities Framework & Assessment System
- Use of Document

This document is to *assist local authorities, township developers, designers and individuals* in assessing whether developments carried out within the city contributes towards the reduction or decrease in GHG.



Was Launched in Sept 2011 by YAB Prime Minister

LCCF

PERFORMANCE CRITERIA

Base on Carbon Footprint

4 Elements for GHG Reductions in Cities and Townships

Urban Environment

- Site Selection
- Urban Form
- Urban Greenery & Air Quality

Urban Transportation

- Shift of Transport Mode
- Green Transport Infrastructure
- Green Vehicles
- Traffic Management

Urban Infrastructure

- Infrastructure Provision
- Waste
- Energy
- Water

Buildings

- Low Carbon Building
- Community Service

Elements Contribute to GHG emission → **13 Performance Criteria*** → **35 Sub Criteria**

*Performance Criteria are measurable strategies to reduce carbon emission through:-
Policy control, technological dev., better process & product management, change in procurement system, carbon capture, consumption strategies & others.

LCCF consists of Four (4) Main Components in the framework of GHG analysis

Key Elements to Measure

Identify Elements to Measure

- Understand which elements contribute most to the city's GHG emission
- Prioritize/choose which elements to measure (all?/specific elements?)

Territory Boundaries or Area of Concern:

- Administrative boundaries of the city/any area of city.
- Single source solutions

Baselines Needed

Current Status of GHG emission

- Baseline information on current GHG emission level.
- BAU Levels – projected emission
- If non available of baseline data – benchmarks against other baselines can be used as a guide.

Source of generation

- Identify the key source of generation.

Targets & Gaps

Targets

- Set targets for reduction of GHG emission
- Targets should be achievable and measurable

Gaps

- Identify the gaps between current emission status and targets.
- Identify measures

Roadmap

Roadmaps

- Set a Roadmap

GTALCC project - Barrier Analysis

1. **An incomplete policy and regulatory framework** to promote low carbon planning and development, especially at the sub-national levels

2. **Lack of awareness and institutional capacity** for evidence-based low carbon planning at the sub-national levels

3**. Lack of capacity of cities to mobilise finance and incentives** to promote low carbon investments

Strategy

Project Components

Component 1: Policy support for the promotion of integrated low carbon urban development.

Component 2: Awareness and Institutional Capacity Development.

Component 3: Low Carbon Technology Investments in Cities (Demonstration)

Component 1
Policy support for the promotion of integrated low carbon urban development

which will enable cities to implement and adopt integrated low carbon urban development plans and programmes

Major cities implemented and adopted integrated low carbon urban development plans and/or programmes

Output 1.1

Output 1.1.1

Approved **city policies, legislations and regulations** and strengthened enforcement systems for integrated low carbon urban development*

Output 1.1.2

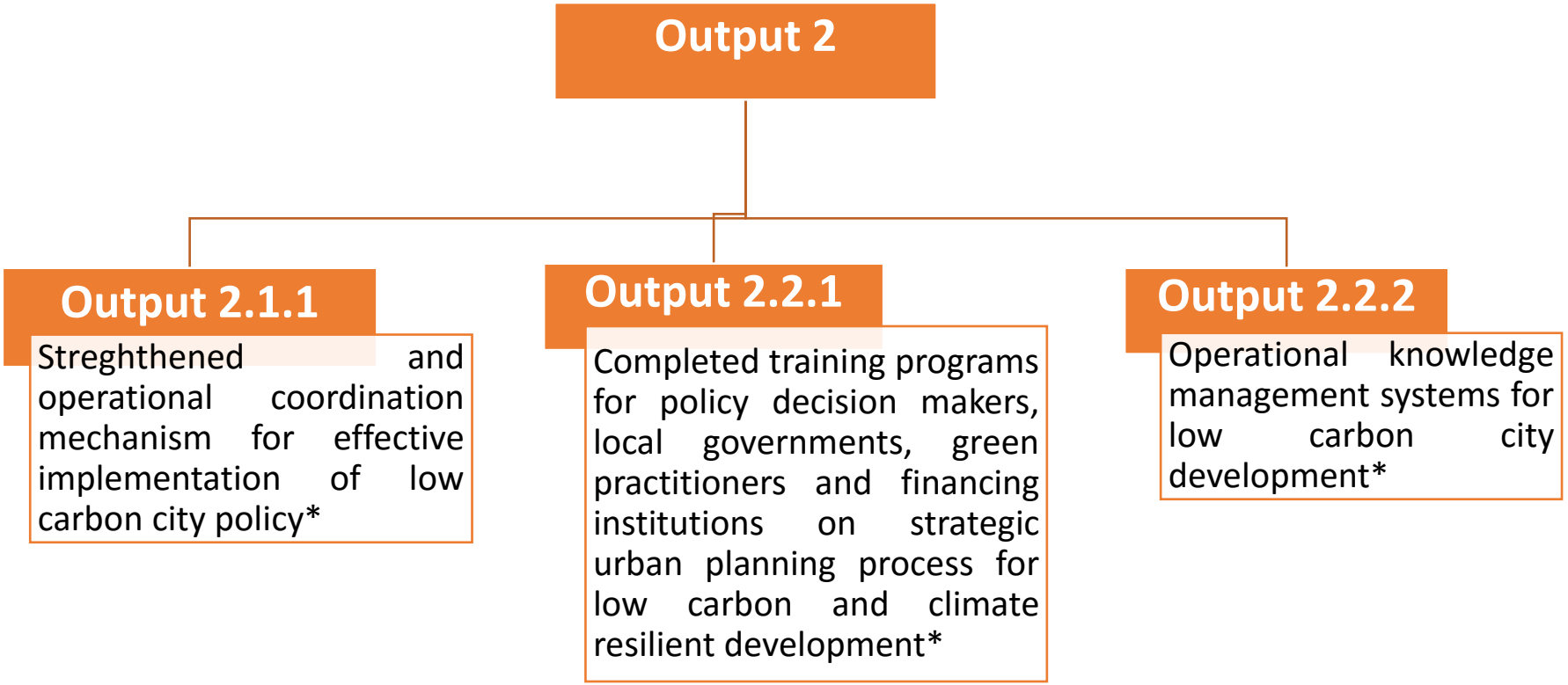
Established **GHG accounting framework and decision-making tools** for national and sub-national levels*

Output 1.1.3

Completed and approved **evidence-based low carbon development plans** and investment programmes for cities and precincts*

* Subject to change

Component 2 **Awareness and institutional capacity development**	**which will expedite appraisal, approval and the implementation of strategic urban development, and ensure cities are aware of a planning and implementing low carbon technology applications.**



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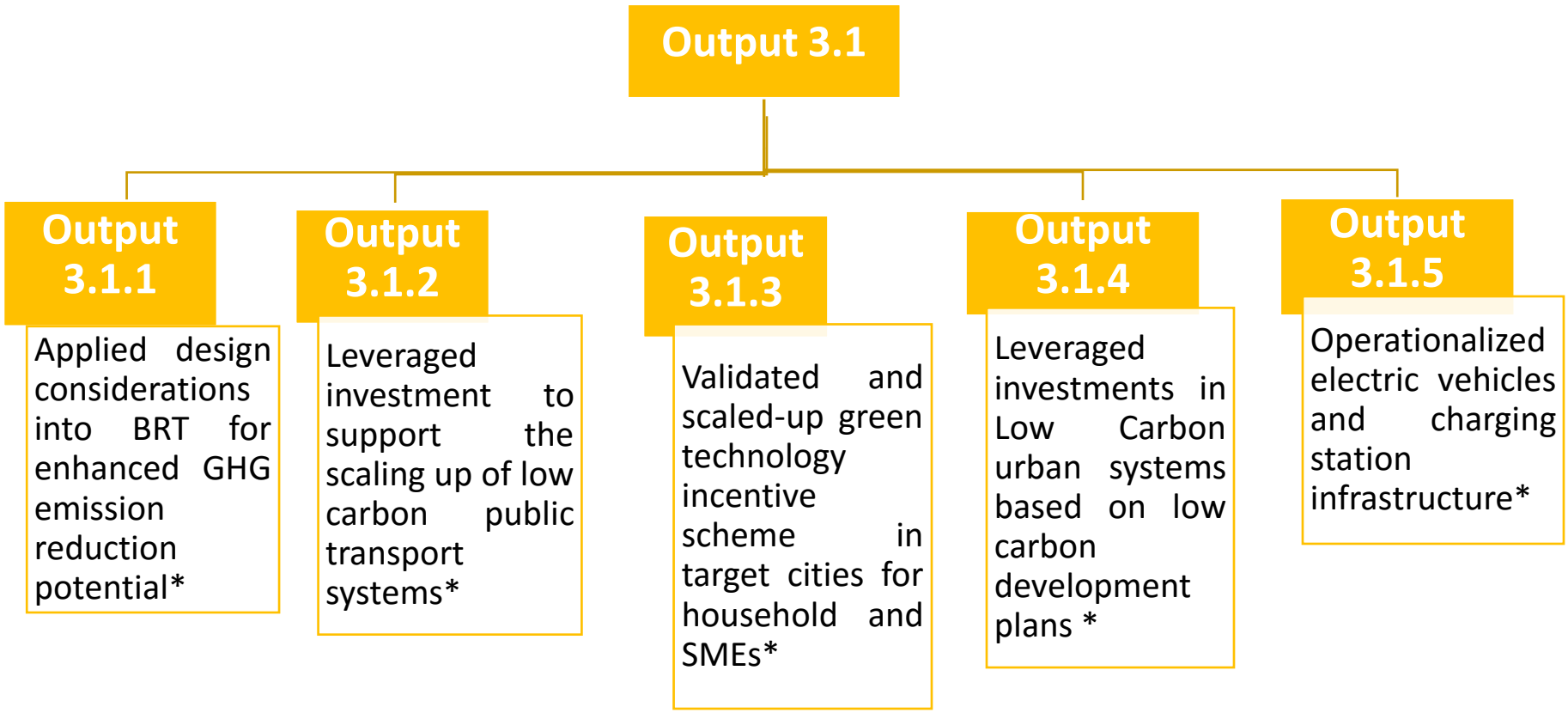
Component 3 - Low carbon technology investments in cities	To increase investment in low carbon technologies with more low carbon projects implemented.



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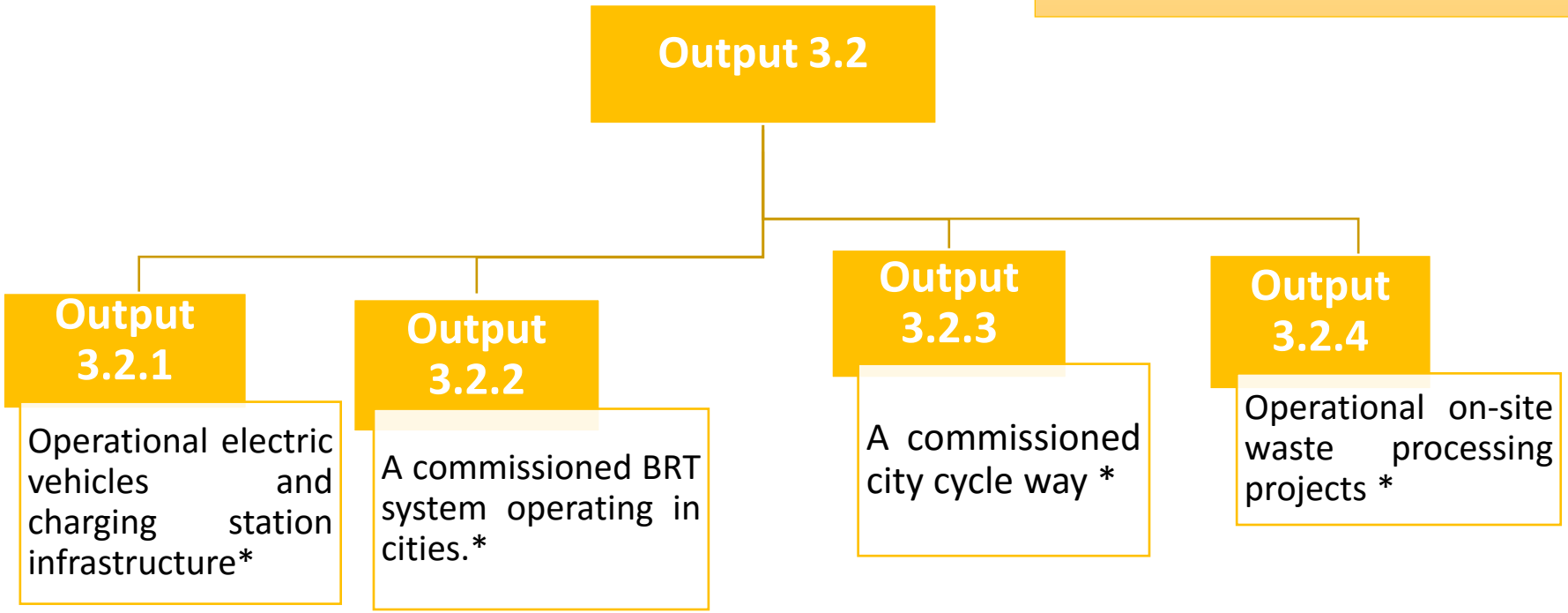
Component 3 - Low carbon technology investments in cities	To increase investment in low carbon technologies with more low carbon projects implemented.

3.2 More low carbon projects implemented in Malaysian cities



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FOCUS ON GREEN TECHNOLOGY APPLICATIONS THAT HAVE SIGNIFICANT & MEASURABLE LOW CARBON IMPACT

4 Elements for GHG Reductions in Cities and Townships

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Urban Transportation

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Thank you for your attention

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