



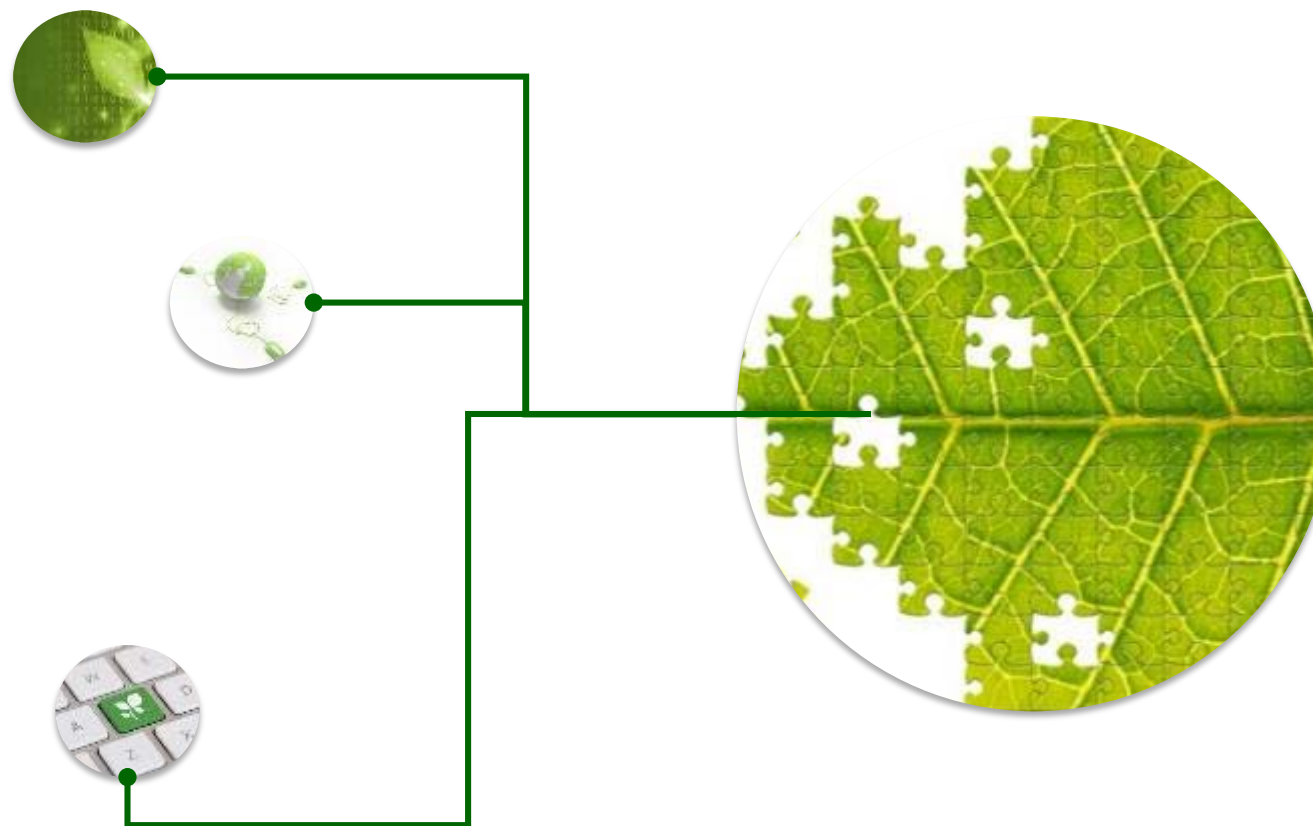
# ***NATIONAL GREEN TECHNOLOGY MASTER PLAN***

## **Pelan Induk Teknologi Hijau Negara**



# PRESENTATION OUTLINE

- Objective
- Background
- Issues & Challenges
- Action Plans
- Implication
- Recommendation

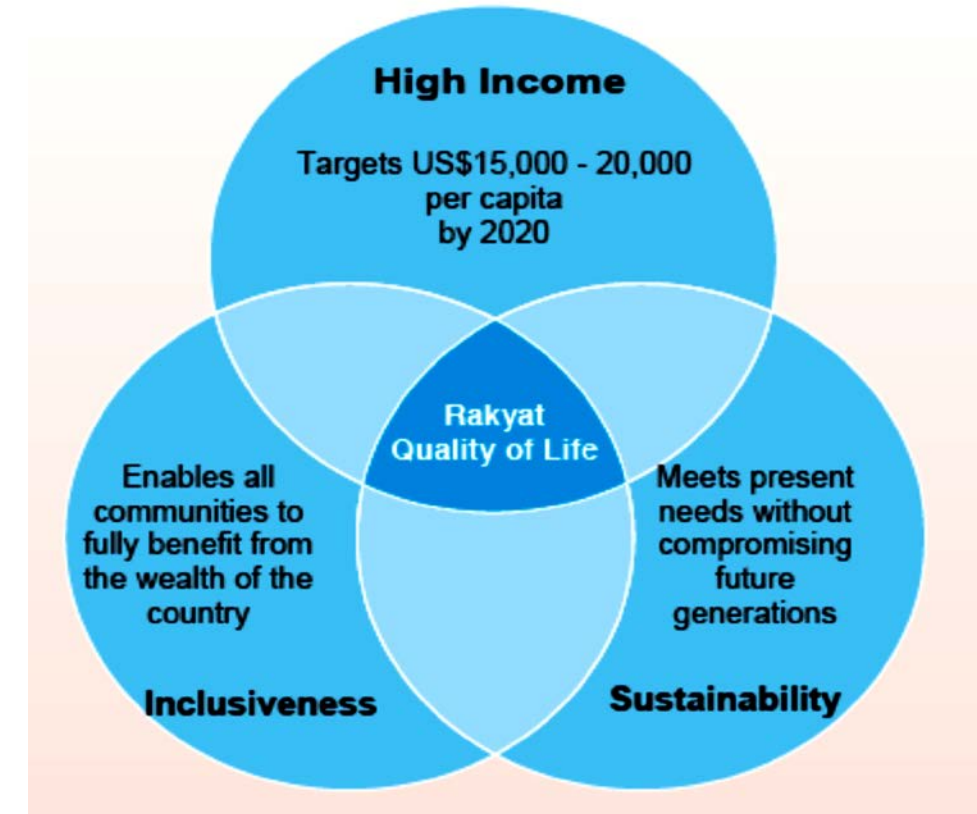


## OBJECTIVE

To seek the approval from the Green Technology and Climate Change Council on the followings:

- 1) **Green Technology Master Plan** as the national strategic plan and implementation framework to catalyse Green Growth towards sustainable development and high income nation by 2020 and to position Malaysia as a Green Technology hub by 2030;
- 2) Support the implementation of **five (5) Key Action Plans** in achieving the goals of National Green Technology Policy; and
- 3) Acknowledge the implementation of **Green Catalyst Projects (GCP)** to achieve the 40% carbon intensity reduction by 2020 and to improve the quality of life of the RAKYAT

**Positioning Malaysia as a GREEN TECHNOLOGY HUB**



*(from New Economic Model)*

**3.3 Malaysia should lead the global green revolution**

*..... Malaysia should embrace a leadership role in green technology and become a strategic niche player in high value green industries and services that play to our competitive advantage .....*

## BACKGROUND

### GREEN TECHNOLOGY TOWARDS SUSTAINABLE DEVELOPMENT



“It is my dream that one day we can live in a clean, healthy and high quality environment where **cities, townships and communities** are built on the fundamentals of **Green Technology**”.

*As of 2013, we have managed to reduce carbon intensity by more than 33% vis-à-vis our pledged 40% carbon intensity reduction by 2020*

**Green Technology** has been identified as a driver of the future economy for the nation that would contribute to overall Green Growth and Sustainable Development



# BACKGROUND

## CURRENT ACHIEVEMENT IN GREEN TECHNOLOGY

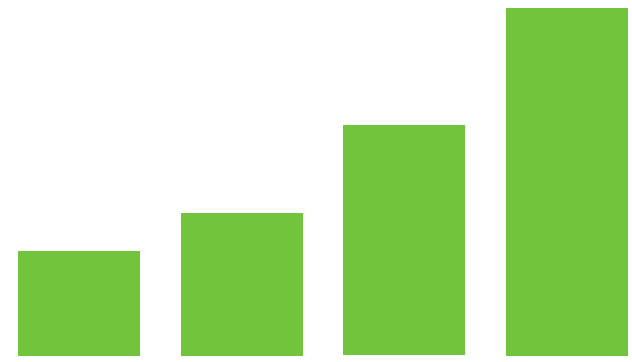
<p><b>Institutional Framework</b></p> <ul style="list-style-type: none"><li>• Malaysian Green Technology Corporation</li><li>• MTHPI</li><li>• SEDA</li><li>• Yayasan Hijau</li></ul>	<p><b>Policies &amp; Regulation</b></p> <ul style="list-style-type: none"><li>• National Renewable Energy Policy and Action Plan</li><li>• Renewable Energy Act</li><li>• National Climate Change Policy</li><li>• National Automotive Policy</li></ul>	<p><b>Fiscal Instrument</b></p> <ul style="list-style-type: none"><li>• Green Technology Financing Scheme</li><li>• Feed in tariff (FiT)</li><li>• Incentives for RE &amp; EE</li><li>• Incentives for GBI certified</li><li>• Incentives for hybrid and EV</li></ul>
<p><b>Promotion, Industry &amp; Public Awareness</b></p> <ul style="list-style-type: none"><li>• IGEM</li><li>• Green Carnival</li><li>• Malaysian Green Technology Awards</li></ul>	<p><b>Labeling and Certification</b></p> <ul style="list-style-type: none"><li>• Eco labeling</li><li>• MyHIJAU Mark</li><li>• Energy Efficient Rating and Labeling Scheme</li><li>• Water Efficient Product Labeling Scheme</li></ul>	<p><b>Rating Tool</b></p> <ul style="list-style-type: none"><li>• Low Carbon City Framework (LCCF) Assessment Tool</li><li>• Green Building Index</li><li>• Green Pass</li><li>• Green RE</li></ul>
<p><b>MyHIJAU Programme</b></p> <ul style="list-style-type: none"><li>• MyHIJAU Procurement</li><li>• MyHIJAU Mark</li><li>• MyHIJAU Directory</li><li>• MyHIJAU SME</li></ul>	<p><b>Human Capital Development</b></p> <ul style="list-style-type: none"><li>• MGTC = Industry Lead Body for GT</li><li>• NOSS for GT</li><li>• AEMAS</li><li>• MyHijau Youth Camp</li><li>• SME Development Programme</li></ul>	<p><b>Green Township – Pilot Projects</b></p> <ul style="list-style-type: none"><li>• Putrajaya</li><li>• Cyberjaya</li><li>• Subang Jaya</li><li>• Petaling Jaya</li><li>• Hang Tuah Jaya</li><li>• Iskandar Malaysia</li></ul>



# BACKGROUND

## ACHIEVEMENT IN GREEN TECHNOLOGY (2013)

ECONOMY



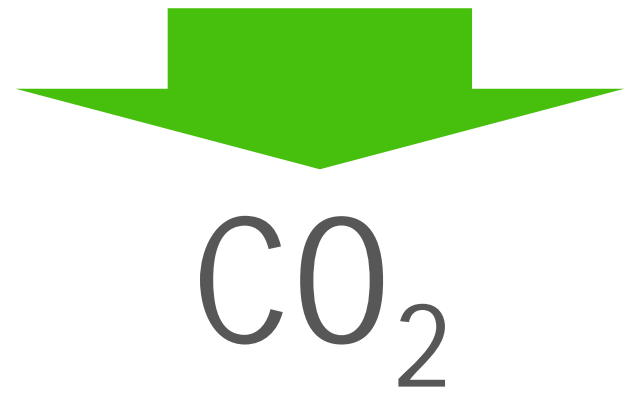
CONTRIBUTION TO GDP:  
RM7.9 billion  
(0.8%)

SOCIAL



GREEN JOBS:  
61,280

ENVIRONMENT



CARBON EMISSION REDUCTION:  
11.6 million tonnes  
CO<sub>2</sub> eq/yr

Note: Contribution by Energy, Transportation, Building, Waste And Water Sectors

Source: *Economic Assessment Report (Sept 2014) by PwC Malaysia*



## ISSUES & CHALLENGES

- 1 Market Readiness: GT products perceived as expensive. Scepticism and confidence in some GT products
- 2 Lack of understanding on GT leading to low green market demand
- 3 Infrastructure to support GT
- 4 Lack of innovative financing on GT projects- adverse risk taking
- 5 Lack of GT products in local market
- 6 Lack of local expertise throughout value chain

# BACKGROUND

## JOURNEY TOWARDS GREEN TECHNOLOGY MASTER PLAN (GTMP)

### KeTTHA & GreenTech Malaysia

Provide clear steps and indicators for Malaysia to become a developed nation by 2020 with GT, by addressing key actions within the energy, transports, building, waste, and water sectors.

GT Foresight (by MIGHT)	Roadmap Review (by Institute of Strategic & International Studies Malaysia)	GT Regulatory Framework (by UKM Lestari)	Economic Assessment (by PwC Malaysia)	Green Incentives (by PwC Malaysia)	Green Tax Incentives (by PwC Malaysia)	Green Investment (by Protégé)
Prioritization of green technology until 2030 for 9 sectors: Energy, Building, Transport, Waste, Water, ICT, Manufacturing, Agriculture & Forestry.	Policy review and development of knowledge management system (inventory of green growth and green economy initiatives).	Exploring statutory options for GT development and applications	Assessment of green businesses in Malaysia:	Impact assessment of current and previous green incentives .	Green tax incentives framework and implementation mechanism via Green Investment Tax Allowance (GITA) and Green Income Tax Exemption (GITE).	Exploring green financial institutions to accelerate the growth of green investment in Malaysia.



# KEY STAKEHOLDERS OF GTMP





## 2020 Goals

**By 2020:**

**GDP: RM22.4 billion**

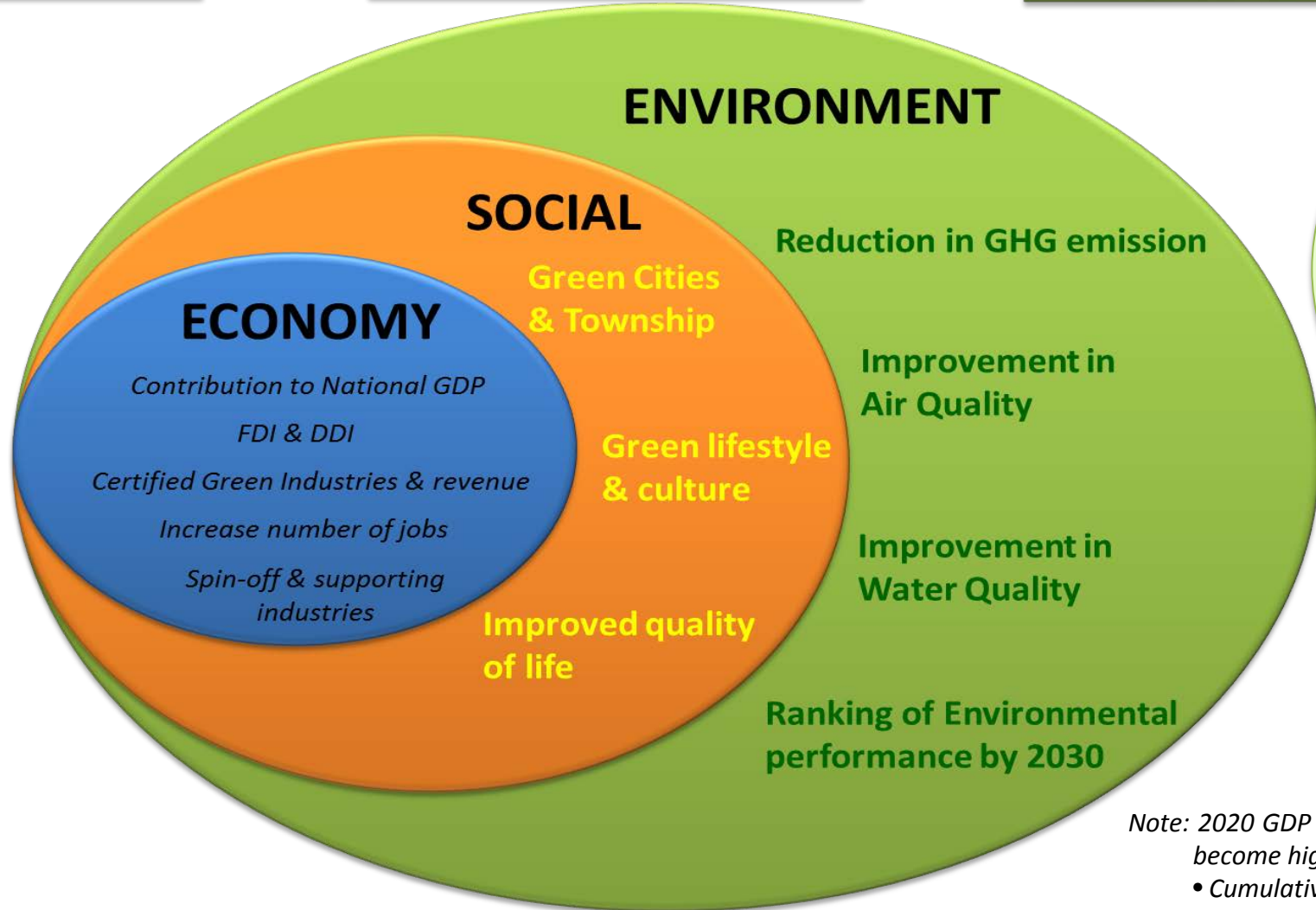
**1.2% of national GDP (estimate)**

**Investments: RM28.0 billion\***

**Green jobs: 144,590\***

**0.7% of workforce**

**Malaysia can potentially achieve 3-4% of GDP by tapping the growth of regional markets by being export oriented**



*Note: 2020 GDP estimation is based on nominal GDP growth rate for Malaysia to become high income nation*

*• Cumulative figure*

## ROLE

1

**Provide strategic plan** for GT to be one of the engines for economic growth (significant contribution to GDP)

2

**Inculcate green culture** as lifestyles to improve quality of life

3

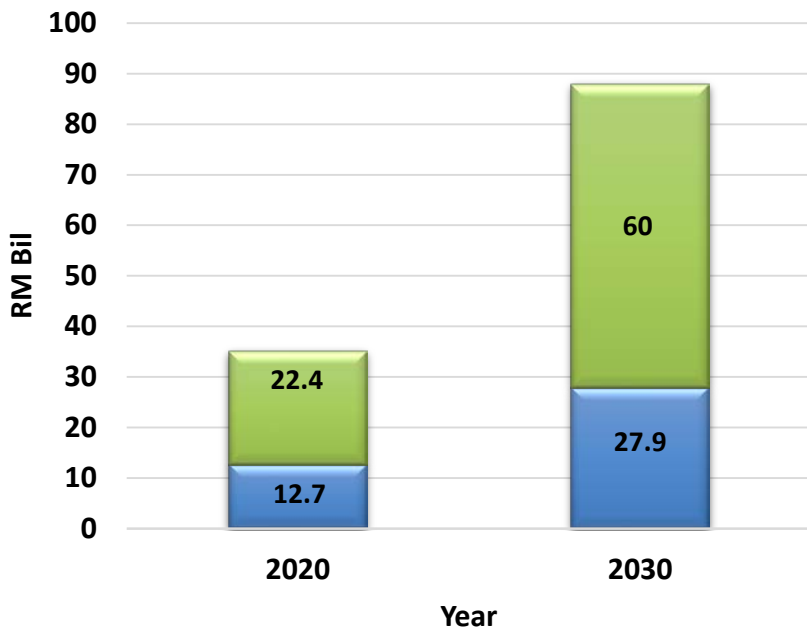
**Facilitate deployment** of GT as mitigation to achieve 40% carbon intensity reduction

## MAIN STRATEGIES OF GTMP

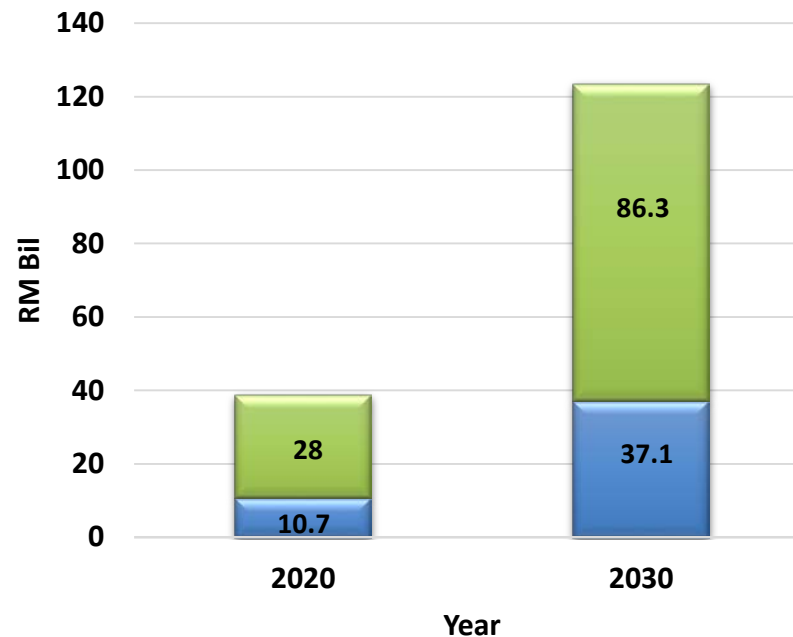
- **Design Ecosystem in Greening Local Companies.**  
*Framework & instrument (leadership, financial, human capital & technology) to produce green products and services.*
- **Identify Growth Areas.**  
*Potential sectors and sub-sectors for domestic and international GT market.*
- **Introduce Enabling Process & Framework**  
*Example Green Procurement, Low Carbon Cities Framework (LCCF) and MyHijau Mark, Green Labelling & Standards.*
- **Advocate Life Cycle (LC) Thinking.**  
*Initiate advocacy programmes and establish LC info-structure (LC database, LC costing, LC assessment).*
- **Facilitate Behaviour Change.**  
*Improve availability, accessibility and affordability of green products and services.*
- **Establish Clear Direction.**  
*Specific target for each sector (ETBWW\*) and mitigation areas*
- **Provide Sustainable Financing**  
*Specialised financial vehicle for GT (i.e. Green Investment Corporation)*
- **Strengthen Regulatory Framework & Economic Instruments**  
*Leveraging existing acts, incentive and tax exemption*

# IMPACT OF GTMP TO THE MALAYSIAN ECONOMY

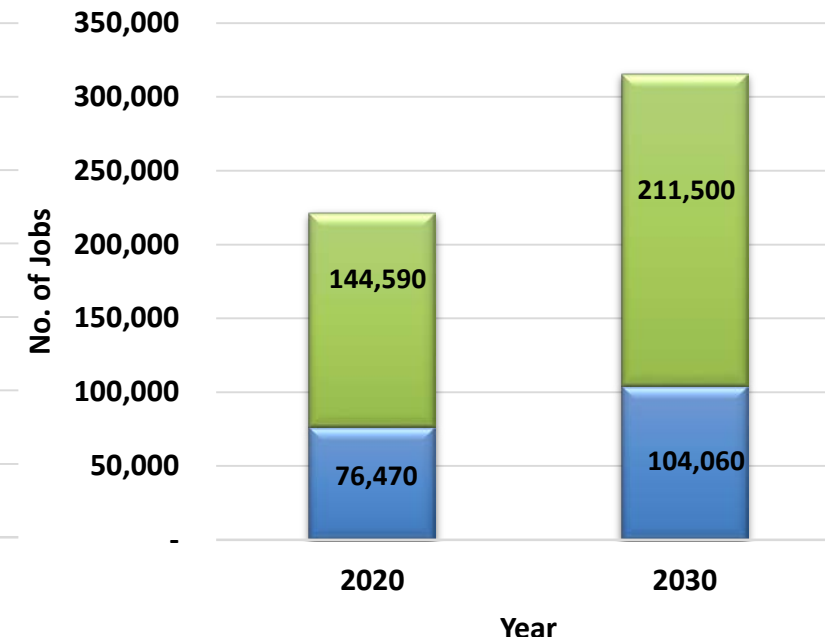
### GT Contribution on GDP



### GT Contribution on Investment



### GT Contribution on Jobs Creation



■ Business as Usual (BAU) ■ Meeting Green Target (MGT)

## GDP share and estimation by 2020

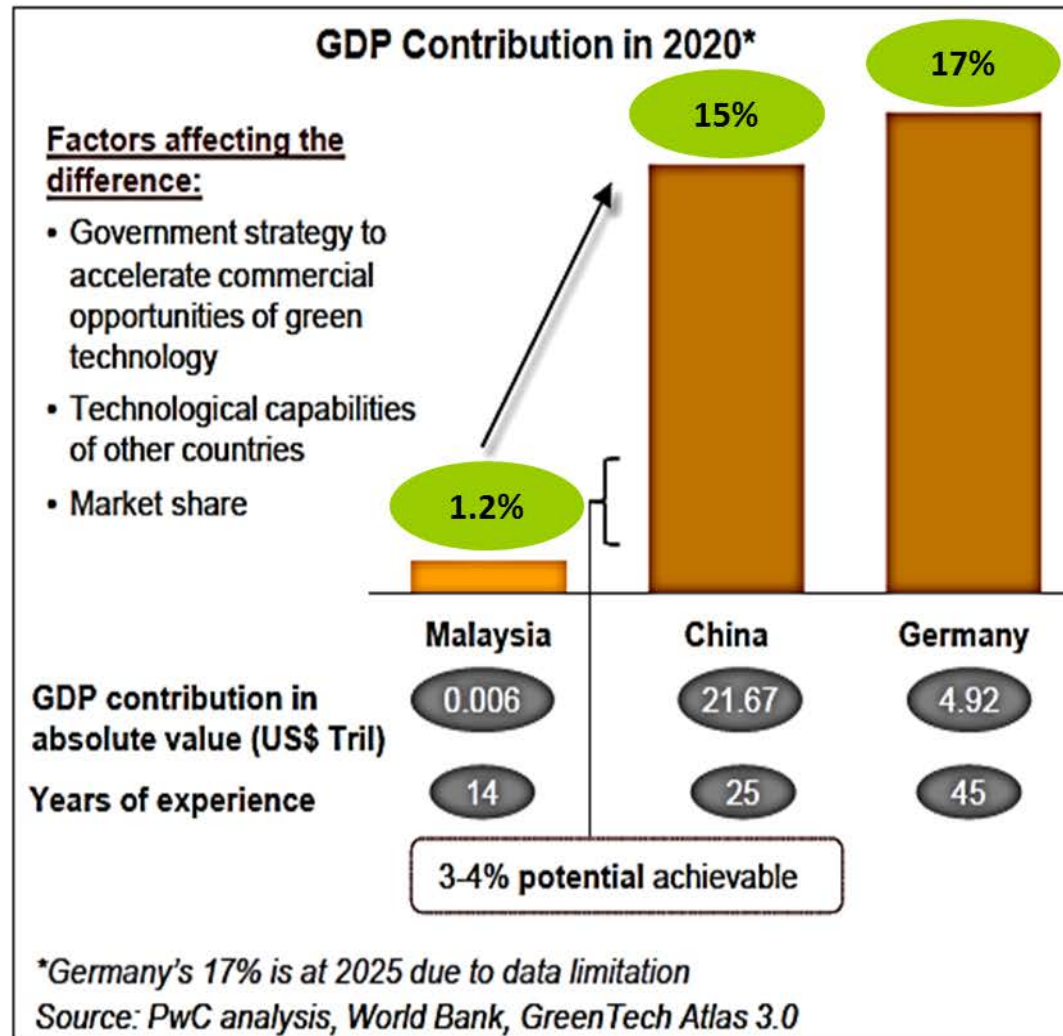
- GDP
  - RM22.4 billion
  - *1.2% of national GDP (est.)*
- Investments
  - RM28.0 billion\*
- Green jobs
  - 144,590\* (0.7% of workforce)

## GDP share and estimation by 2030

- GDP
  - RM60.0 billion
  - *1.5% of national GDP (est.)*
- Investments
  - RM86.3 billion\*
- Green jobs
  - 211,500\* (0.6% of workforce)

# IMPACT OF GTMP TO THE MALAYSIAN ECONOMY

It may be possible to achieve a higher GDP contribution from the green businesses if Malaysia commits to achieving the same capabilities or characteristics that some of the leading green technology nations have exhibited.



Malaysia can potentially bridge the gap and achieve 3-4% by:

- Working towards the capabilities and characteristics which these countries exhibit
- Tapping on the growth of regional markets by being an export-hub
- Bringing in and specialising in new green technology industries, i.e. replicating our success stories

### Solar

Since the operations of First Solar in 2007, its workforce has grown from 109 to 3,500 employees, and has contributed RM3.5 billion to GDP.

### Electrical and electronic

Electrical and electronic products have been the most traded items in Malaysia since the industry's inception in the 1960s. The industry contributes 24.5% to the manufacturing component in the GDP.

Source: SEDA, MATRADE

# IMPACT OF GTMP : SOCIAL

**Improved Quality of Life:** Cleaner cities, reduced cost of living, creating green jobs, comfortable homes, better air quality, healthier society, greener future, sustainable water supply.....

**Reduce air & noise pollution**



**Sustainable water supply**



**Ability to generate own power**



**From sun to 'tank' – simplified & multi-functional infrastructure, reduced land usage**



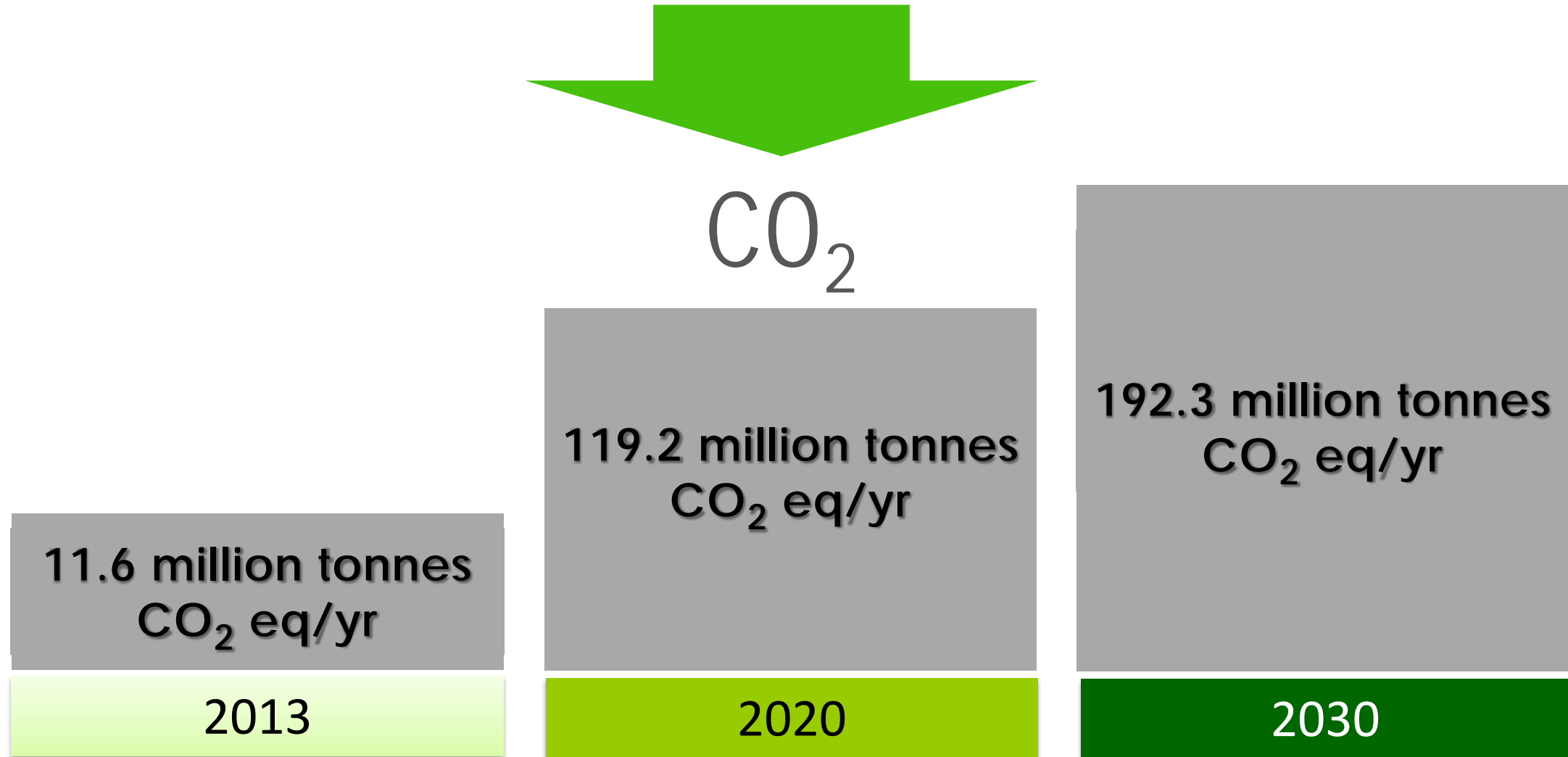
**Active and healthy lifestyle & new mindset**



**Future green generation & innovators**



# IMPLICATION OF GTMP : ENVIRONMENT



*Note: CO<sub>2</sub> reduction in year 2020 and 2030 subject to mitigation in place for the energy, transportation, building, waste and water sectors*



## RECOMMENDATION

To seek the consideration and approval from the Green Technology and Climate Change Council on the followings:

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**Positioning Malaysia as a GREEN TECHNOLOGY HUB**