MiGHT

SCIENCE
to ACTION

CLIMATE MITIGATION: FROM GLOBAL TO REGIONAL AND LOCAL LEVELS
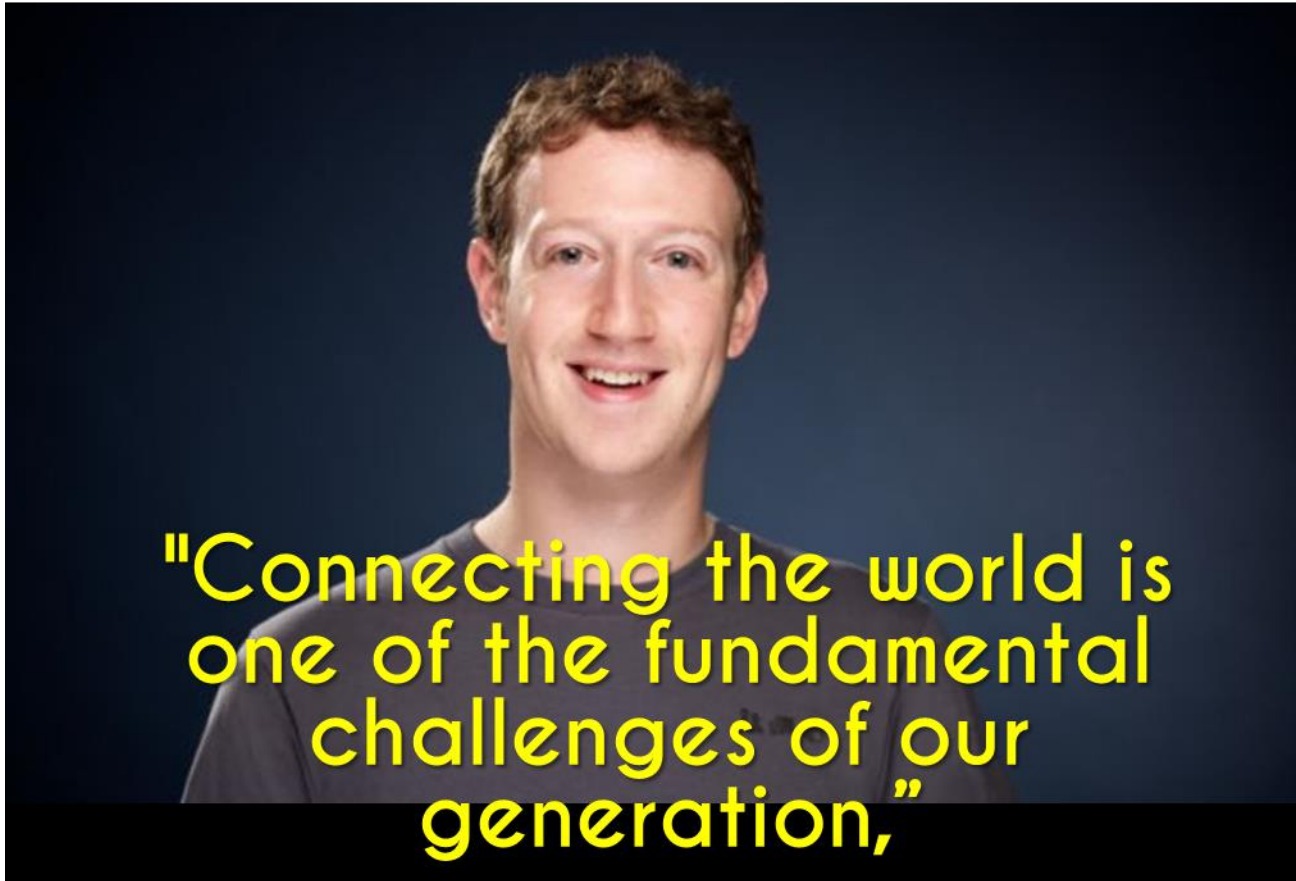
Presentation By:

Datuk Dr Mohd Yusoff Sulaiman
President & CEO

12 October 2015

4th Annual Meeting Low Carbon Asia Research Network, Johor Bahru, 11-13 October 2015

UN Sustainable Development Conference, 2015

"Connecting the world is one of the fundamental challenges of our generation,"

- Mark Zuckerberg at the UN Sustainable Development Conference, 2015

Its' "Connectivity Declaration" states that Internet access is "essential for achieving humanity's goals, and wants to get the Internet to everyone on Earth by 2020.

- ONE, an international advocacy organization founded by U2 front man Bono

Global Challenges

Poverty

Urbanisation

Demography
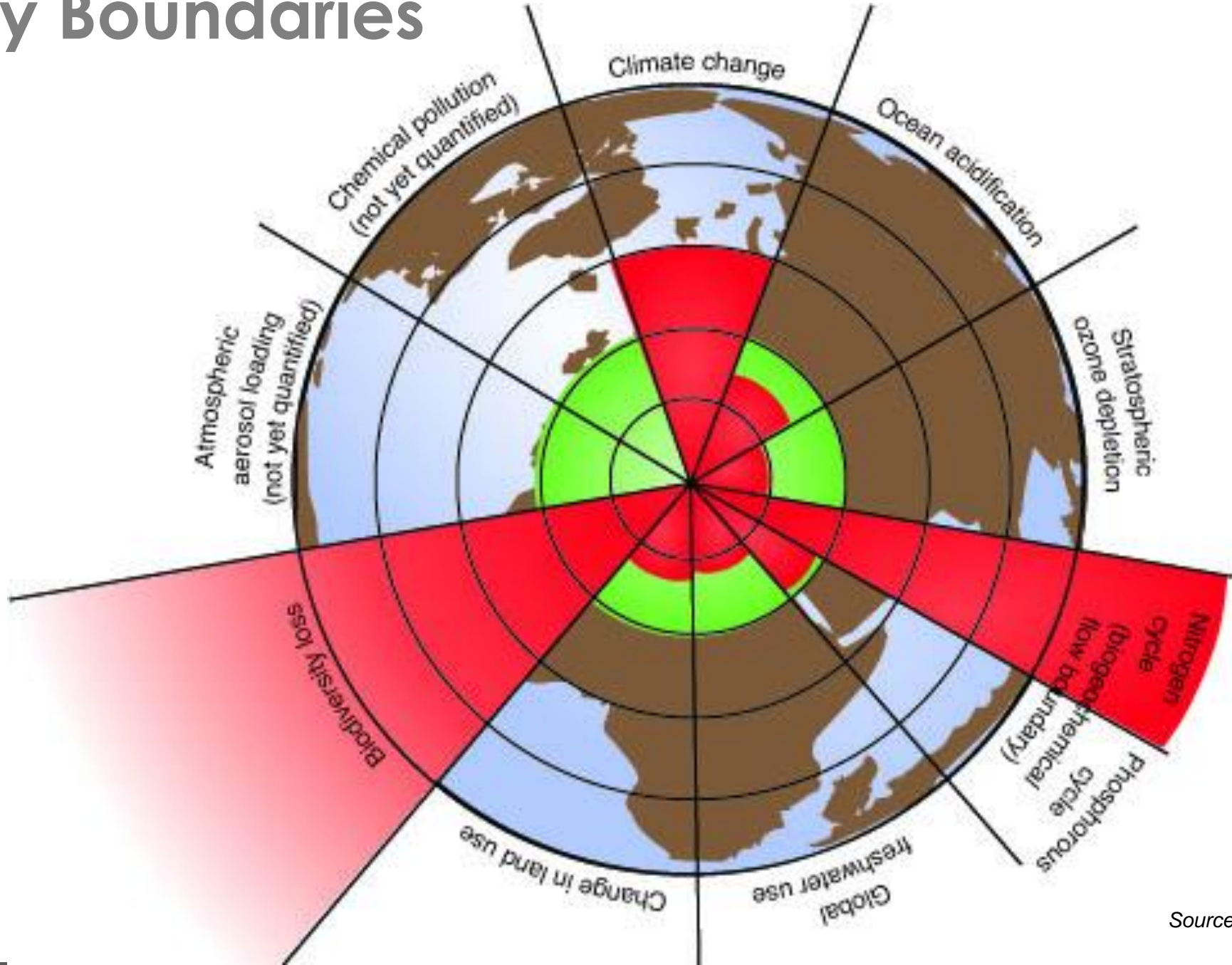
Climate Change

Energy

Food Security

Biodiversity

Water

Planetary Boundaries

Source: Rockstorm et al 2009

Three Pillars to the Post 2015 Development Agenda

Financing for Sustainable Development,
Addis Ababa, July 2015

Sustainable Development Goals,
UN Hq, New York, September 2015

Climate Change Agreement at COP 21,
Paris December 2015

Three Tiered Global Mitigation Agreement at COP 21

Modest Legally Binding Goals to 2030

01

02

Bold Aspirational Deep Carbonization Pathways to 2050

03

Public Private Partnerships for Low Carbon Technologies

National Strategies & Initiatives

- National Green Technology & Climate Change Council

- Low Emission Capacity Building

- Clean Development Mechanism

- Green Technology Funding Scheme

- MYCarbon

- Feed-in-Tariff

Malaysia's Climate Change Priorities

Climate adaptation and mitigation actions supported with adequate adaptation measures

Voluntary measures for emission reduction and transition to a low-carbon society

Eleventh Malaysia Plan: Focus Areas

A) Strengthening the enabling environment for green growth

- Strengthening governance to drive transformation
- Enhancing awareness to create shared responsibility
- Establishing sustainable financing mechanisms

D) Strengthening resilience against climate change and natural disasters

- Strengthening disaster risk management (DRM)
- Improving flood mitigation
- Enhancing climate change adaptation

B) Adopting the sustainable consumption and production concept

- Creating green markets
- Increasing share of renewables in energy mix
- Enhancing demand side management (DSM)
- Promoting low carbon mobility
- Managing waste holistically

C) Conserving natural resources for present and future generations

- Ensuring natural resources security
- Enhancing alternative livelihood for indigenous and local communities

Our Focus

National Waste Grid Program

Benefits

Government

Reduction of up to **RM 5 B in capital** expenditure for waste treatment facilities until 2020
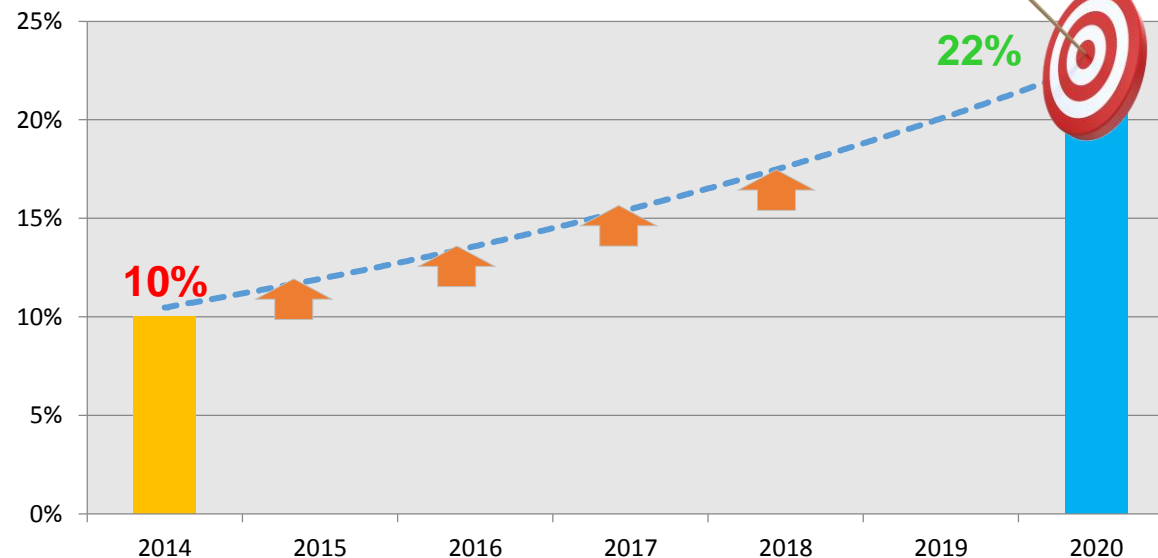
Rakyat

Increased income to the student community by direct buyback points system for recycled items
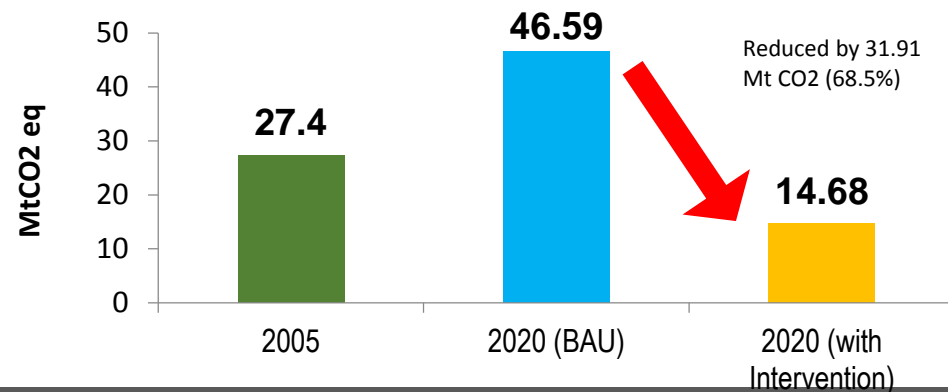
Industry

Capital and operational investment by the private sector up to **RM 2 B until 2020 for privately operated Waste Industry Eco Park**

The National Recycling Rate

10% ... **22%**

(Chart: recycling rate from 10% in 2014 rising to 22% target in 2020)

The Environment

MtCO2 eq

- 2005: **27.4**
- 2020 (BAU): **46.59**
- 2020 (with Intervention): **14.68**

Reduced by 31.91 Mt CO2 (68.5%)

A High Impact Program

NATIONAL WASTE GRID = HOLISTIC WASTE MANAGEMENT

CURRENT

- Single Feedstock **01**
- Single Technology **02**
- Single Product **03**

GOVERNMENT BASED SPENDING

FUTURE

- Multiple Feedstock
- Multiple Technologies
- Multiple Products
- BIO

PUBLIC-PRIVATE PARTNERSHIP

Source: MIGHT – Green Technology Foresight 2030
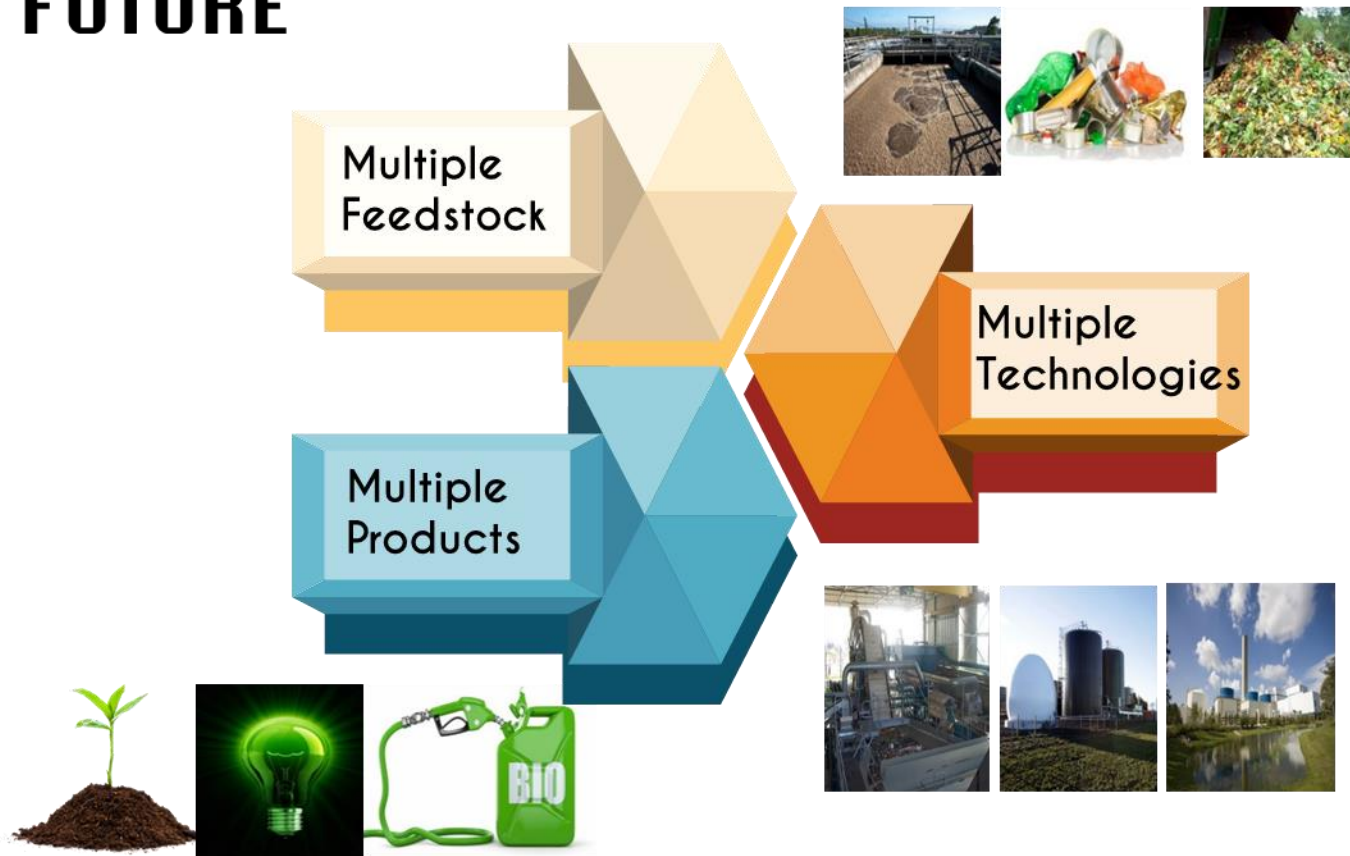
Green Chemicals Program
Completing Oil based Chemicals

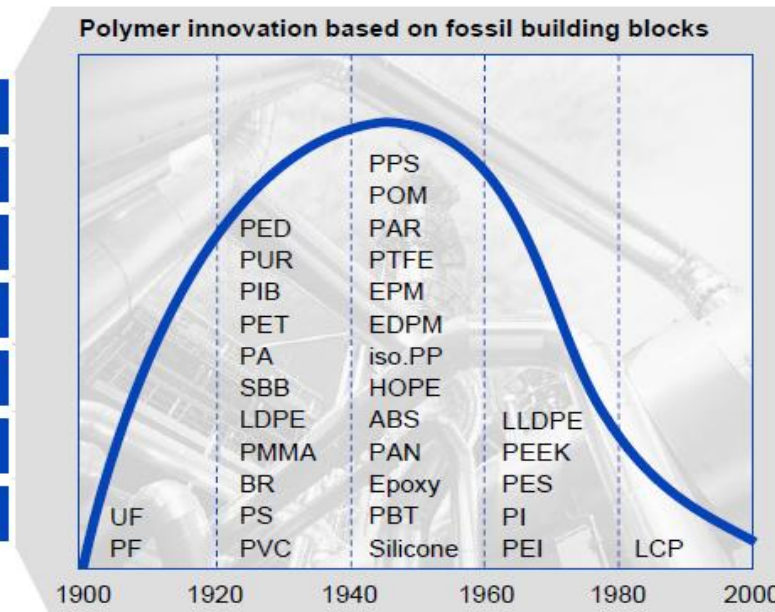**Need for alternative feedstocks...and innovation**

- Oil Scarcity
- Oil price volatility
- Growing population
- Growing Wealth

Sustainable Demand

- Concerning of reserves of fossil fuels
- Growing public environmental concerns (climate change, CHG reduction, global warming, etc.)
- Sustainability demand from end consumers
- Sustainability objectives set by many companies

Technology Development

- Continued advanced in biotechnology
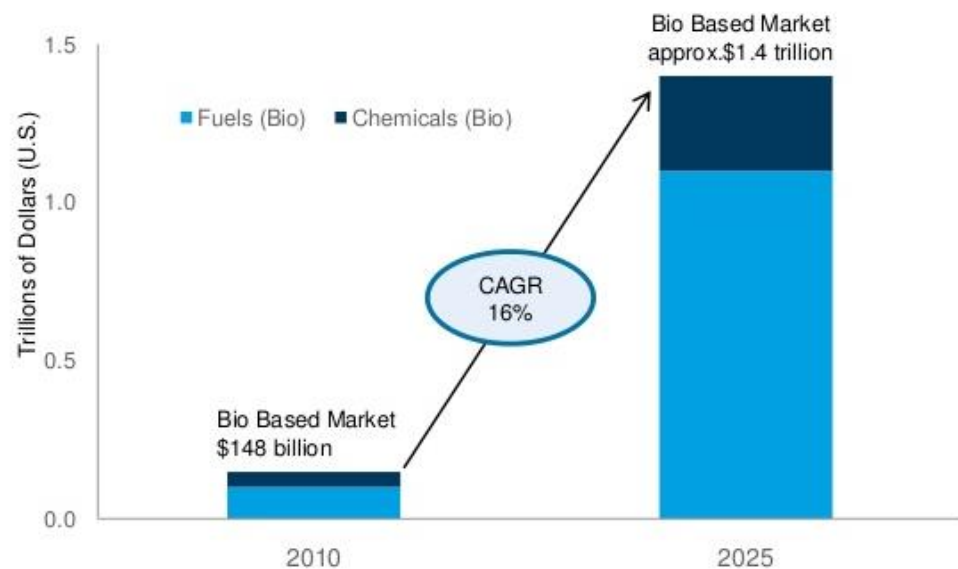- Agricultural feedstock at competitive prices

Feedstock blocks: Ethylene, Propylene, Butadiene, Benzene, Toluene, Xylene, Methanol

Polymer innovation based on fossil building blocks

Source: McKinsey & Co., 2009

1. **New Building Block**

2. **New Opportunities**

Bio-based Market Projection

Bio-based Market Opportunity

	2010	2025
Total Chemicals & Fuels Market	$5.0 trillion	$8.0 trillion
Bio-based Share	3.0%	17%

Source: Silicon Valley Bank June 2012

From Petrochemicals to Green Chemicals

We use 87million barrels of oil per day
Chemicals represent <10% of total oil consumption

- Plastics packaging
- Chemicals in shampoo
- Surfactants in detergents
- Chemical fibers in cloth
- Ink
- Glue
- Paint
- Rubber

WHAT DO WE DO WHEN THE WORLD RUNS OUT OF OIL?
– No Oil, No Plastic!

Smart Communities Program

Industry Driven Projects Based Partnership Centric Government Facilitated

RMK-11 : People Economy

TO PROVIDE VALUE EXPERIENCES

RMK-11 : Capital Economy -'Green Growth'

GREENING OF CITY FUNCTIONS

WELLNESS

BUSINESS

LEARNING

SAFETY, SECURITY & DISASTER

TOURISM

ENERGY

WATER

WASTE

TRANSPORT

INDUSTRY

......Integrating City Systems for High Inclusiveness & High Multiplier Impact

(Focus Areas : Community Needs Driven, Green Industry Clusters, Capacity Building, R&D & Localization)

International Collaboration – Strengthening the 'Melaka Living Lab'

1. NEWTON-UNGKU OMAR FUND (NUOF) : 1st Call - Big Data Project in Melaka

PROJECT : BUILDING LOCAL CAPACITY IN UNDERSTANDING, ANALYZING AND VISUALIZING BIG DATA IN MELAKA, MALAYSIA

Status – Workshop No.2 in Melaka – pending date finalisation
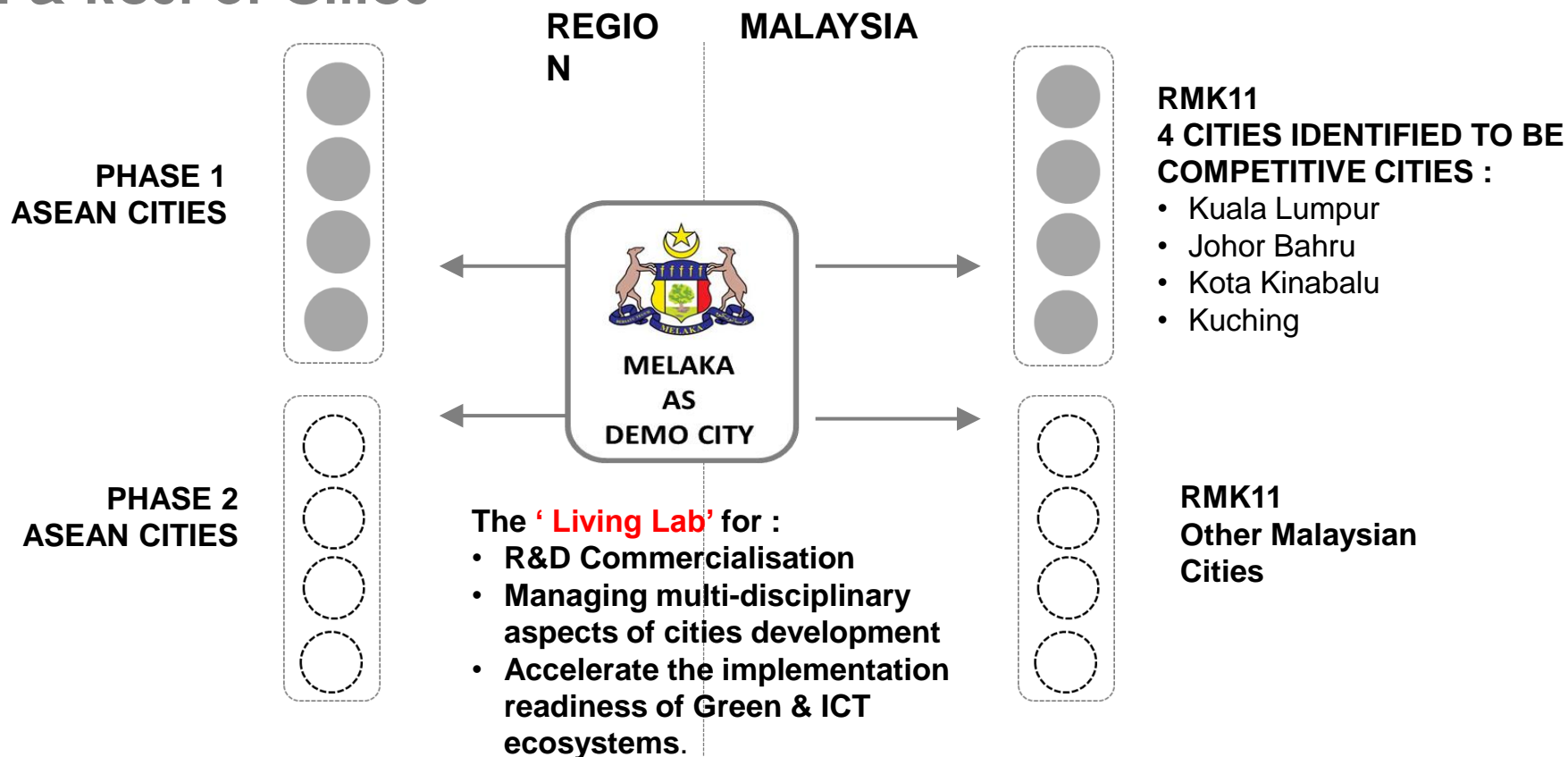
Workshop 1:
1. Objectives :
   - To provide project overview and deliverables/ timeline.
   - To gather input on implementation
   - To gather information on related projects to date in Malaysia
2. No of days : 1 full day
3. Location : Kuala Lumpur
4. No of pax : 100 pax

2. NUO : 2nd Call – Potential Demo Projects in Melaka

Innovate UK Technology Strategy Board

1. Cambridge : ICT- Platform Technology for Sensors
2. IES : City Data & Simulation
3. Transport System Catapult : ICT- Multi-Modal Citizen Journey Planning.
4. Green Lizard : Green – Platform Technology from Biodiesel By-products to value add chemicals applicable in multiple sectors.

Status – Facilitating linkages for submission on 30-9-15.

3. GLOBAL ENVIRONMENT FACILITY 6 : Sustainable Cities Development in Malaysia

Roll-out Plan :
Sept 2015 : Engagement with EPU as Key Partner
Sept 2015 : Engagements with Key Partners, e.g. Corridors.
Oct 2015 : National Steering Committee Meeting No.1
Oct 2015 : Workshop 1
Dec 2015 : Workshop 2
Feb 2016 : Workshop 3
May 2016 : Submission of Project Details
Sept 2016 : Disbursements of Remaining project Funding

Role of Melaka & Rest of Cities

REGION | MALAYSIA

**PHASE 1
ASEAN CITIES**

**MELAKA
AS
DEMO CITY**

**RMK11
4 CITIES IDENTIFIED TO BE
COMPETITIVE CITIES :**
- Kuala Lumpur
- Johor Bahru
- Kota Kinabalu
- Kuching

**PHASE 2
ASEAN CITIES**

The **' Living Lab'** for :
- **R&D Commercialisation**
- **Managing multi-disciplinary aspects of cities development**
- **Accelerate the implementation readiness of Green & ICT ecosystems**.

**RMK11
Other Malaysian
Cities**

**COLLABORATION
ARRANGEMENTS**

**MIGHT IN PARTNERSHIP
WITH REGIONAL PLATFORMS
:**
- ASEAN Secretariat
- ASEAN Innovation Network
- IMT-GT

**MIGHT IN PARTNERSHIP
WITH STATE PLATFORMS :**
- Regional Economic Corridors
- State Green Technology Corporations
- State ICT GLCs.

Global Cleantech Innovation Programme

VISION

Malaysia as **Regional** Cleantech innovation **hub** with **competitive** global status **companies** delivering solution to mitigate climate change and environment degradation.

STRATEGIC OBJECTIVES

1. Creating **investable** Malaysian cleantech companies

2. **Bridging** Market, Technology & Funding.

3. Intensify **commercialization** towards green **market access** through national programs such as Smart Communities.

4. Continue Support to accelerate GCIP **Alumni** towards **Scale-up** stage & becoming Regional/Global Industry **Champions**.

Cleantech Global Network

CLEAN TECH OPEN — SILICON VALLEY

ARMENIA
TURKEY
PAKISTAN
THAILAND
INDIA
MALAYSIA
SOUTH AFRICA

MARKET — SMART CITY

GCIP — Global Cleantech Innovation Programme

TECHNOLOGY
- Technology Foresight
- Technology Deepening
- Access to Academia

FUNDING
- Investments
- Facilitation funding
- Access to Venture Cap.

Free The Seed to represent Malaysia at global green forum

Digital News Asia Oct 21, 2014

- Processes paddy husks into fibre for boxes, packing material
- Has the potential to improve the livelihood of farmers

Free The Seed founder Ramaness Parasumaran (third from left) receiving his prize from Deputy Minister of Energy, Green Technology and Water, Mahdzir Khalid.

AN idea to turn fibre derived from paddy husks and stalks into recyclable boxes and other packing material won the Malaysian leg of the Global Cleantech Innovation Programme (GCIP).

Free The Seed Sdn Bhd came out tops in the competition-based accelerator programme that aims to nurture startups in the green technology sector to bring their ventures to the next level by providing them with mentoring, coaching and connections to the right investors and markets.

Organised by the United Nations Industrial Development Organisation (Unido) and The Cleantech Open accelerator, and supported by the Global Environment Facility (GEF), the programme was held for the first time in Malaysia.

Sustainable Development Solution Network (SDSN)

The Sustainable Development Solutions Network (SDSN) is a global network that mobilizes scientific and technical expertise from academia, civil society, and the private sector in support of sustainable development problem solving at local, national, and global scales.

Functions

1. To provide expert advice and support

2. To identify critical pathways to SD in 12 thematic areas

3. To promote Solution Initiatives

4. To expand regionally and nationally to accelerate practical problem solving

5. To develop and disseminate online materials

SDSN: Thematic Networks
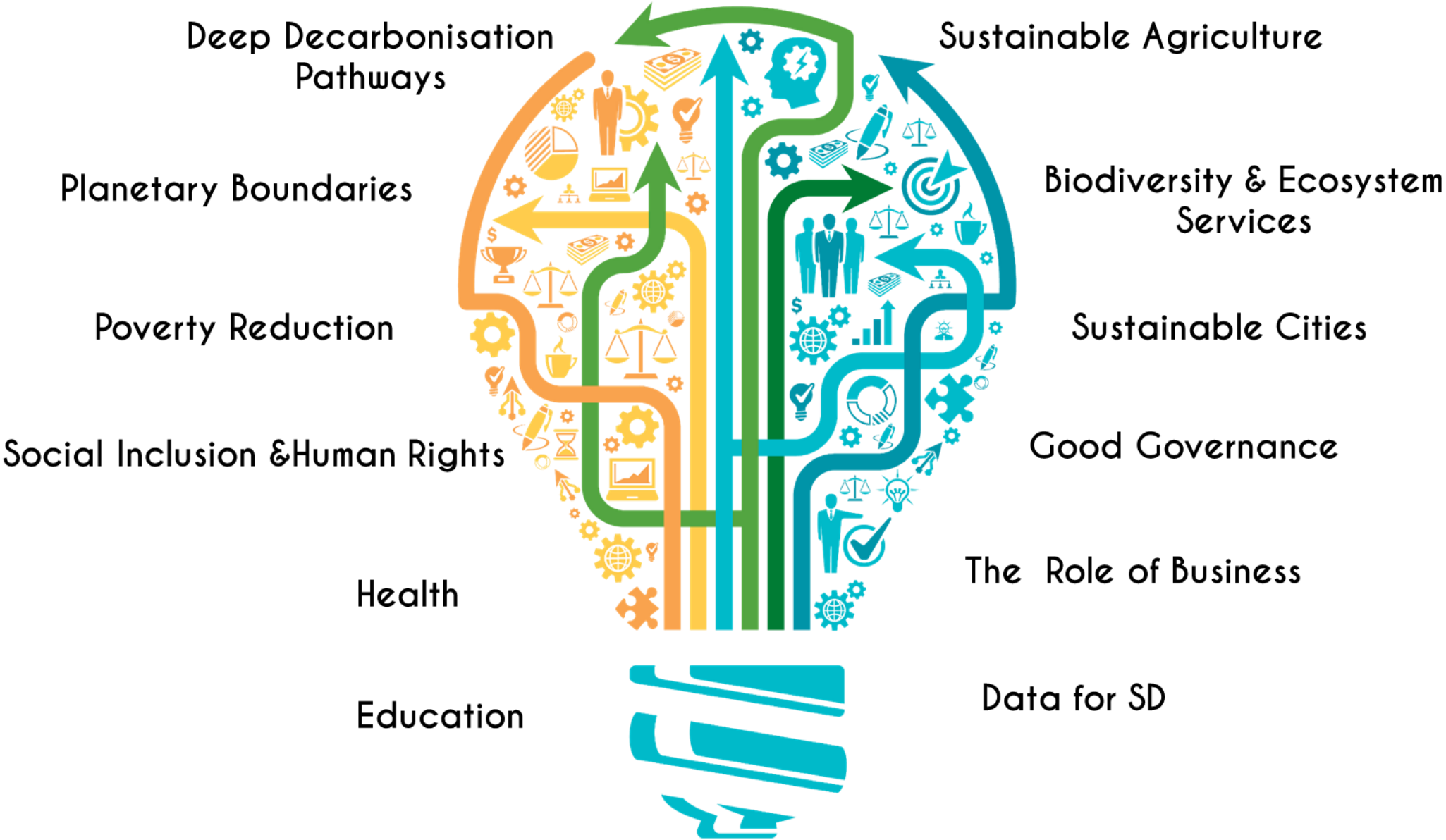
Eco-homes For Disaster Relieve

Climate Change and Natural Disaster has displaced 120 million people from 2008 to 2012, or an average of 24 million people a year.
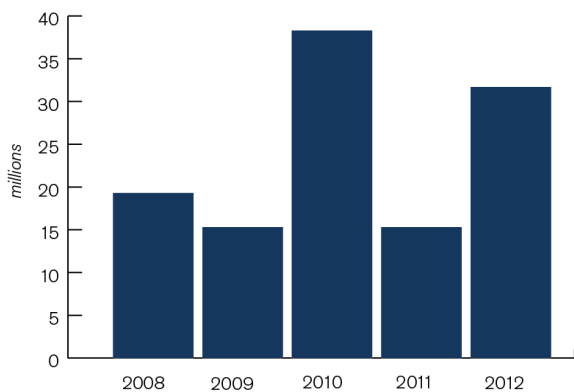
People newly displaced each year by climate and weather related hazards, 2008 – 2012 (Source: *Internal Displacement Monitoring Centre (IDMC)*)

Current Efforts for Climate Displaced & Environmental Migrants

Immediate Response Systems are Limited

1	**2**	**3**
Immediate housing for displaced persons are limited in quantity and quality	Most are tent based (very temporary in nature) and cannot survive against elemental forces for long	Quantity and quality is a problem – often not enough sturdy housing for medium to long-term climate change displaced refugees.

In conclusion …

Implementation,
Implementation,
Implementation

A New Business Model

Collaborative Model That Works On A Win-win Approach

THANK YOU

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