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CONNECT
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Connecting
your business to
global opportunities

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 **SINGAPORE
BUSINESS
FEDERATION**
Apex Business Chamber

SUPPORTED BY
 **Enterprise
Singapore**

IN PARTNERSHIP WITH
 **SMART CITIES
NETWORK**

Welcome to SBF Global's

Fostering Malaysia-Singapore Partnership Through Smart Cities Projects in Penang & Johor

29 June 2021, Tuesday | 3.00pm to 4.30pm (GMT +8)

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This webinar is being recorded and will be posted on SBF's YouTube Channel.

Learn with us

- About markets
- About new customers
- About Free Trade Agreements

Because knowledge is power.

Land with us

- Dedicated digital spaces
- Established networks
- Hands-on advice and facilitation

Scale and grow *smartly*.

Localise with us

- Trusted relationships abroad
- Deepen market presence
- Secure long-term sustainability

Because network is net worth.

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PROGRAMME LINE UP

3.00 pm

Welcome Note

By SINGAPORE BUSINESS FEDERATION

3.05pm



Smart Cities 101 Training Programme and Potential Collaboration Opportunities

Ms MAIMUNAH JAFFAR
Director, Lead Technology and Innovation,
Iskandar Regional Development Authority
(IRDA)

3.20pm



Investment and Collaboration Opportunities with Digital Penang

Mr TONY YEOH
CEO, Digital Penang Sdn Bhd

3.35pm



How Singapore Companies can Better Engage Malaysian Stakeholders

Ms GOH SEOK MEI
CEO, Graffiquo, and Executive
Director, United Cities

3.50pm



Experience Sharing: Food Security in Malaysia

Mr BK SINHA
Founder & Director, Habitat Enviro Sdn
Bhd , and Council Member, malaysiaGBC

4.05pm

Q&A / Panel Discussion

4.25pm

**Closing remarks and preview of
what's next by SBF Global**

BUSINESS CONSULTATION SESSION

For companies who may have questions on smart cities projects in Malaysia or are interested to look for collaborative partners in Malaysia, sign up for our complimentary Business Consultation Session by emailing:

Contact: Chan Zhiquan
Manager, Infrastructure, SBF Global
Email to: zhiquan.chan@sbf.org.sg



Smart Cities 101 Training Programme and Potential Collaboration Opportunities

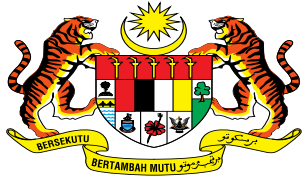
Ms MAIMUNAH JAFFAR

Director, Lead Technology and Innovation, Iskandar Regional Development Authority (IRDA)



Ms Maimunah is a Director in IRDA who oversees Technology and Innovation projects. She also leads the Smart City Iskandar Malaysia team as the Chief Smart City Officer for Johor Bahru in the ASEAN Smart Cities Network program alliances. Ms Maimunah is the Vice Chairman for Malaysia Green Building Council Southern Chapter 2021 and is in the pro tem Committee of Malaysia Smart Cities Alliance Association.

Prior to her current positions, Ms Maimunah worked as an architect in the United States for 4 years before returning to Malaysia in 1992 to work as an urban designer in Kuala Lumpur. Ms Maimunah represented Iskandar Malaysia to launch and speak in the Conference of Parties (COP) and has spoken at various national and international conferences and summits on the topic of Sustainable and Smart City.



GOVERNMENT OF MALAYSIA



Smart Cities 101 Programme and Potential Collaboration Opportunities

Presentation by

Maimunah Jaffar

Director Iskandar Regional Development Authority

Lead Technology & Innovation

Iskandar Malaysia



GOVERNMENT OF MALAYSIA

Presentation content



- **Overview of Malaysia Smart City Framework**
- **Iskandar Malaysia effort on Smart City projects**
- **Smart City 101 Program**
- **Common Challenges in Malaysia cities and possible projects**
- **Recipe for partnership**



GOVERNMENT OF MALAYSIA

Malaysia Interest in Smart Cities



Rise of City population

Rapid Urbanisation

Urban Challenges

Climate change

2021: **32.7 mil**

2030: **36.1 mil**

Nearly **78%** of Malaysia total population live in urban areas

Source: World Bank

Resource Limitation

Inter agencies enforcement

Improve public services for enhance quality of life

Digital Transformation Plan
end to end gov online services up to **85%**

80% of gov data on cloud

New Economic Growth

Economic competitiveness

Digital business trend

Investment in Technology and Innovation

Digital Transformation Plan By 2025

22.6% digital economy to Malaysia's GDP

IR4.0



GOVERNMENT OF MALAYSIA

2019 : Smart City Malaysia Framework



Malaysia Smart City Framework launched on 24th Sep 2019



FINAL REPORT
MALAYSIA SMART CITY FRAMEWORK

2018



KPKT

Ministry of Housing and Local Government

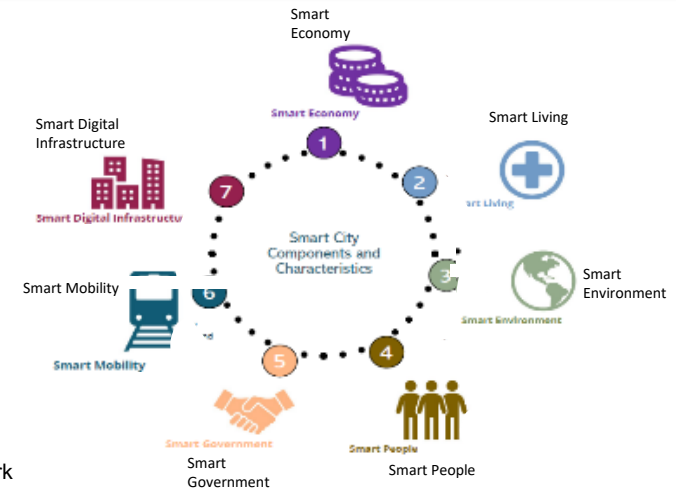
MYANM SMART CITY

Johor Bahru is pilot cities for MSCF & ASCN (represented by IRDA)



5 pilot cities/region/dev

- Kuala Lumpur
- Johor Bahru
- Kuching
- Kota Kinabalu
- Kulim H Tech Park



26 pilot cities



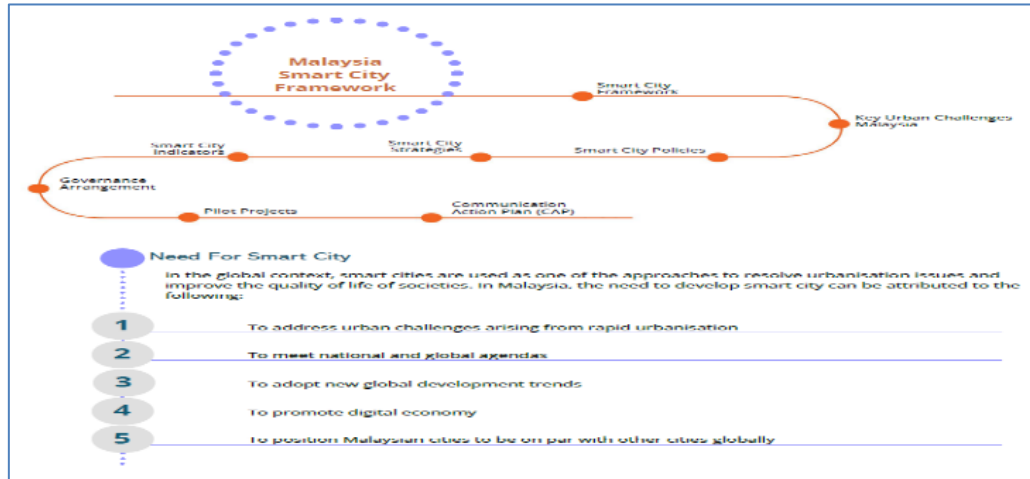
ASEAN Smart Cities Framework launched on November 2018





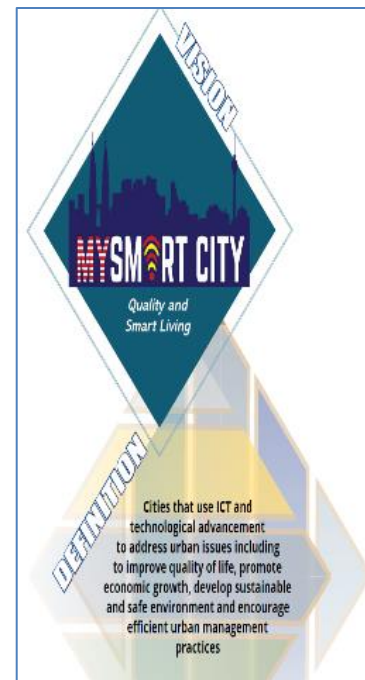
GOVERNMENT OF MALAYSIA

Malaysia Smart City Framework



| SUSTAINABLE DEVELOPMENT GOALS | | |
|--|--|--|
| 3 GOOD HEALTH AND WELL-BEING | Goal 3: Ensure healthy lives and promote well-being for all at all ages | 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE |
| 4 QUALITY EDUCATION | Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all | 10 REDUCED INEQUALITIES |
| 5 GENDER EQUALITY | Goal 5: Achieve gender equality and empower all women and girls | 11 SUSTAINABLE CITIES AND COMMUNITIES |
| 6 CLEAN WATER AND SANITATION | Goal 6: Ensure availability and sustainable management of water and sanitation for all | 12 RESPONSIBLE CONSUMPTION AND PRODUCTION |
| 7 AFFORDABLE AND CLEAN ENERGY | Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all | 13 CLIMATE ACTION |
| 8 DECENT WORK AND ECONOMIC GROWTH | Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all | |

Source: World Economic Forum, Sustainable Development Goals, 2015



LATAR BELAKANG

Rangka Kerja Bandar Pintar Malaysia (2019)

“Accreditation of smart city standards shall be introduced to set a standard for smart city qualification and recognition”



| RATIONALE | DESCRIPTION |
|---|--|
| There is <u>no current standard to measure city's qualification</u> to be recognised as a smart city in the nation. | The accreditation of smart city standard policy will be used for sharing purpose, common understanding, integration, investment, procurement and scaling for smart city development, taking into consideration the elements specified by the relevant existing agencies. |

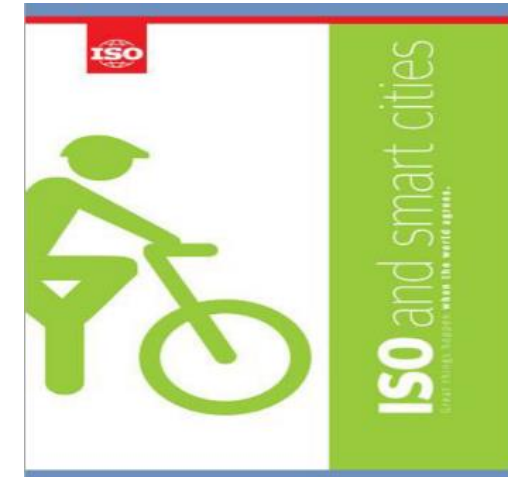
BAB 4:

Dasar Bandar Pintar - Akreditasi bandar pintar (menetapkan standard bandar pintar untuk pengiktirafan)

BAB 8:

Pelan Tindakan - Menubuhkan Akreditasi Bandar Pintar Malaysia berdasarkan ISO 37122

Tindakan: Jabatan Standard Malaysia (JSM) dan PLANMalaysia



ISO 37122 – SUSTAINABLE CITIES AND COMMUNITIES (INDICATORS FOR SMART CITIES)

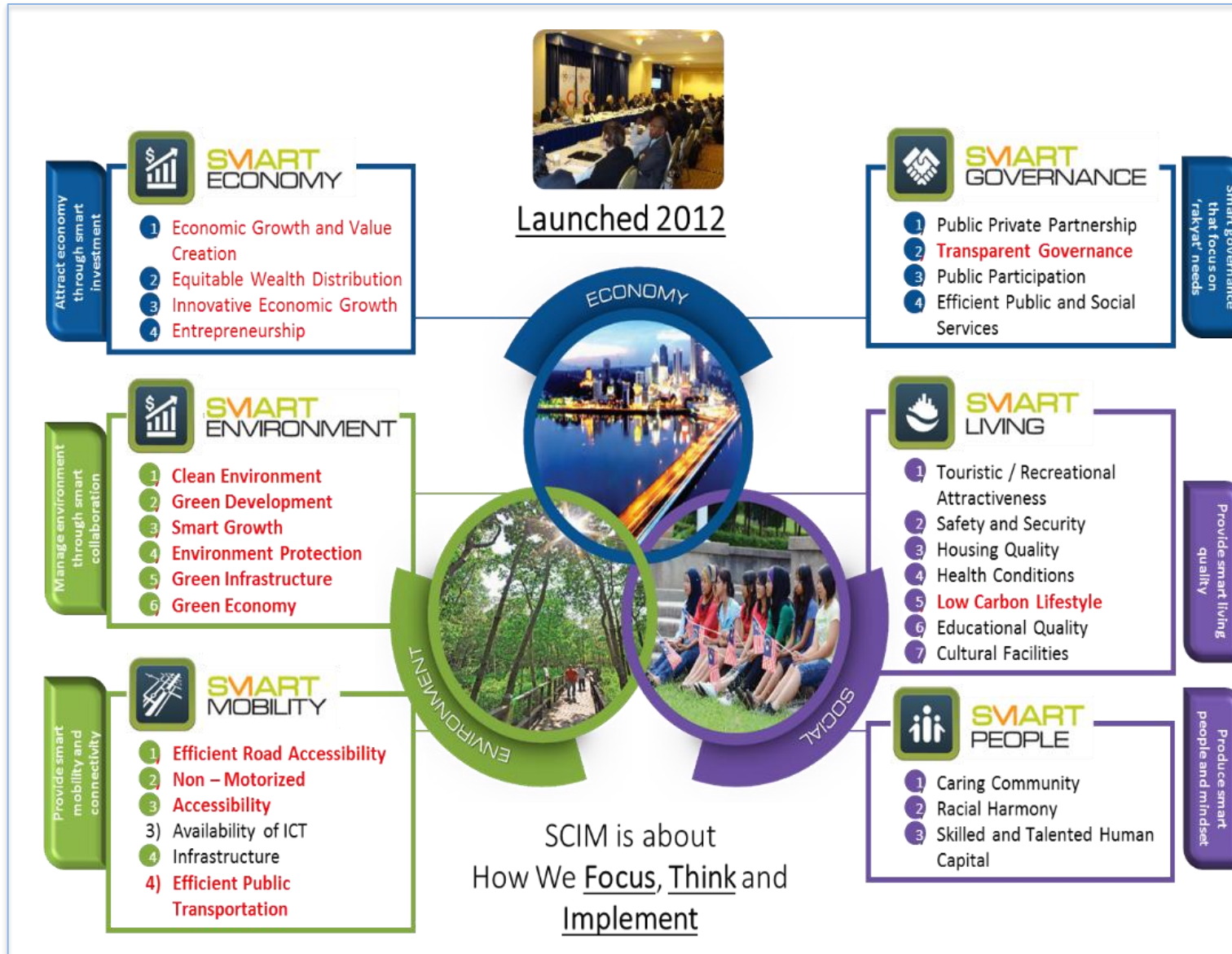


12

42

26

2012: IMSC cover 6 dimension and 4 enabler eco-system



Enabler and Eco System

- Infrastructure – hardware and software and Data



- IMUO and Data Analytics from Connected Devices



- Government Action for Public Services Improvement



- Private driven smart solution to enhance quality of life





Iskandar Malaysia Location



Global and Regional Context



Iskandar Malaysia covers **FIVE** local planning authorities.



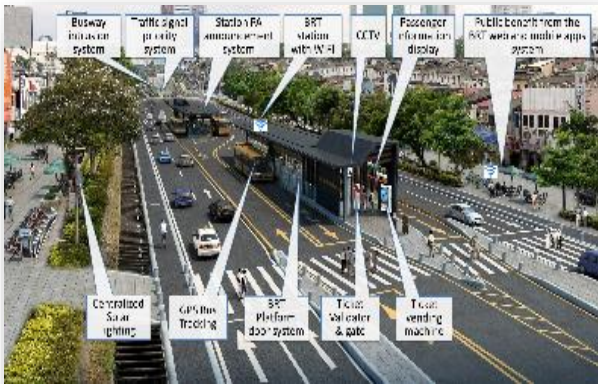
- Established in **2006**.
- An economic development corridor in the **Southern Johor, Malaysia**.
- Encompasses an area of **2,217 sqkm**, which is **3 times bigger** than Singapore.



Iskandar Malaysia Key on-going Smart City projects



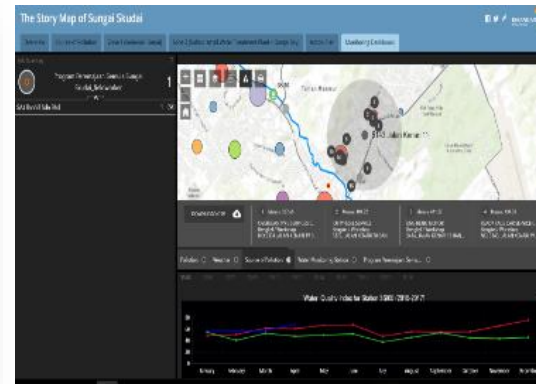
Smart City with Intelligent Transportation Iskandar Malaysia BRT (IMBRT)



Sedenak Data and Digital Regional Hub



River monitoring for Sg Skudai



Iskandar Malaysia Urban Observatory (IMUO)



Regional Data Analytics Platform

Smart Integrated Mobility Management System (SIMMS)

Smart City Action Plan with Local Authorities in Iskandar Malaysia

Smart Integrated Mobility Management System (SIMMS)

Developing the implementation strategy for Iskandar Malaysia's Smart Integrated Mobility Management System

Data Utilisation and Data Management for Evidence-Based Urban and Transport Planning

Introducing planning decision support to help utilize data from the integrated mobility system for better city planning outcomes





GOVERNMENT OF MALAYSIA

Key projects from the 6 cities in the ASCN platform




KUALA LUMPUR

Vision
Kuala Lumpur aims to be a world class sustainable city by 2020

Focus Areas
 Industry and Innovation
 Quality Environment
 Built Infrastructure

Project 1
KL Urban Observatory

Project 2
Kuala Lumpur Pedestrian and Bicycle Lane



JOHOR BAHRU

Vision
To develop Johor Bahru Smart City into a Strong and Sustainable metropolis of international standing.

Focus Areas
 Good Governance
 Quality Environment

Project 1
Iskandar Malaysia Urban Observatory [IMUO] Tool for Decision-making, Stocktaking and Measurement

Project 2
Integrated Urban Water Management Blueprint which includes the Sourcing of New Water Solutions and Enhancements



KOTA KINABALU

Vision
Transforming Kota Kinabalu into a clean, green and liveable city.

Focus Areas
 Quality Environment
 Built Infrastructure

Project 1
Integrated Public Transport System

Project 2
Integrated Solid Waste Management



KUCHING

Vision
Kuching aims to improve the citizens' quality of life and achieve Smart City status through digital transformation.

Focus Areas
 Mobility
 Urban Resilience

Project 1
Smart Mobility - Integrated Smart Traffic Light System

Project 2
Integrated Flood Management and Response System



GOVERNMENT OF MALAYSIA

Smart City 101 program



Module 1

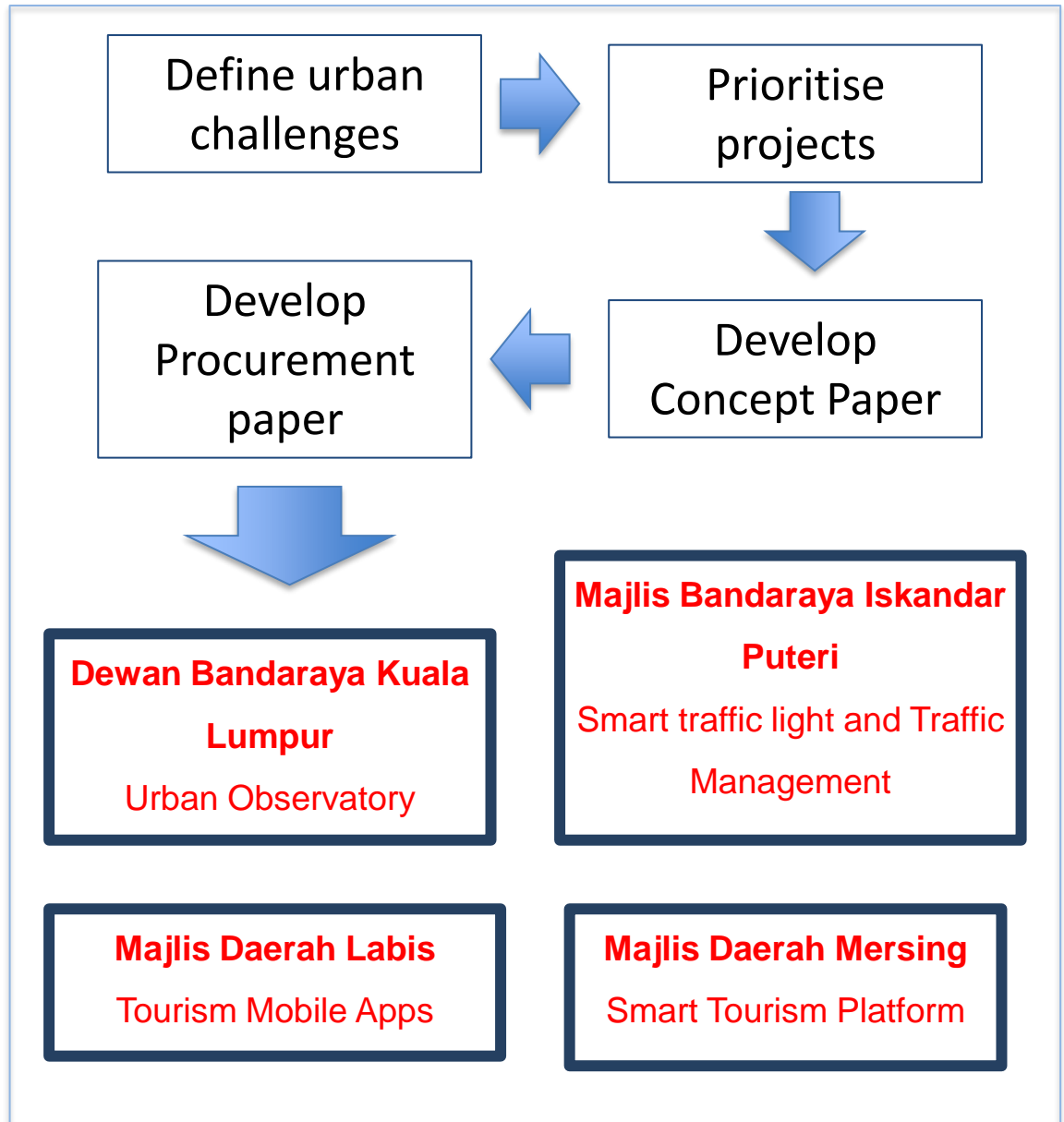
- How Smart City projects can improve city efficiency
- Importance of Smart City ecosystem
- Categorization of Smart City projects

Module 2

- Projects prioritization and best solution to deploy
- Right business model to ensure sustainability of projects

Module 3

Basic procurement understanding for smart city component which include licensing, data protection and IP and business model





GOVERNMENT OF MALAYSIA

Common Urban Challenges faced by Cities in Malaysia



Network and infrastructure



Traffic Management



Waste Management



Economic regeneration



Efficient Gov delivery system



Environmental related monitoring and enforcement

Challenges faced by Local Authorities in driving Smart Cities

Smart Cities Challenges



Infrastructure readiness

Uncoordinated joint collaboration and policies to resolve issues

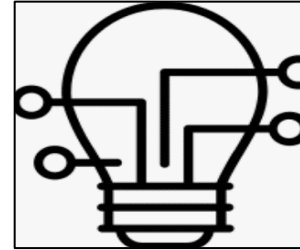
Mind set change and Readiness of resources

Limited Funding at gov agencies

Funding Challenges



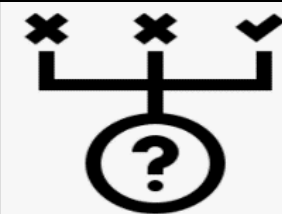
Understanding the full range of options available



Advantages and disadvantages of each solution

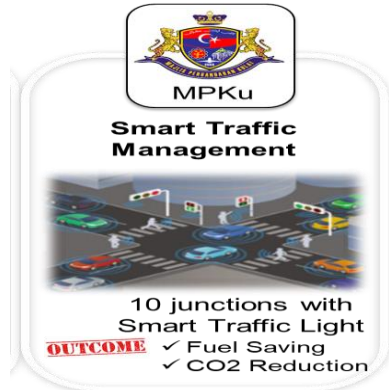


Some areas of digital infrastructure remain untested or tested only to a limited capacity.



Unproven benefits of selected solution

Possibilities



- Public Funding (own funding)

- **Sharing operating profits or losses**
- **Profit-sharing** system that ensures each entity is compensated

Revenue sharing between PBTs and vendors/PPP



- International grants

Financial arrangement - **a third-party developer owns, operates, and maintains the project** such as photovoltaic (PV) system, and a host customer like PBTs **agrees** to site the system on its property and purchases the system's electric output from the **solar services provider** for a predetermined price

- Differed payment from savings

A self-contained small-scale capital investment or technical assistance **project**, the purpose of which is to "demonstrate" a particular approach

- Demonstration projects

Conclusion, recipe for partnership



THE RIGHT PARTNERS

Partners that can provide solution to the urban challenges



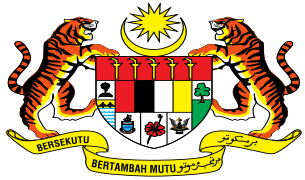
DEMONSTRATION PROJECTS

Partners that can demonstrate the right solution



WIN-WIN BUSINESS MODEL

Partners that can come out with right business model



GOVERNMENT OF MALAYSIA



THANK YOU



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www.iskandarmalaysia.com.my

Investment and Collaboration Opportunities with Digital Penang

Mr TONY YEOH

CEO, Digital Penang Sdn Bhd



Mr Yeoh is the CEO of Digital Penang, a government agency of the State of Penang, Malaysia, established to accelerate efforts to capture opportunities in the digital economy and promote a digitally engaged society.

Prior to his current position, Mr Yeoh has had 12 years of experience as a Consulting and Systems Integration Lead based in China, Taiwan, Thailand, Singapore, and Malaysia for Hewlett Packard (HP), and spent over 10 years based in Singapore as the regional Chief Information Officer for Intercontinental Hotels Group (IHG) Asia Middle East Africa region.



INVESTOR OVERVIEW

For more info
Email

contact@digitalpenang.my



www.digitalpenang.my

January 2021

Penang, Malaysia



Land area: 1,031 sq km



Population: 1.8 mil
68.8% working age group



Multilingual: English, Malay,
Mandarin, Japanese, Korean etc



Literacy rate: 98.3%



Workforce: 822,200
299,200 in manufacturing



High migration effectiveness
ratio: +58%



GDP per capita: RM49,873
6.6% of national GDP



45 years of cumulative industrial
intelligence

Penang Accolades



**1st among 8 of
world's culinary
hotspots**



Lonely Planet

**Georgetown, UNESCO
World Heritage Site**



**Malaysia's most
liveable city
ECA International**

**Top 10 dynamic industrial
clusters in the world**



UNIDO

**Top 31 BPO locations
of the future**



KPMG

**20 Destinations With the
Most Beautiful Beaches
(You Can Actually Afford To
Go To)".**



The Travel

**Top 8 islands "you
must see before you
die"**



**Yahoo!
Travel**

**Medical Travel
Destination of
the Year**



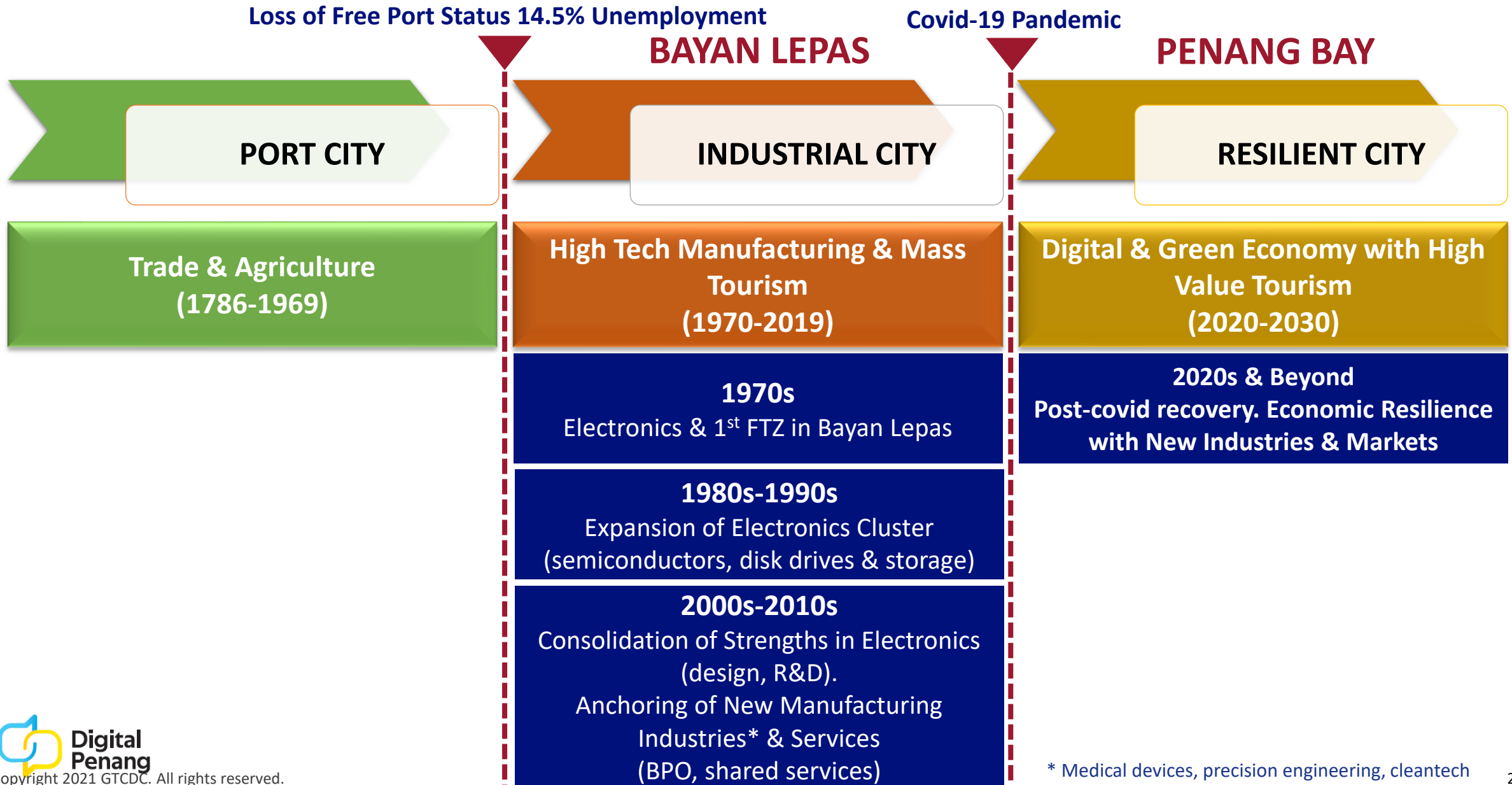
**International Medical
Travel Journal**

**2nd Must Visit City in
2017 out of 17 cities in
the world**

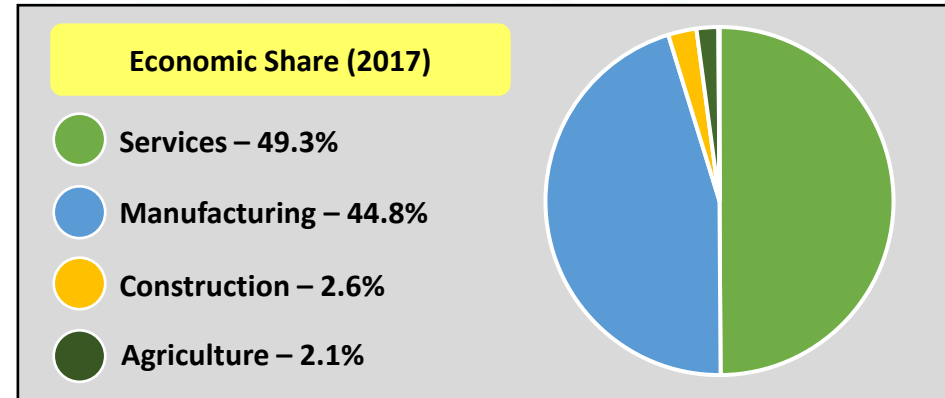
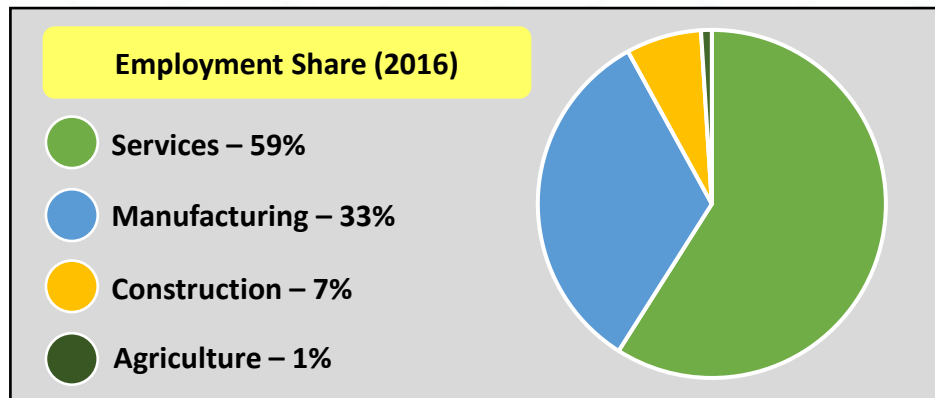
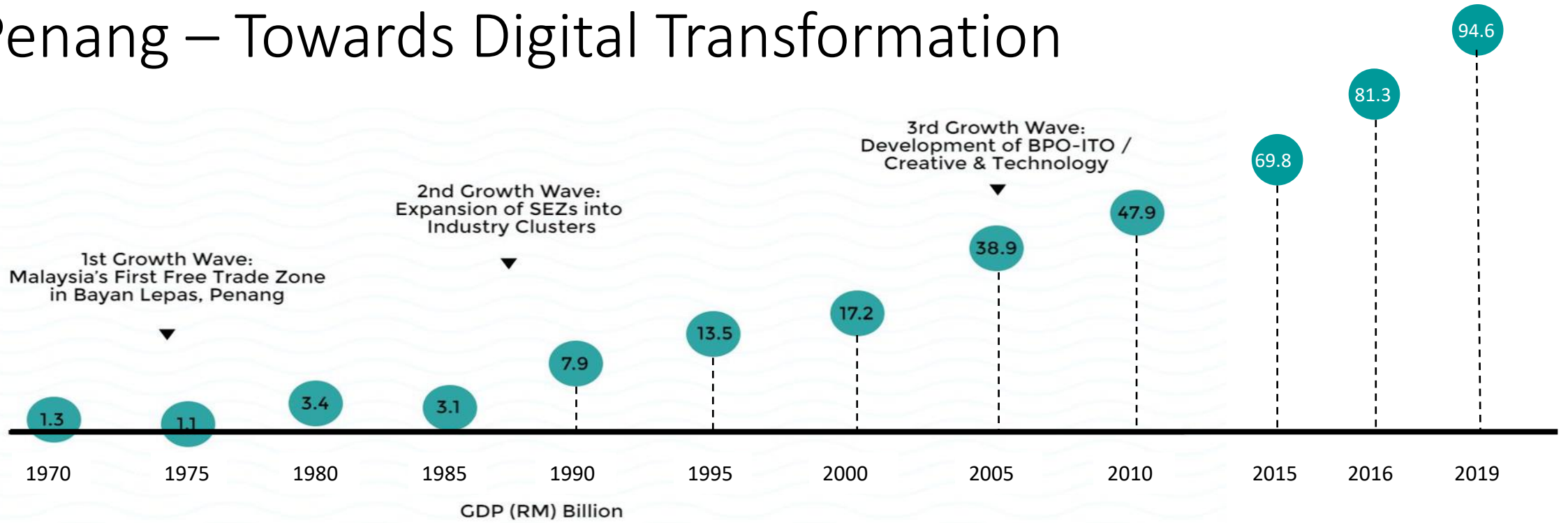


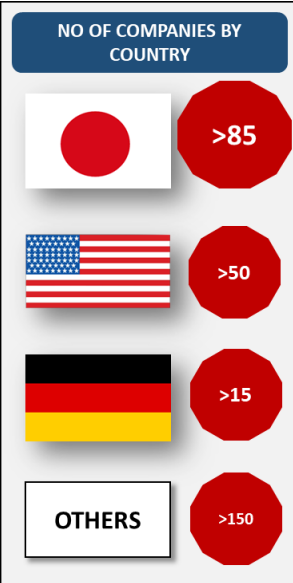
CNN

Penang's economic evolution over 200 years



Penang – Towards Digital Transformation





Penang's Talent supply and Education ecosystem



PENANG – The magnet for talents in the northern region

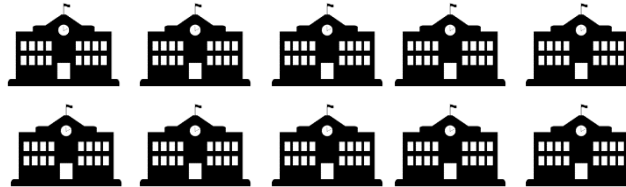
- Malaysia produces > 220,000 university graduates annually
- 46,122 of those are Engineering graduates



CASE FOR PENANG



- 2 public universities
- 2 private universities

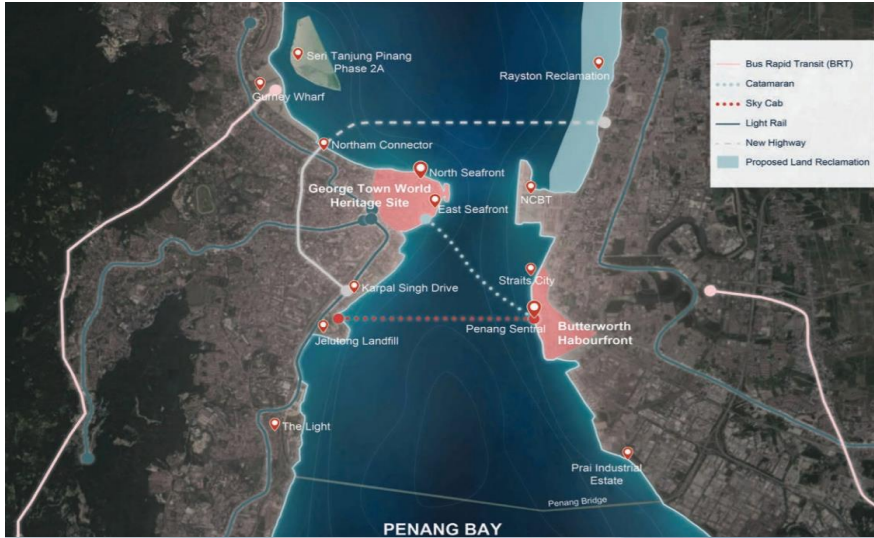


- 28 university colleges / colleges
- 2 polytechnics
- 6 community colleges

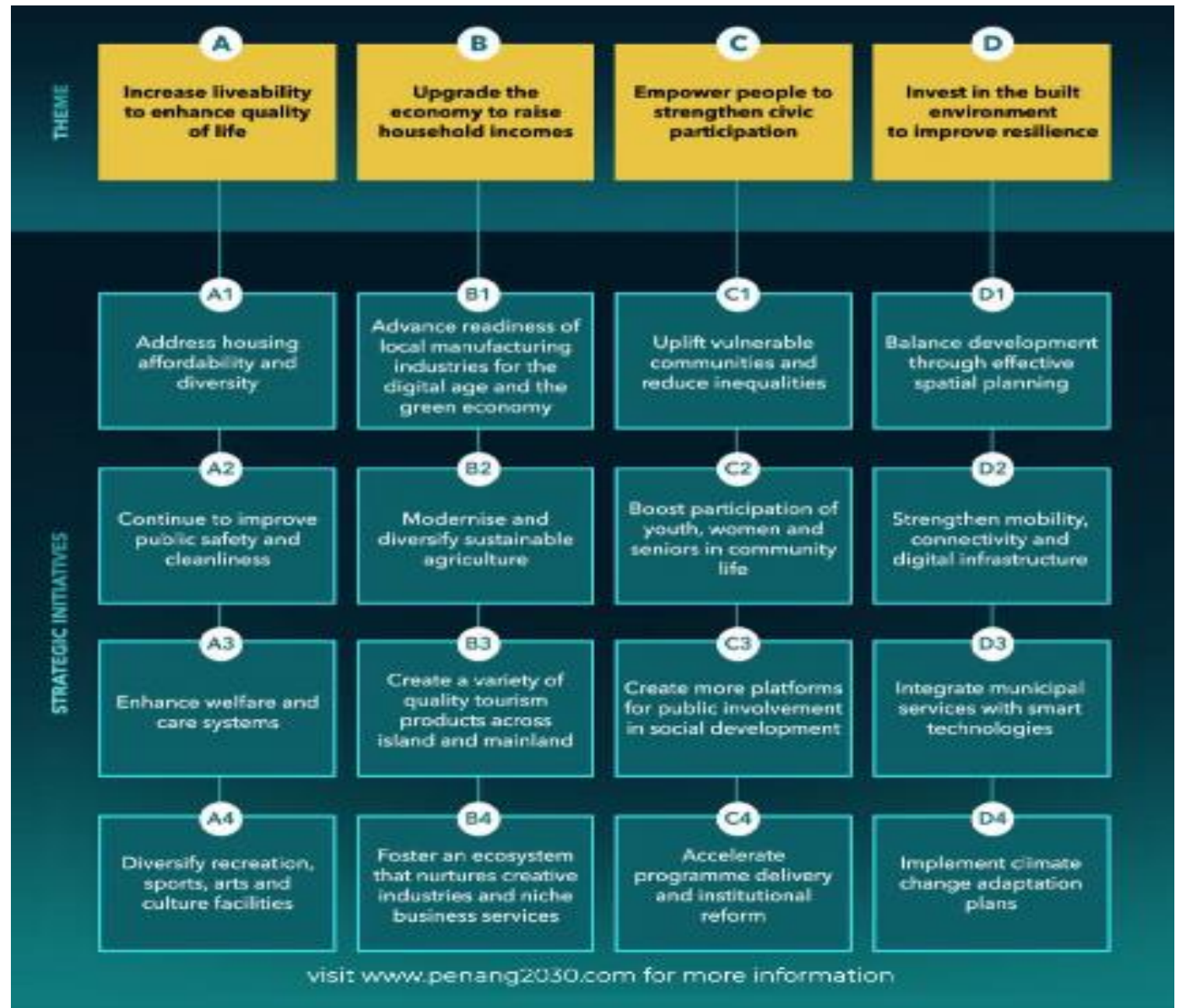


- 4 industrial training institutes
- 1 youth skills development institute
- 2 teacher training institutes

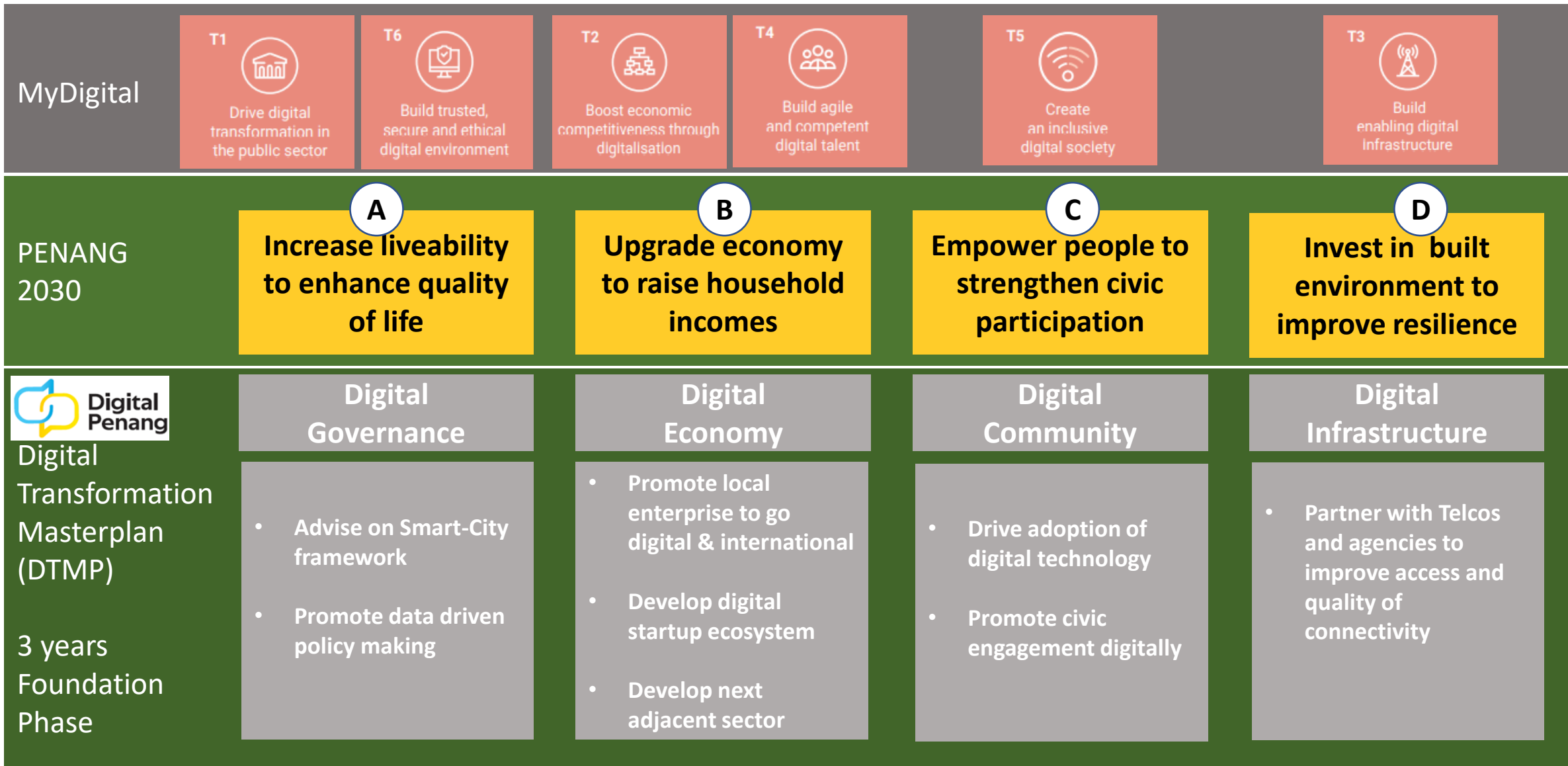
Penang 2030 vision



REIMAGINING THE WATERFRONTS OF GEORGE TOWN AND BUTTERWORTH, PENANG MALAYSIA



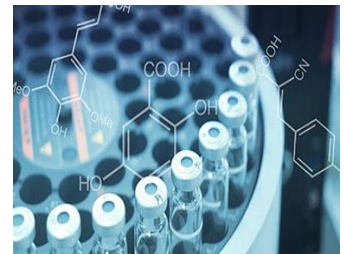
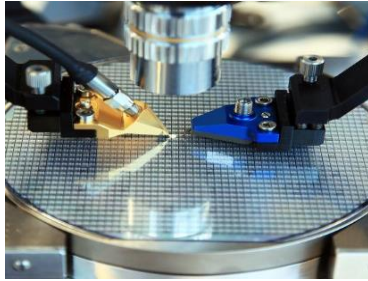
Digital Strategy



Economic Zones in Penang



Penang priority economic sectors



- IC Design & Development
- Embedded Systems, Software Engineering
- Software Development, Testing, Localization
- Medical Field Trials
- Global Business Services (GBS)
- Creative Multimedia



- Semiconductor
- Electrical & Electronics
- Electronics Manufacturing Services (EMS)
- Light Emitting Diodes (LED)
- Life Sciences/ Medical Devices
- Automotive
- Aerospace/Avionics



PENANG BAY



STRAITS QUAY

GEORGE TOWN

TAMAN ROBINA

RMAF BUTTERWORTH

GURNEY WHARF

PENANG PORT

BUTTERWORTH

MAK MANDIN INDUSTRIAL ZONE

KARPAL SINGH DRIVE

PENANG SENTRAL

BANDAR SEBERANG JAYA

JELUTONG LANDFILL

PRAI INDUSTRIAL PARK

PERMATANG PAUH

THE LIGHT WATERFRONT

USM

BAYAN LEPAS INDUSTRIAL ZONE

PRAI RIVER

PENANG BRIDGE

NORTH-SOUTH EXPRESSWAY

LEIM CHONG EU EXPRESSWAY

Catalyst Nucleus: Creative Digital District CD²@Georgetown

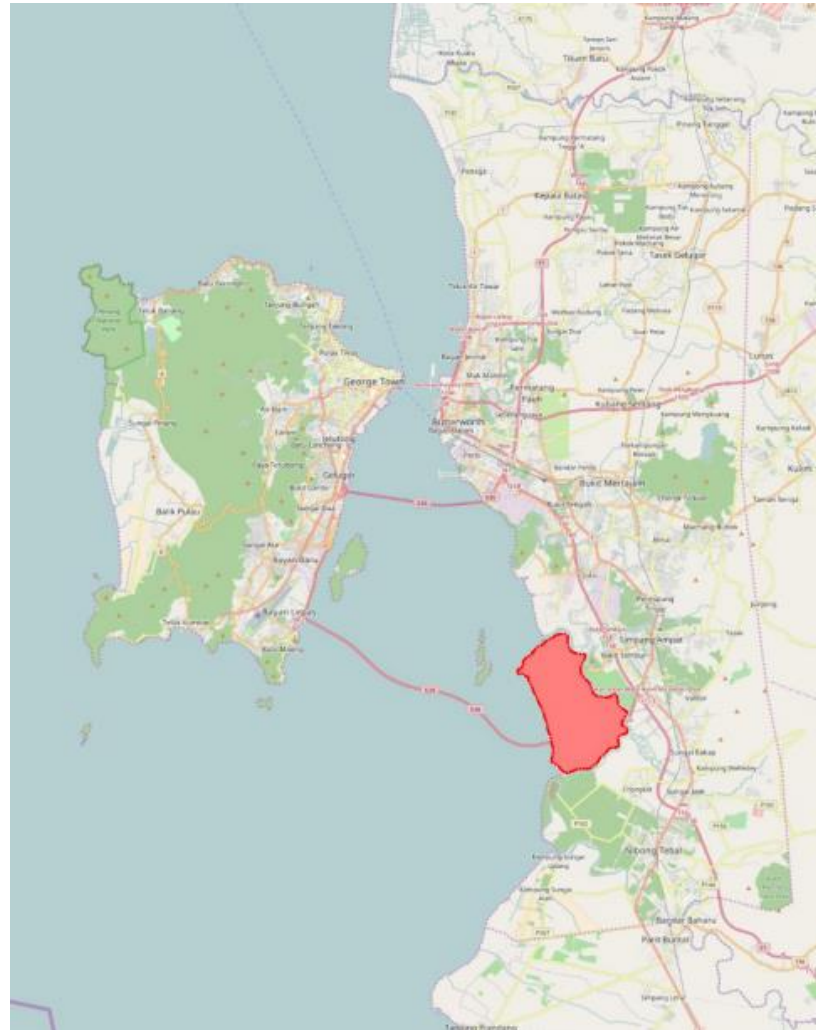


Penang Development Masterplan 2050



Catalyst Nucleus: Creative District CD²@Bandar Cassia

MEDICAL EDUCATION DIGITAL SERVICES



Summary

- Pro-business environment
- Sustainable growth and development up to 2050
- Public Private partnerships
- Lifestyle and liveable environment
- Talent pool

How Singapore Companies Can Better Engage Malaysian Stakeholders

Ms GOH SEOK MEI

CEO, Graffiquo and Executive Director, United Cities



With more than 25 years of experience in the technology and telecommunications industry, Ms Goh is the CEO of Graffiquo, a software solutions provider for industries such as Smart Cities, Environmental Impact and Assessment, and Asset Inspection of Energy and Communications Infrastructure. She is also an Executive Director of United Cities.

In her spare time, Ms Goh contributes her research and knowledge to the United Nations International Telecommunication Union (UN-ITU) focus group for Artificial Intelligence for Environmental Efficiency and mentor's university students and youth leaders. Following a project during Typhoon Ulysses in November 2020 where she used Graffiquo's 3D digital twin to map out crisis areas, save lives and provide jobs, Ms Goh is now inspired to run a global non-profit organisation that aims at helping cities become more sustainable, resilient, and inclusive in the future.



Project Experience in Malaysia

My experience in these sectors

Banks, Insurance, Education,
Built Environment Property
Developers



Income Tax, Emergency
Response, City Councils



Kuala Lumpur



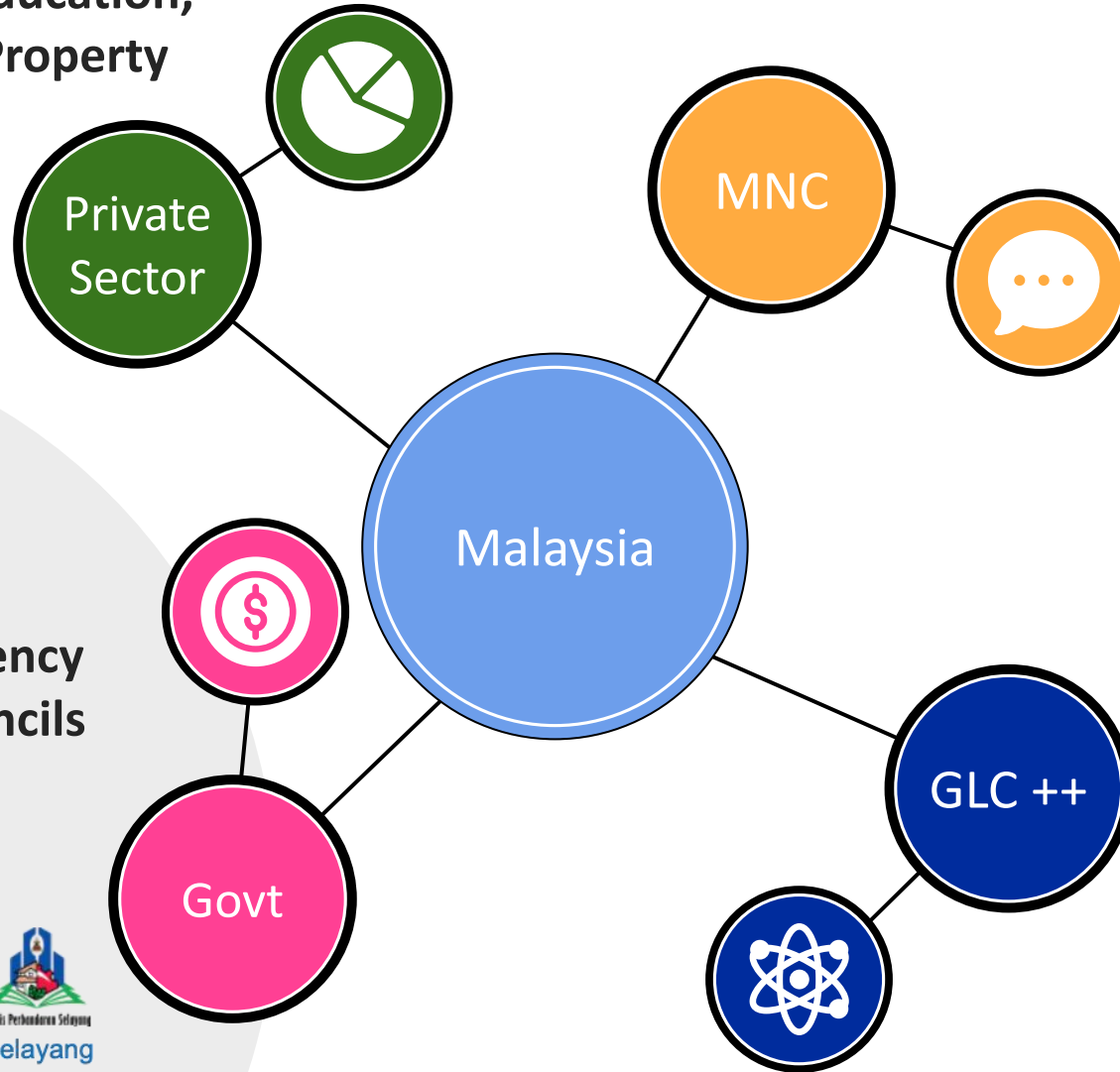
Petaling Jaya



Putrajaya



Selayang



ICT & Manufacturing



Telecommunication, Water
Board, Energy Board



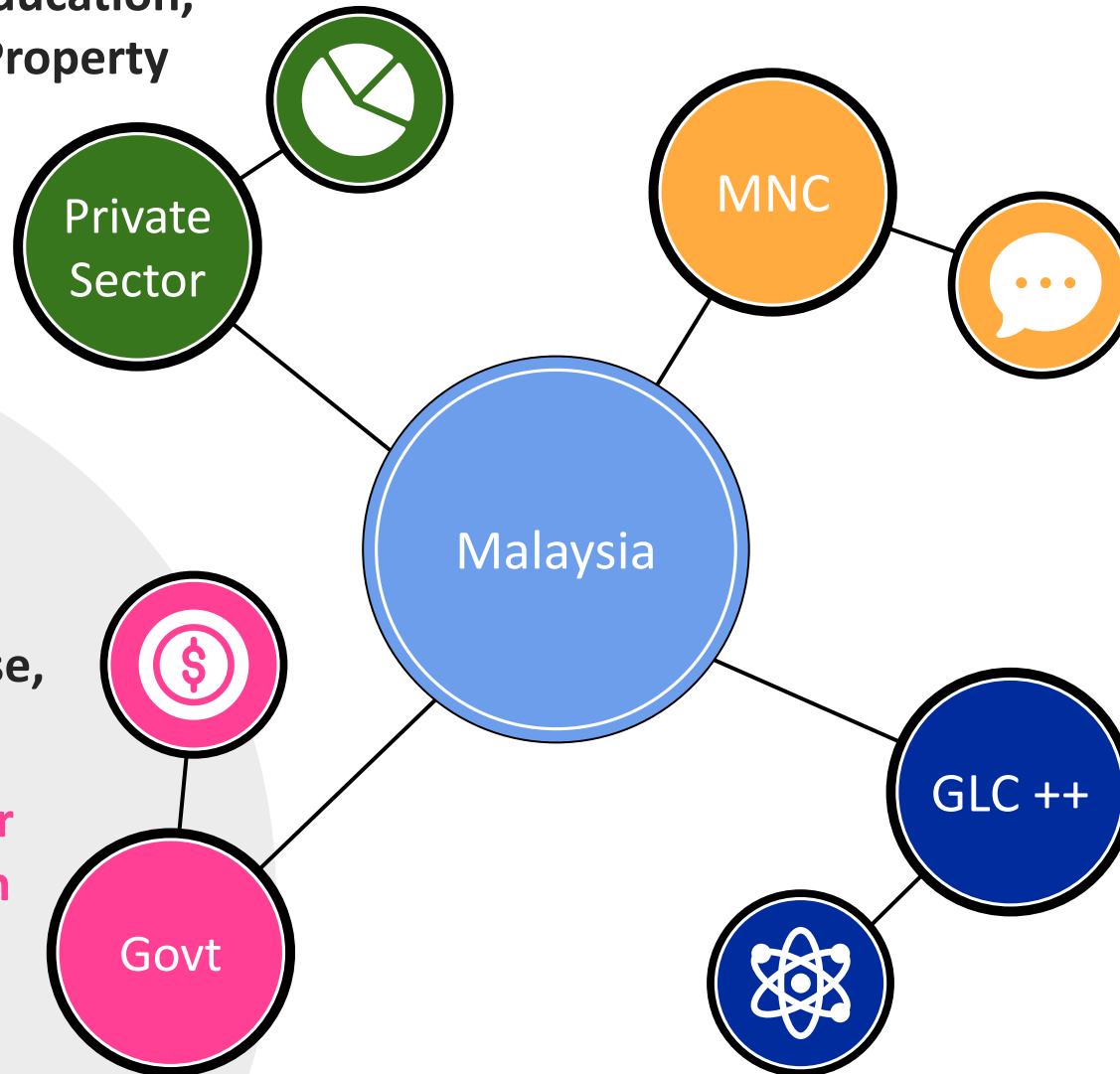
Key takeaways from each sector

**Banks, Insurance, Education,
Built Environment Property
Developers**

**Value add, think
win-win, fast cycle,
foreign companies
can bid direct**

**Income Tax,
Emergency Response,
City Councils**

**Need a local partner
that is certified with
MOF and/or MOF
Bumi**



**ICT &
Manufacturing**

**Global organisations, a
lot of convincing, bid
direct**

**Telecommunication, Water
Board, Energy Board**

**Long sales cycle, many
inter/intra-dependent
departments, longer term
contracts, some tenders bid
direct**

My experience in these sectors

Banks, Insurance, Education,
Built Environment Property
Developers



Income Tax, Emergency
Response, City Councils



Kuala Lumpur



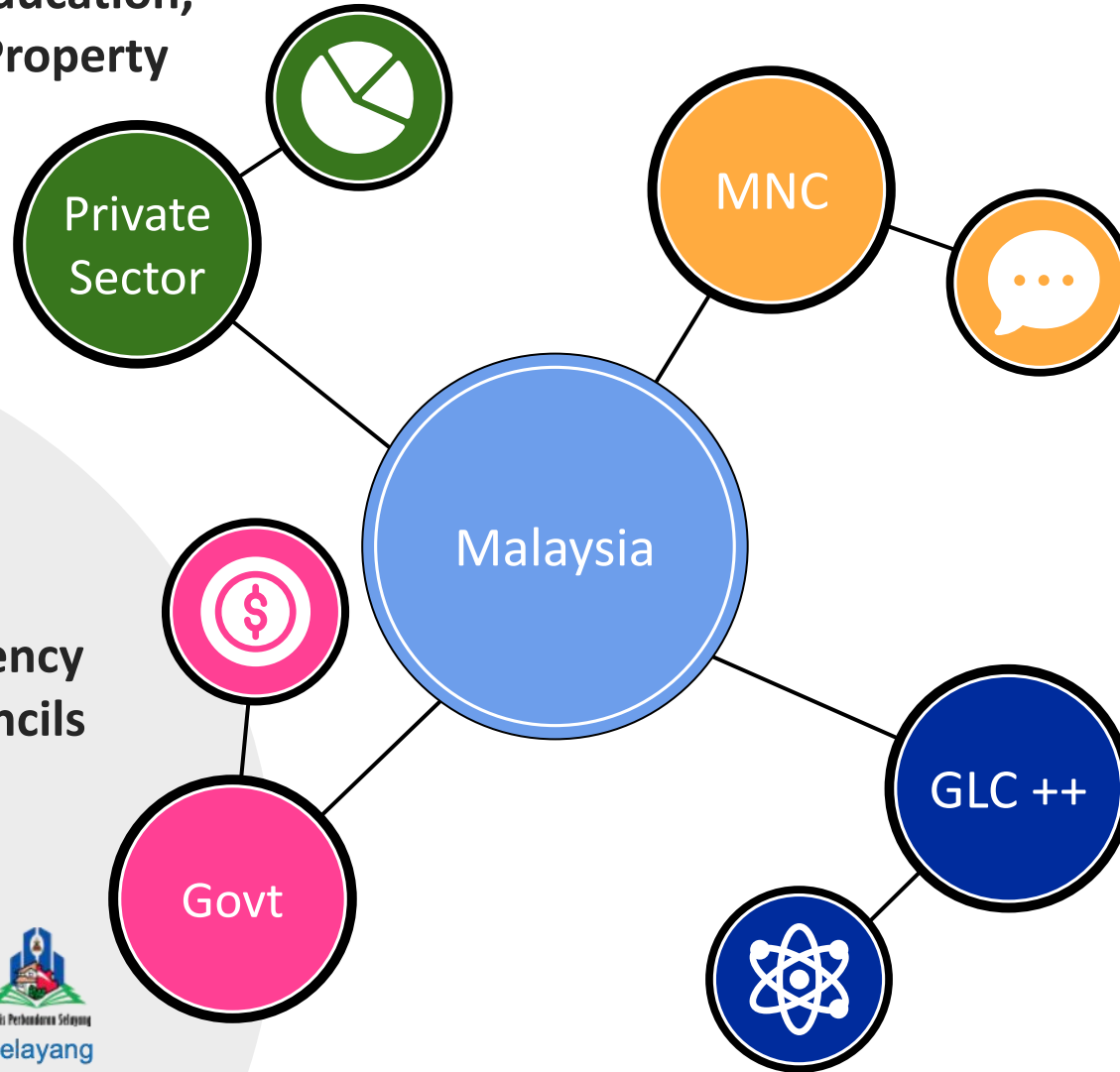
Petaling Jaya



Putrajaya



Selayang



ICT & Manufacturing



Telecommunication, Water
Board, Energy Board





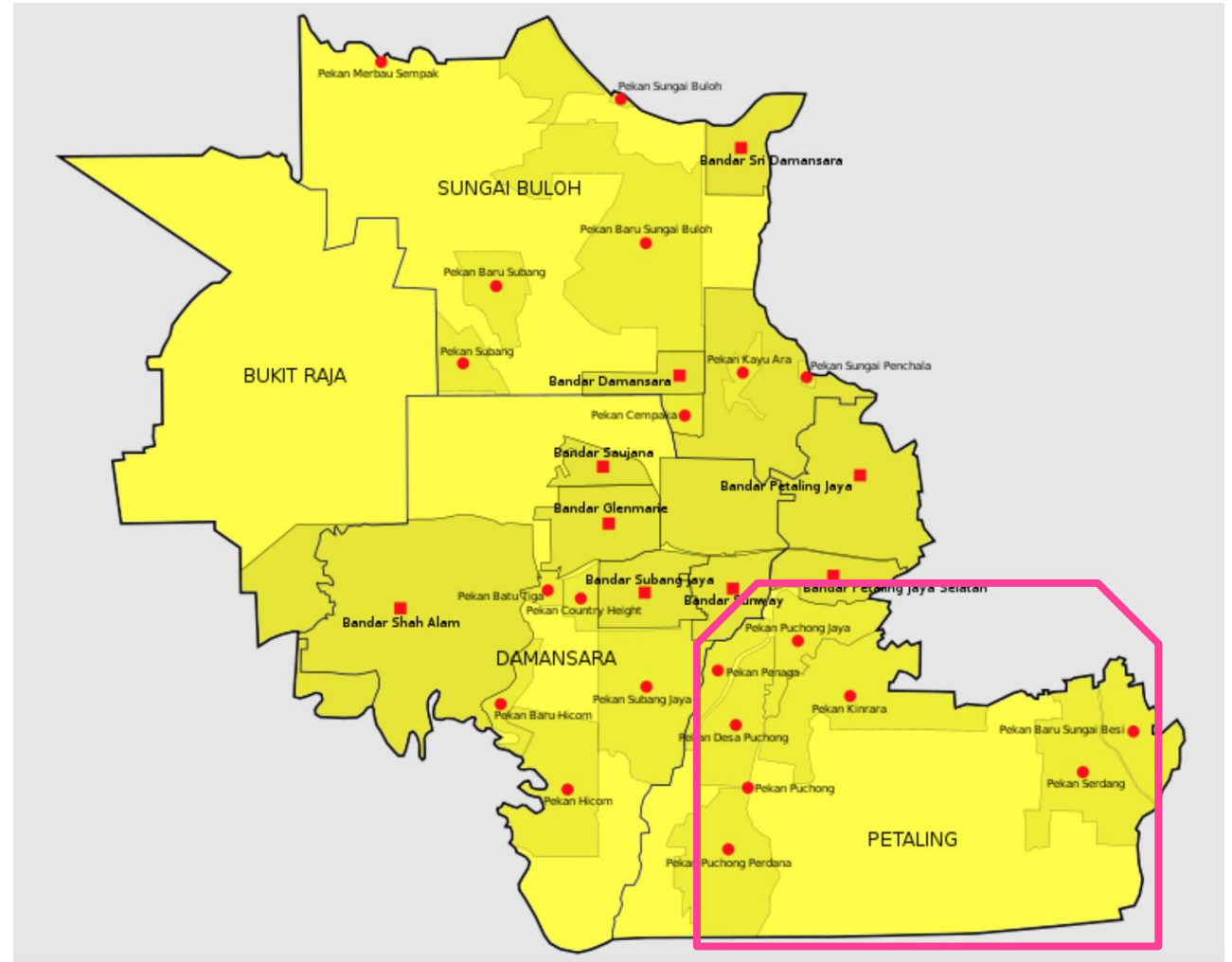
Petaling Jaya Digital Twin Project

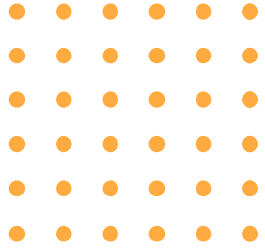
Covers land area of 97.2km²

Population 550,000

Criteria for project :

- Tender for 3 month prototype
- On-premise
- 2D map
- Local companies
- Security deposit

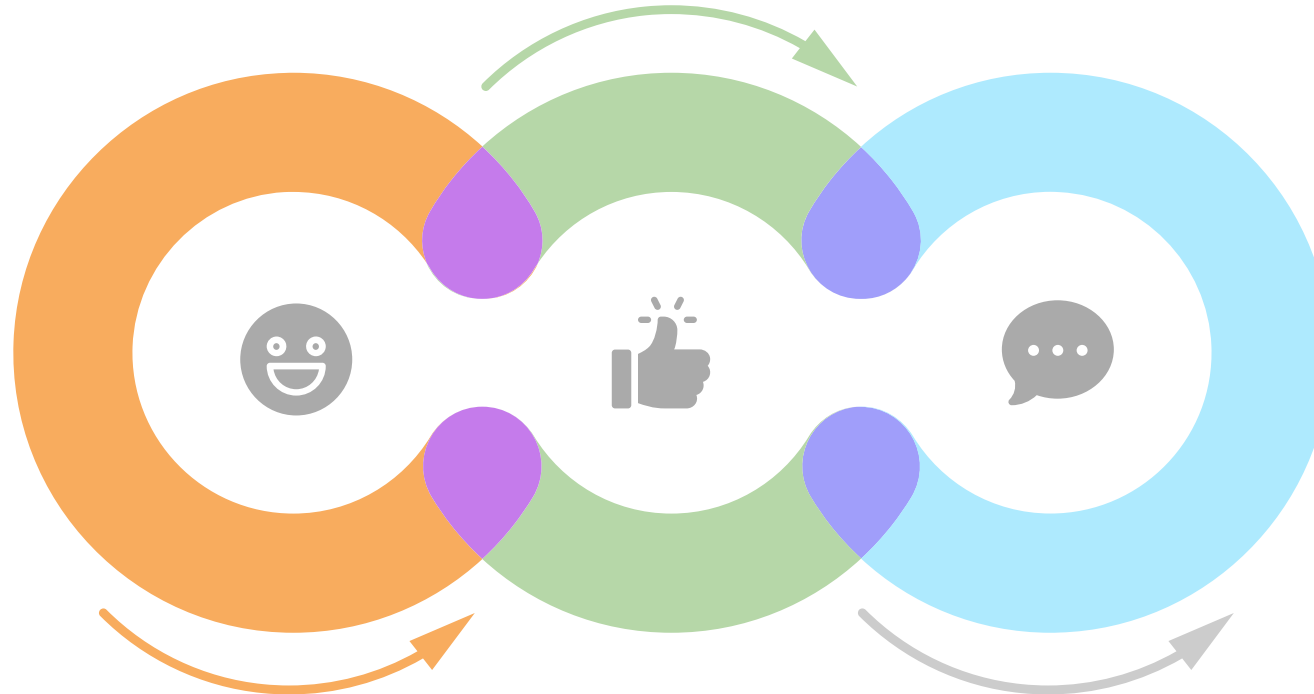




How?

Criteria for project :

- Tender for prototype
- On-premise
- 2D map
- Local companies
- Security deposit



Our company :

- Not registered with MOF
- SAAS - Cloud
- 3D photogrammetry
- Singapore company
- Bank account in SGD

What was our strategy :

- MOF Bumi registered partner & 3 month prototype duration
- Tweak solution to be on premise
- Convince why 3D photogrammetry is better
- Singapore company + set up a Malaysian company
- Bank account in MYR

Project Learnings

People & Partnership

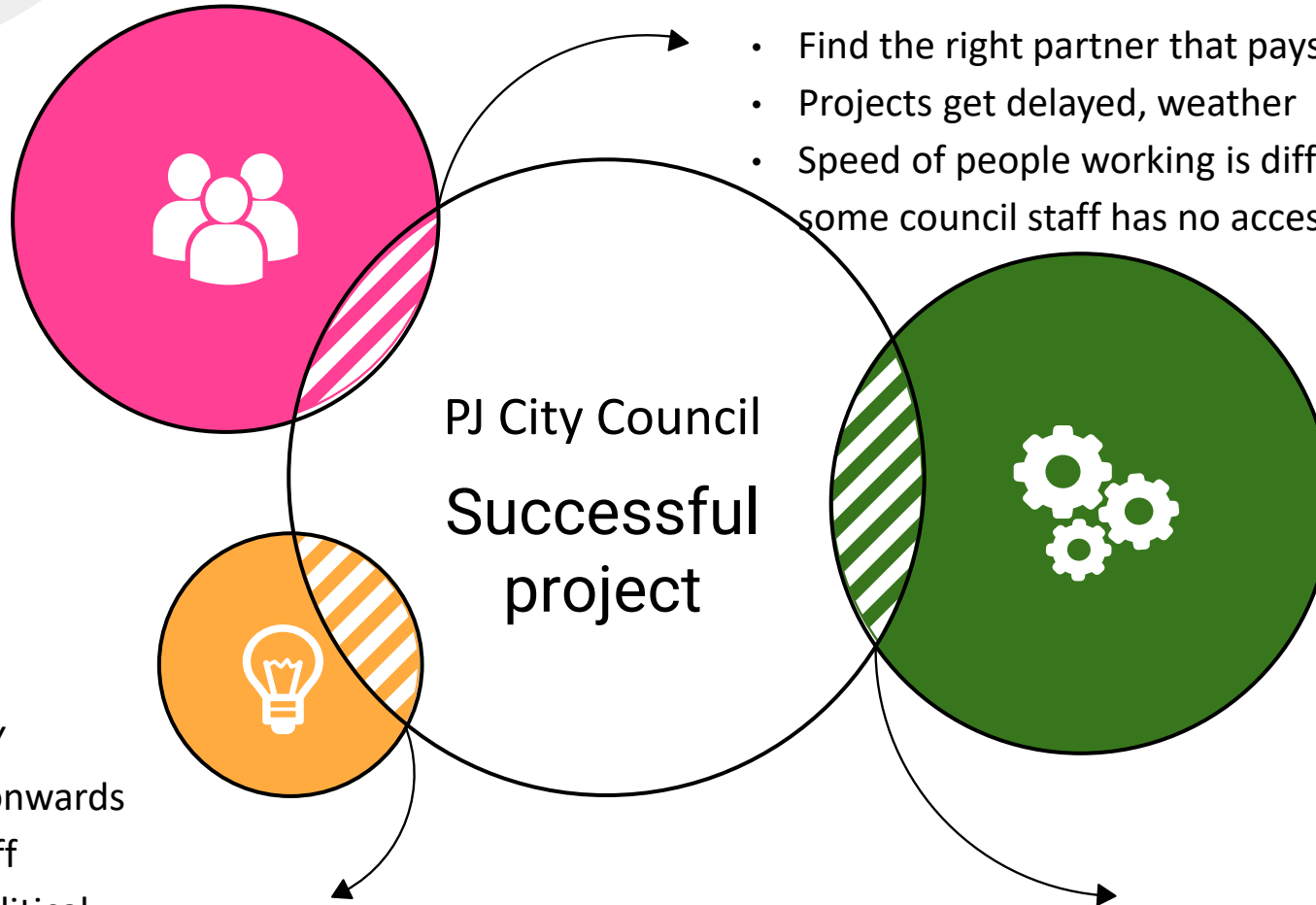
- Find the right partner that pays on time
- Projects get delayed, weather
- Speed of people working is different especially now during MCO, some council staff has no access to systems

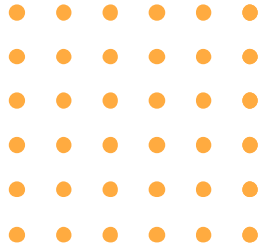
Process

- Find out tender / vendor registration criteria and documentation
- Timeline to register
- Legal document between partners

Strategies

- Partner or set up MY company - Phase 2 onwards
- Bahasa speaking staff
- Navigate through political agendas

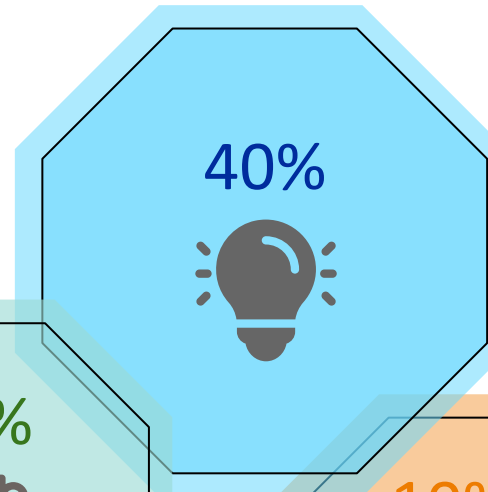
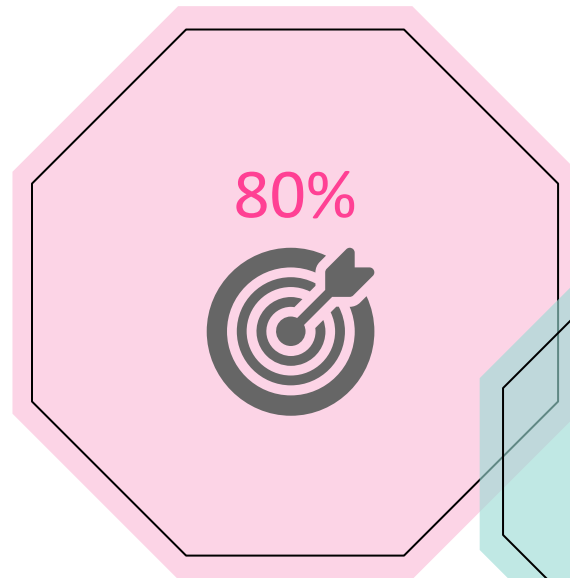




Key Takeaways



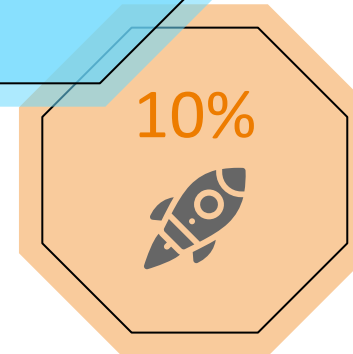
Right partnership,
right time



Business Model
& Strategies



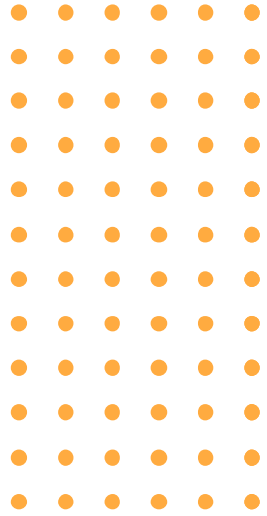
'Localised'
Solutions,
Credentials &
Awards



Inspiration,
Passion &
Drive

Total Effort = 150%





THANK YOU



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+65 8778 4148



seokmei.goh@theunitedcities.org



www.linkedin.com/in/seokmeigoh



Experience Sharing: Food Security in Malaysia

Mr BK Sinha

Founder & Director, Habitat Enviro Sdn Bhd, and Council Member, malaysiaGBC



Mr BK Sinha is the founding Director of Habitat Enviro, the former CEO of Malaysia Green Building Council (malaysiaGBC), and the Vice Chair of the Asia Pacific Network (APN) of the WorldGBC. He has over 30 years' experience in Project Management, Green Buildings and Waste to Energy project development. He holds a tenacious belief in a holistic approach with all stakeholder inclusivity that he applies to all his projects, finely balancing People, Planet & Profit.

Sinha is respected as a thought leader and mentor in many notable sustainable projects in Malaysia, Maldives, and Vietnam. He has been consistently involved in capacity building for Circularity and Carbon Footprint Awareness of building materials with malaysiaGBC. Notably, he is the innovator of FatHopesEnergy, a leader in the region as a premier consolidator and processor of waste organic oils, such as used cooking oil, fats and grease into EN14214 EU standard bio-diesel.

Habitat Enviro Sdn. Bhd

....an introduction to the future of disruption.



About Us

..... start-up with a combined experience of about 100 years



Habitat Enviro Sdn Bhd's Team Profile

BK Sinha, Mechanical Engineer / Sustainable Development Innovator



BK Sinha is a founding Director of Habitat Enviro and the former CEO of Malaysia Green Building Council (malaysiaGBC) as well as Vice Chair of the Asia Pacific Network (APN) of the WorldGBC. He has over 30 years' experience in Project Management, Green Buildings and Waste to Energy project development and management. The combination of his experience and knowledge is fueled by his deep-rooted passion for Sustainability & sustainable developments in this region. He holds a tenacious belief in a holistic approach of all stakeholder inclusivity that he applies to all his projects, finely balancing People, Planet & Profit. Sinha is respected as a thought leader and mentor in many notable sustainable projects in Malaysia, Maldives and Vietnam. As a project manager in the construction industry and considering that the built environment accounts for about 40 percent of all energy consumed worldwide, he feels a personal responsibility to contribute towards making sustainable buildings and infrastructure in Malaysia the norm rather than the exception. He has been consistently involved in capacity building for the LCA and Carbon Footprint of building materials with malaysiaGBC. Notably, he developed FatHopes Energy into ASEAN's largest waste cooking oil to biodiesel within 10 years.

Ar. Rohendran Chelliah, Architect / Green Finance



Rohen is a founding Director of Habitat Enviro and was Country Manager for Veritas in Iran, before returning to Veritas Malaysia to work on large mixed development projects for clients including DRB Hicom, Glomac & IJM with a combined GDV of RM 5 billion. He then jointly set up a property development consultancy to research and design sustainable Affordable Housing solutions for Malaysia, based on in-depth qualitative analysis of the of current solutions to today's urban housing environment and seeking out innovative solutions to help clients address the challenge of providing affordable housing with a high quality of life. He also developed comprehensive property development proposals for boutique housing developments in Malaysia and secured development funding from financial institutions. Currently, Rohen is tasked with ensuring compliance to the SDG and availing Green Finance for all of our Projects.



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Habitat Enviro Sdn Bhd's Team Profile



Murali Haripalan, Electrical Engineer / Green Technology Deployment

Murali is the founding Director of Habitat Enviro as well as Bolt Industries Sdn Bhd. Collectively he delivers solutions for renewable energy, energy efficiency and Internet of Things (IOT) in South East Asia. He is experienced in working with established regional organizations and start-ups. He has first-hand understanding of the local culture and experience of doing business in the region. A qualified electrical engineer with an MBA from Strathclyde Business School; with international experience spanning across technical, operations and business development role for engineering companies and regional offices. Experience spanning 14 years working with regional clients and investors to develop new business models in the Energy space.



Satyajit Ghosh, Mechanical Engineer / Green Technology Analyst

Satyajit is a founding Director of Habitat Enviro as well as of Metamorf, India. A company with the vision of international acceleration for Indian technology startups in the field of Renewable Energy Solutions with the primary focus area of waste to energy solutions in Malaysia and the Maldives. He has developed Zero Diesel/fossil fuel dependency model for the inhabited islands in the Maldives to completely rely on Biogas, Solar & Wind energy for powering the islands. JV Partnership with Renewable Energies Maldives (REM) along with a collaboration with Future Farms, Chennai for the set up of the first industrial scale NFT hydroponics farm to provide food security for the people in the Maldives who were completely dependent on imports for all fresh produce.



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Habitat Enviro Sdn Bhd's Team Profile

Ishwar Parhar / Green Technology Scientist

Prof. Dr. Ishwar Parhar has recently joined team HabitatEnviro to value add to our existing high value Green Technology development systems.

PROFESSOR OF NEUROENDOCRINOLOGY

DIRECTOR OF BRAINS RESEARCH INSTITUTE, MONASH UNIVERSITY

HEAD OF NEUROSCIENCE, SCHOOL OF MEDICINE, MONASH UNIVERSITY MALAYSIA

IMMEDIATE PAST POSITION (1994-2005): 1. Director, Molecular Neuroendocrinology Unit. 2. Nippon Medical School, Tokyo, Japan

Publications : 234

Citation : 5431

Grants : RM11,727,758.79 (since 2006)

Awards : 16 National & International Awards

• Narishigae Neuroscience Research Award, Japan • Top Research Scientist Award by Academy of Science Malaysia

• Hind Rattan Award, India

Appointments : 13 (senior academic appointments since 1993)

• Rockefeller University, New York, USA • Gunma University, Medical School, Japan • Sun Yet Sen University, Guangzhou, China • Meiji University, Tokyo, Japan

Conferences : 56 plenary lectures at international conferences (since 2002)

62 invited lectures at conferences (since 1995)

ACADEMIC SERVICE (Editorial Board) : General and Comparative Endocrinology, Neuroendocrinology, Frontier in aging, Frontier in Neuroscience, Frontier in Endocrinology

SCIENCE: 28 New Gene sequences deposited with the Genebank and one Patent filed (PI2007188)

SCIENTIFIC SOCIETIES

President – NeuroMalaysia Society

Treasurer - The Asian Oceanian Society for Comparative Endocrinology (AOSCE)

Council Member - Federation of Asian Oceanian Neuroscience Societies (FAONS)

President of Malaysia Professionals in Japan(MAPRO-JAPAN)

SCIENTIFIC ADVISOR TO GOVERNMENTS

2007 Scientific Advisor to the Republic of Gabon, Africa

2008 Malaysia's Northern Corridor Biotechnology Center, Penang

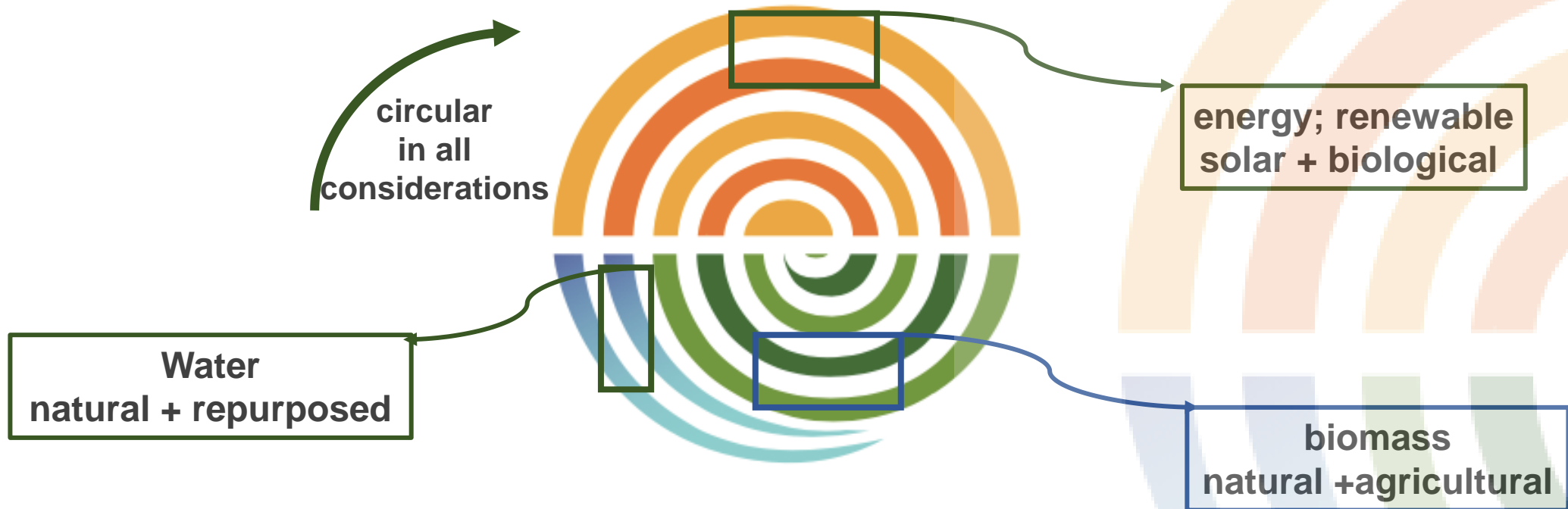
2010 National Science and Research Council, Malaysia

2010 Penang State Science Council, Malaysia



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.....what our logo stands for.....



HabitatEnviro



circular | green | innovations



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Strategic Approach



Proposed Habitat Enviro

Cow/Buffalo, Pig & Poultry Farm Collaboration

HESB is a fast-growing start-up, with Sustainability at its core, in Project Design, Green Finance, Implementation and Project Development Management solely based on People, Planet and Prosperity, Peace & Partnerships with full Circularity.

Our unique approach is defined by an Integrated Design Management (IDM) framework, in combination with the latest project management tools and techniques, which gives stakeholders of our projects a clear advantage to engage HESB to provide broad, integrated solutions to optimize the waste, water & energy components of any project. We have on board a panel of experienced and competent team members, as well as consultants and advisors with specialized expertise in the following areas:

1. Sustainable Development Design Development
2. Sustainable Business Systems Implementation
3. Green Project Financing
4. IoT & AI to Digital Twin
5. Contract Management
6. Planning & Scheduling
7. Value Engineering

We cover a large range of projects and can provide assistance in clean development space. Depending on the type of project, we have allocations for formats of mandatory compliance audit.. Alignment and Compliance with the UN Sustainable Development Goals is seamlessly incorporated so as to **allow all advantages of any Project to be measurable and verifiable for stakeholder and investor reporting purposes.**

For any Project, we are propose to achieve to convert typically sub-urban business-as-usual (BAU) farms into a **5Ps Bottom Line / Towards Net Zero farm** which generates higher financial returns, by using on-site renewable energy and water while mitigating towards **Zero Waste.**



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Integrated Waste, Water, Energy & Feed/Fodder Solutions

- **IoT & AI to Digital Twins**
- **Advanced Logistics Management for Waste to Biogas**
- **Advanced Biogas Production**
- **Heat & Power for Farmer & Fodder Formulation**
- **Water Mitigation and Recycling**
- **Science Based Fish Production**
- **Solar Power Production on Roofs of All Farm Buildings**
- **High Nutrition Science Based Feed Mill Production**



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Proposed Habitat Enviro – Cow/ Buffalo Farm Collaboration

BAU Farm:

INPUTS

1. Ground & Portable Water
2. Grid Electricity Supply

BAU BUFFALO FARM OPERATIONS

OUTPUTS

1. Buffalo Milk
2. Dung & Urine Wash
3. Carbon from Grid Water & Power Supply
4. Water Pollution, Odour and Flies



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Proposed Habitat Enviro – Cow/Buffalo Farm Collaboration

INPUTS

1. Rainwater Harvesting, Ground Water & Upcycled Water
2. Sunlight
3. Wind for Natural Ventilation
4. Dung & Urine

Habitat Enviro Farm – Full Circularity Included:

OPERATIONS

1. Harvest Rainwater & Slurry for Water Supply – Aerated Wetlands
2. Harvest Solar & Dung (Biogas) for Energy Supply
3. Grid Water & Electricity Supply as back up emergency support only
4. Reduce space required for Buffalo Feed via Hydroponic Fodder
5. Increase revenue streams by diversifying (fish, prawns, upstream buffalo milk products etc.)

OUTPUTS

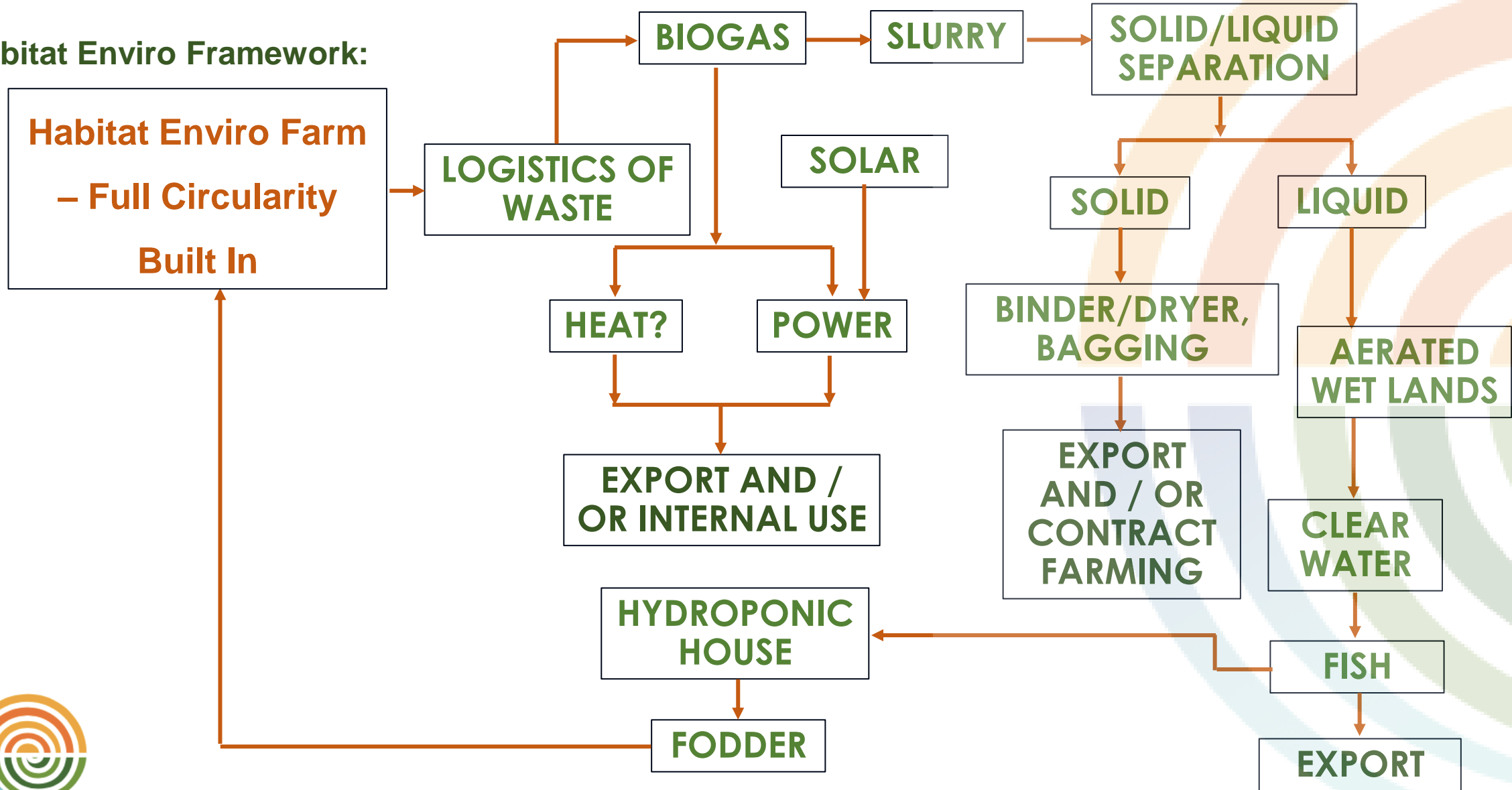
1. Double the number of Buffaloes within the same farm area
2. Increased Revenue Streams via diversified products and subscription models
3. Zero Air & Water Pollution
4. "Towards Zero Carbon" for all operations within the boundary of the farm.
5. Diversified income source from Energy, Water, Fertiliser, Fish & increased Milk production



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Proposed Habitat Enviro – Cow/Buffalo Farm Collaboration

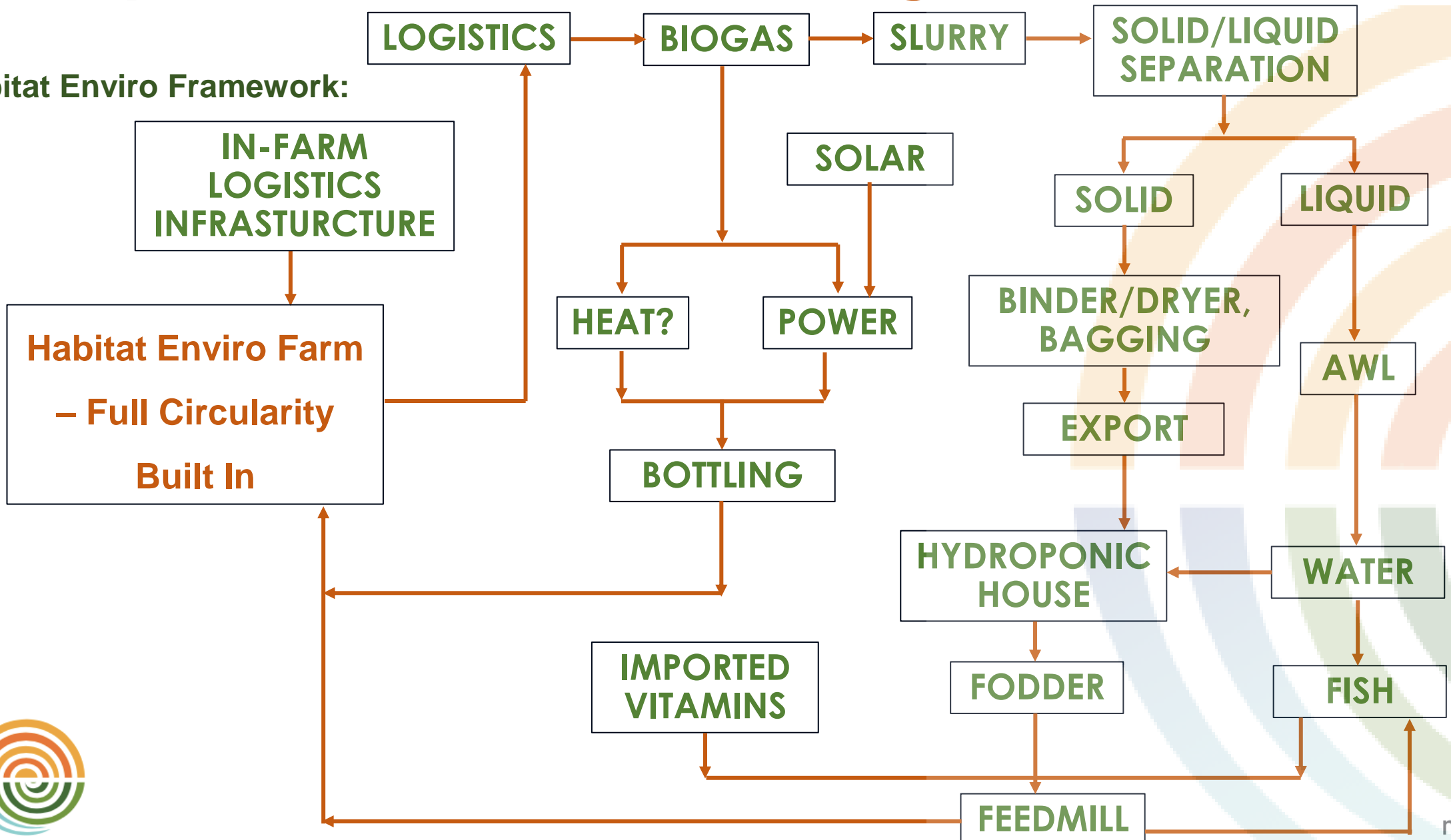
Habitat Enviro Framework:



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Proposed Habitat Enviro – Pig Farm Collaboration

Habitat Enviro Framework:



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Proposed Habitat Enviro – Farm Collaboration

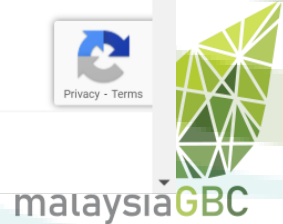
Problems being addressed: 1 - Pollution from farm discharge

The screenshot shows the homepage of The Star news website. At the top, there is a navigation bar with the 'The Star' logo, a '50 YEARS OF SHAPING THE NATION TOGETHER' anniversary banner, and buttons for 'Subscriptions' and 'Log In'. Below this is a main menu with categories like StarPlus, News, Asean+, Business, Sport, Metro (highlighted), Lifestyle, Food, Tech, Education, Opinion, Videos, Photos, and StarPicks. A secondary menu lists various topics such as Blessed Raya, Sabah & Sarawak, The New Normal, In 500 Words, Covid-19 Watch, EEA 2021, True or Not, and Do You Know.

The main article is titled 'Buffalo farm in Kajang scrutinised for sewage discharge' by GRACE CHEN, dated Saturday, 27 May 2017 at 12:00 AM MYT. The article content is mostly obscured by a large 'The Star' watermark. To the right of the article is a 'Trending in Community' section with four items:

- 1. METRO NEWS 1d ago: Long queue for last fix of laksa
- 2. METRO NEWS 1d ago: Donations pour in for shelter home following death of...
- 3. METRO NEWS 8h ago: MBPJ community seed funding grant now open for...
- 4. METRO NEWS 8h ago: Tracking wild jumbos on the move

Below the main article, there is a 'Related News' section with a thumbnail for 'LAOS 19h ago: Commission to monitor Mekong river flow with...'. At the bottom of the page is a mobile navigation bar with icons for Home, For You, Bookmark, Audio, and Search. A 'Privacy - Terms' link is also visible in the bottom right corner.



Main cause of Sg Kreh pollution? Pig farming activities in Kg Selamat, say NGOs

By Audrey Dermawan - February 4, 2021 @ 1:58pm



The pollution in Sungai Kreh is believed to be from pig farming activities in Kampung Selamat, Tasek Gelugor. -NSTP/Danial Saad

GEORGE TOWN: Three non-governmental organisations (NGOs) have called for an immediate solution to the 40-year-old Sungai Kreh pollution issue, blamed on pig farming activities in Kampung Selamat, Tasek Gelugor.

26 pig farms in Tasek Gelugor found discharging swine faeces into river

By Audrey Dermawan - October 15, 2020 @ 6:41pm



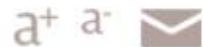
Local

We have endured swine manure issue for 40 years: Resident

07 APR 2019 / 22:56 H.



The disgusting condition of Sungai Kreh at Kampung Air Melintas Kecil, Tasek Gelugor on April 7, 2019. — Bernama



TASEK GELUGOR: "We have endured this issue for 40 years," said a resident of Kampung Air Melintas Kecil here whose life has been affected by the swine manure dumped into the river from pig farms in Kampung Selamat nearby.

HOME / MALAYSIA

Environmental group supports closure of Kampung Selamat pig farms

Tuesday, 25 Aug 2020 10:38 AM MYT
BY OPALYN MOK



SAM president Meenakshi Raman voiced her full support for the proposal by the Environment and Water Ministry to temporarily close the pig farms due to pollution problems at the nearby Sungai Kreh. — Picture by KE Doi

Subscribe to our Telegram channel for the latest updates on news you need to know.

GEORGE TOWN, Aug 25 — Environmental group Sahabat Alam Malaysia (SAM) has asked that all pig farms operating in Kampung Selamat, Tasek Gelugor be temporarily closed until the facilities implement a zero-waste system.

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IN MALAYSIA

JUST IN POPULAR

5 minutes ago

Unemployed man charged with murdering ex-brother-in-law, hurting daughters, ex-wife and her boyfriend

14 minutes ago

Daily Covid-19 infections in Malaysia continue to soar with 7,857 new cases today

25 minutes ago

MoH mulling fines, mandatory jabs ensure Malaysians turn up for their Covid-19 vaccine appointments

30 minutes ago

Being perfunctory at jobs no longer cuts it, Public Service Dept D-G warns civil servants

Proposed Habitat Enviro – Farm Collaboration

Problems being addressed: 2 – Food Security & Self Sufficiency – Producing food where it is consumed

CORPORATE FROM THE EDGE Select Language

Edge Weekly

Special Report: The State of the Nation: Bridging the gap between agriculture and food security

Esther Lee and Supriya Surendran / The Edge Malaysia
July 13, 2020 17:00 pm +08

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HongLeong Asset Management

REFINITIV LIPPER FUND AWARDS 2021 - MALAYSIA


- HONG LEONG DIVIDEND FUND
Equity Malaysia Income - Malaysia Provident, 5 Years
- HONG LEONG ASIA-PACIFIC DIVIDEND FUND
Equity Asia Pacific ex Japan - Malaysia Provident, 3 Years
- HONG LEONG ASIA-PACIFIC DIVIDEND FUND
Equity Asia Pacific ex Japan - Malaysia Provident, 5 Years
- HONG LEONG GROWTH FUND
Equity Malaysia Diversified - Malaysia Provident, 5 Years

MOST READ MOST WATCHED

- 1 Penang state govt was conned on vaccine donation, says Khairy
- 2 Streetscapes: A dining hot spot for locals in Taman Paramount, PJ
- 3 Maybank revises branch operating hours on MCO
- 4 'Nearly 600 bank branches in Malaysia to

Organized by MIA conference 2021 MALAYSIAN INSTITUTE OF ACCOUNTANTS Official Media Partner THE EDGE Navigating a Sustainable Future with Agility and Resilience WE ARE GOING VIRTUAL 20 YEARS CLAIMABLE

This article first appeared in The Edge Malaysia Weekly, on July 6, 2020 - July 12, 2020.



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Integration Of ESG Principles in all Projects

Environmental

1. Optimise energy & RE, water and waste management performance via active and passive design interventions, combined with intelligent Facility Management (AI and IoT) to minimise the carbon footprint of the farms and their operations.
2. Benchmarking against international recognised “Towards Net Zero” sustainability standards, combined with independent carbon audit of farm performance.
3. Secure financing via green bonds to ensure additional compliance to green investing.

Social

1. Secure the buy in of all existing farm owners and address all their concerns with the proposed solutions.
2. Identify local and national stakeholders that can be engaged for specific project work components and trained and upskilled where necessary to increase the economic output of the local stakeholders – e.g. AI and IoT for Farm & Facility Management.
3. Support for local businesses when selecting suppliers of raw materials and other components required.

Governance

1. Adapt best practices regarding the Management Team, Operating Processes and Internal and External Audit to the highest standards of transparency and accountability.
2. Identify all current stakeholders that are linked to the existing local ecosystem and how these current stakeholders can be part of the implementation of the proposed project.



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Compliance to UN SDGs

Our work towards more sustainable animal (dairy, pigs & chicken) farming supports the UNSDGs

1. Clean Water & Sanitation by ensuring nitrogen & phosphorus are in balance on our farms.
2. Affordable & Clean Energy by using renewable
3. Energy sources on our Farms.
4. Responsible Consumption & Production by leading the way in dairy farming
5. Climate Action by continuing to reduce the CO2e on our farms and working
6. towards Carbon Net Zero in 2050.
7. Partnerships for the Goals by working with others and the farming industry to ensure a sustainable dairy future for us all.



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Applied Green Technologies



Applied Green Technologies

Resource recovery from waste includes multiple challenges; from planning of logistics to monetization of recovered resources. Due to its multi-faceted requirements, Waste Management projects pose multitude of challenges for project developers.

For the treatment of organic waste from animal husbandry projects, the industry has often turned towards biomethanation systems for a cost-effective sustainable solution. Developments in the modern world, economies of scale has pushed the industry to centralised mega farms posing serious challenges for implementation of waste management.

Industry has time and again turned towards advanced technological solutions to counter the complex waste management hurdles faced by the project owners.

HESB looks to explore such projects which not only adhere to the guidelines set by the authorities but also take a step forward and provide a unique combination of disruptive technological solutions which also incentivise all stakeholders. HESB with its partners bring industry experts and latest solutions for project implementation:

1. **IoT & AI to Digital Twins**
2. **Advanced Logistic Management**
3. **Advanced Biomethanation**
4. **Resource recovery and Zero Waste Policy**
 - a. **Biogas Utilization (Industrial Scale)**
 - b. **Wastewater treatment (Biological Systems)**
 - c. **Dewatered Solids Utilization as certified organic fertiliser**



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IoT & AI to Digital Twins

Components

Sensors . Actuators . Communication Layer
IoT Gateway . Cloud Storage . User Interface

Software System Features

Automation . better control of systems
increased uptime . operational efficiency
strengthen access control when needed

Real time monitoring

respond to the problems right away
adjust resources if needed based on
demand
help maintain efficiency
improve safety compliance



to

AI support

Data inputs

Simulations

Tweaking to optimise to sweet spots

Feedback to system

Implementation

Monitoring for Continuous Improvements



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Advanced Logistics Management

1. Identifying Appropriate Location of Site as per waste source mapping
2. Ensuring no cross contamination within the existing ecosystem.
3. Ensuring Internal & external Biosecurity via technology driven solutions
4. Reduction in CAPEX, OPEX and maintenance complications with completely avoiding underground piping and laying over ground piping wherever necessary
5. Use of dedicated robust transport vehicles designed specifically for each waste stream.
6. **IoT** based waste collection scheduling and appropriate temporary storage for feedstock.



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Advanced Biomethanation

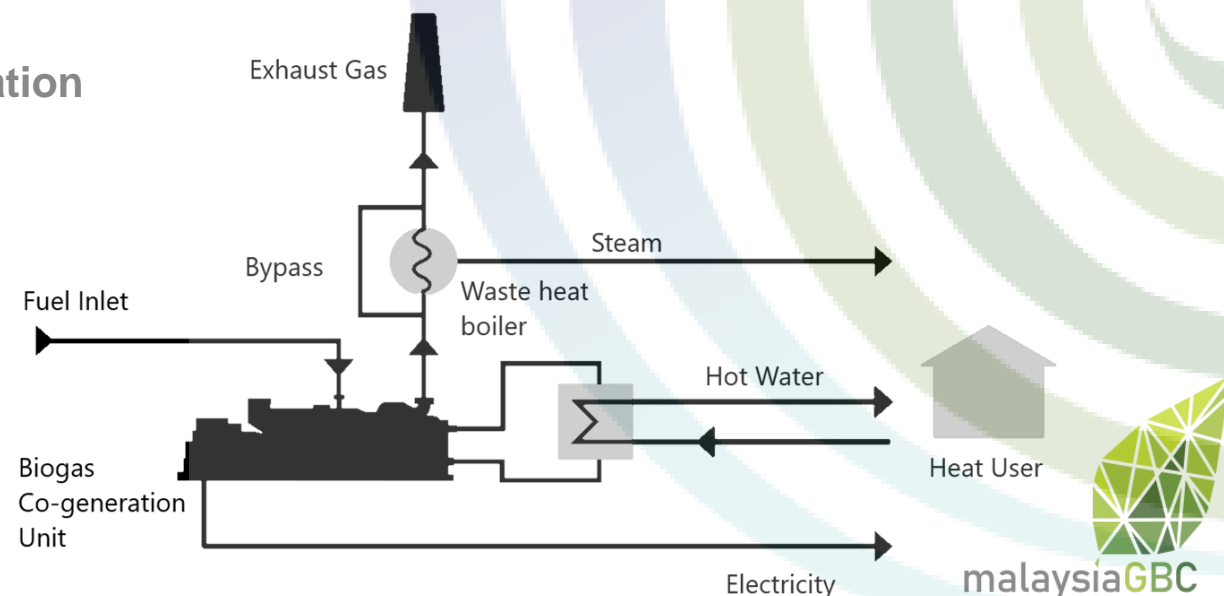
1. Optimized plant design as per actual feedstock characteristics (Physio-chemical)
2. Low HRT equating to smaller footprint and lower CAPEX
3. Low Downtime - Better health management and close monitoring of processes increasing revenue
4. Advanced bio-health management of the biomethanation system using remote monitoring technology.
5. App based performance monitoring.
6. Using high endurance materials for longevity and maximization of the life of the system.
7. Entire operations are **IoT** enabled for monitoring and control



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Advanced Biomethanation

1. Providing purified biogas to neighboring industries to reduce dependence on conventional fuels with/without upgrading
2. Running Biogas Engines to provide farmers with cheap energy and optional co-generation
3. Upgrading Biogas to Bio CNG to be bottled for transportation biogas generated.



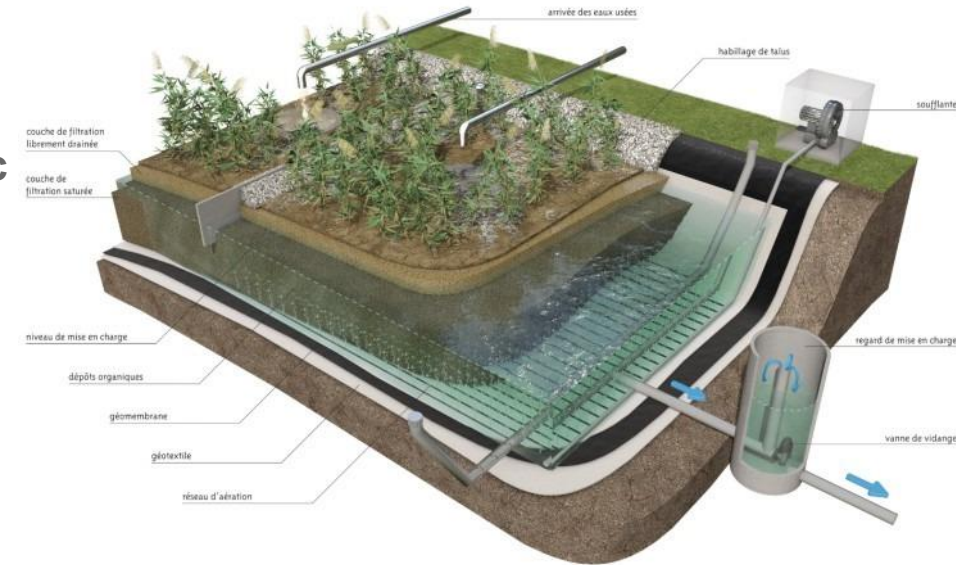
Waste Water Treatment

Waste Water Treatment Using Advanced Micro Bubble Aerated Constructed Wetlands Technology

Wetlands are artificially constructed shallow lakes with controlled flow of wastewater to reduce undesirable biochemical characteristics. Removal of organic pollutants, nutrient concentrations, even hazardous metals and toxic contaminants removal is achieved by a combination of microorganisms, substrates, plants, flow pattern and enhanced oxygen dissolution while the operations of the entire AWL system is IoT based for monitoring and control.

Salient features of HESB proposed technology

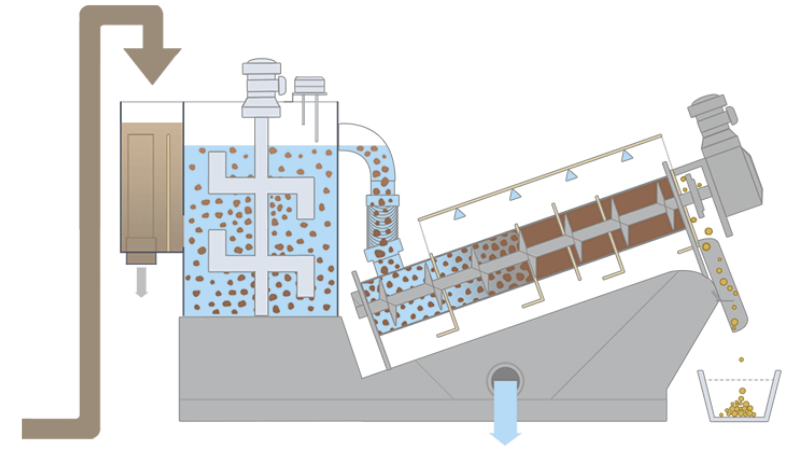
1. Reduced wetland footprint and retention times.
2. Forced aeration for better process control.
3. Optimized bubble sizes for maximising surface area increasing oxygen transfer to water body.
4. Source specific treatment



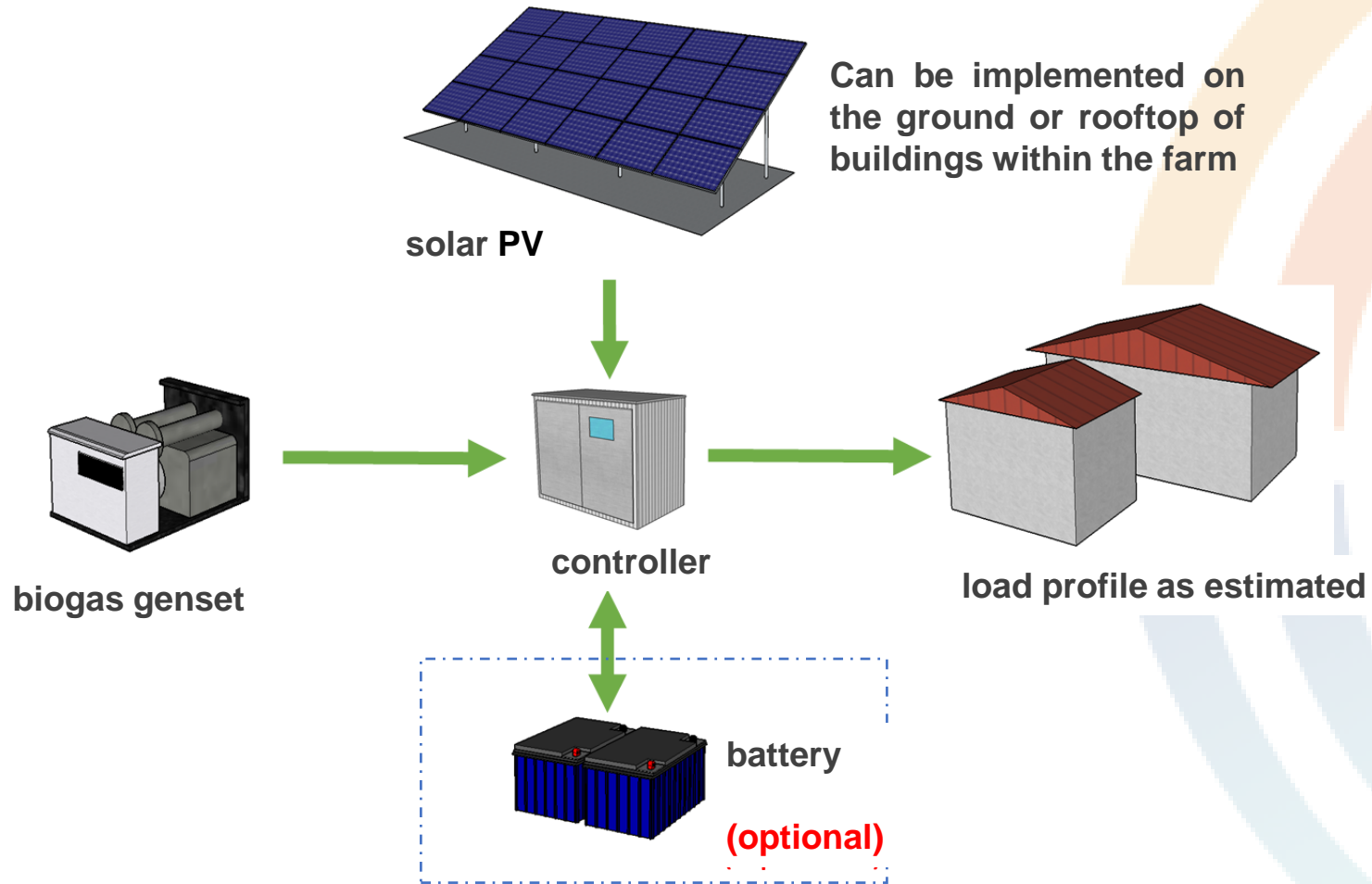
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Organic Fertiliser Treatment

1. Using specialised solid/liquid separators to increase efficacy of dewatering. Better solids retention and lower load on wastewater treatment.
2. Accelerated drying of solids by using waste heat from CHP generator, thus reducing CAPEX and space requirement.
3. Adding binders concurrently increasing the nutrient holding capacity of the organic fertiliser, improving soil aggregation, porosity, infiltration, and many other key beneficial soil physical characteristics



Biogas + Solar Combination



Solar - Battery – Biogas Genset



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Typical Solar + Biogas Installation



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Proposed Habitat Enviro – Cow/Buffalo Farm Collaboration

Problems being addressed: Optimising farmland use and efficiencies in food production

Advanced Hydroponics For Green Fodder & Hybrid Waste To Energy Technology

1. Vertical Farming Hydroponically Grown Animal Fodder.
2. Ensuring Highest nutritional yield output for high life expectancy, healthy & high yield expectancy for the Animals.
3. Increasing Total Farm Capacity up to 100%.
4. To achieve our goal of Carbon Net Zero, we are working towards operations that are totally free of fossil fuels, instead relying on renewable energy sources that include wind ventilators, solar panels, and biogas.
5. On site farm wide scale Bio Methanation of Buffalo Dung for power generation.
6. Wastewater treatment through Aerated Wetlands & Aerated Lagoons
7. Aquaponics for Fish Breeding



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Green Finance



Green Finance

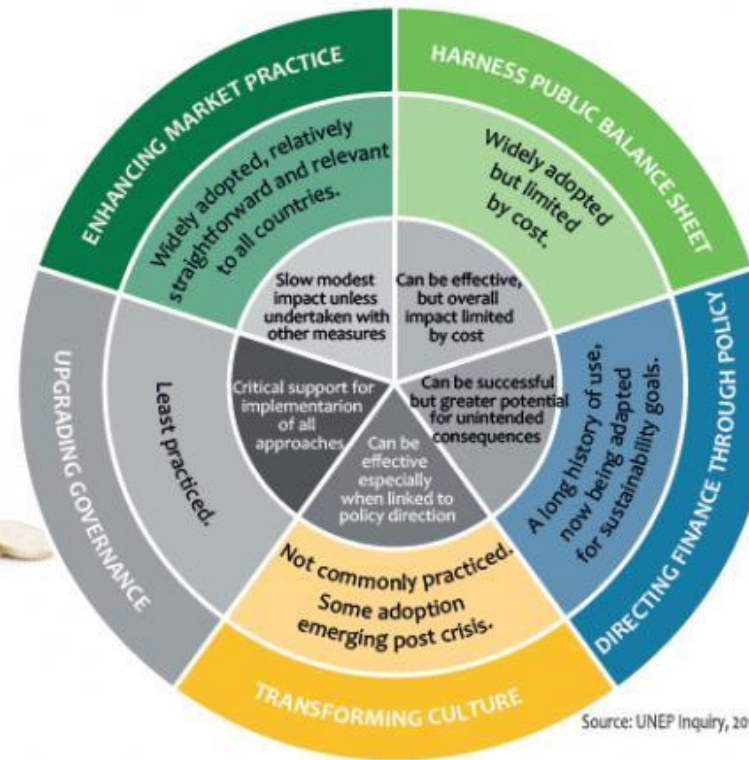
“Green financing is to increase level of financial flows (from banking, micro-credit, insurance and investment) from the public, private and not-for-profit sectors to sustainable development priorities. A key part of this is to better manage environmental and social risks, take up opportunities that bring both a decent rate of return and environmental benefit and deliver greater accountability”

Source: unep.org



GREEN FINANCING IN ASIA AND THE PACIFIC

Five Approaches to Aligning the Financial System to Sustainable Development



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Way Forward

- 1. First EIA approval for Pig Farm Biogas project achieved**
- 2. Government support, endorsement and possible collaboration in progress**
- 3. Investor interest high and in the midst of discussion & negotiations**
- 4. Support from farming community is very strong**



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Kg Selamat Pig Farmers Consultation Session #01 on 09 April 2021 @ 7pm @ Kg Selamat for sustainable Pig Dung disposal system.

四月九日晚7点
威北平安村养猪场
第一场对于可持续猪粪处理系统协商会议

| NO. | DVS Code | Name | Number of SPP | Lot Number | Signature |
|-----|------------|---------------------------|---------------|------------|---------------------------|
| 1. | PU 084 | Ng Kwai Kwang | 1200 | | Ng Kwai Kwang |
| 2. | PU 112 | Ng Chee Lee | 2000 | | Ng Chee Lee |
| 3. | PU 032 | Ng Joo Heng | 200 | | Ng Joo Heng |
| 4. | PU 009 | Ng Joo Hong | 1200 | | Ng Joo Hong |
| 5. | PU 006 | Lim Joo King | 4500 | | Lim Joo King |
| 6. | PU 071 | Lim Poh Huan | 900 | | Lim Poh Huan |
| 7. | PU 008 | Lee John Shen | 5000/4000 | | Lee John Shen |
| 8. | PU 042 | Lee John Shen | 1000 | | Lee John Shen |
| 9. | PU 090 | Tan Kiang Seang | 2800 | | Tan Kiang Seang |
| 10. | PU 065 | Ang Kim Huet | 16000 | | Ang Kim Huet |
| 11. | PU 047 | Tan Peng Hoo | 1300 | | Tan Peng Hoo |
| 12. | PU 022 | Low Keng Seng | 2800 | | Low Keng Seng |
| 13. | PU 029 | Ng Joo King | 2800 | | Ng Joo King |
| 14. | PU 106 | Hwa Chin Wah | 2000 | | Hwa Chin Wah |
| 15. | PU 020 | Tan Chay Yee | 1000 | | Tan Chay Yee |
| 16. | PU 056 | Tan Chay Yee | 2600 | | Tan Chay Yee |
| 17. | PU 043 | Lee Ching Cheong | 2800 | | Lee Ching Cheong |
| 18. | PU 015 | Low Chai Huan | 1800 | | Low Chai Huan |
| 19. | PU 013 | Tan Song Meng | 1600 | | Tan Song Meng |
| 20. | PU 034 | Low Jui Huan | 800 | | Low Jui Huan |
| 21. | PU 031 | Lim Heng Lee | 1500 | | Lim Heng Lee |
| 22. | PU 003 | Teoh Chiew Seng | 2800 | | Teoh Chiew Seng |
| 23. | PU 059 | Lim Chai Li | 800 | | Lim Chai Li |
| 24. | PU 074 | Lim Teak Kwok | 1000 | | Lim Teak Kwok |
| 25. | PU 102 | Geok Cheong Hong | 1000 | | Geok Cheong Hong |
| 26. | PU 050 | Tan Jui Sun | 3000 | | Tan Jui Sun |
| 27. | PU 039 | Lee Trai Theng | 300 | | Lee Trai Theng |
| 28. | PU 087 | Low Kim Chan | 2000 | | Low Kim Chan |
| 29. | PU 024 | Teon Ah Ba | 1000 | | Teon Ah Ba |
| 30. | PU 010-051 | Don Kean Huan | 2500 | | Don Kean Huan |
| 31. | PU 077 | Loo Kwai Joo | 1000 | | Loo Kwai Joo |
| 32. | PU 093 | Ng Wei Hui | 2000 | | Ng Wei Hui |
| 33. | PU 115 | Ng Soon Peng | 1200 | | Ng Soon Peng |
| 34. | PU 033 | Ng Seng Teo | 1200 | | Ng Seng Teo |
| 35. | PU 017 | Ng Global Agriculture S/B | 2000 | | Ng Global Agriculture S/B |
| 36. | PU 030 | Tong Meng Hock | 2000 | | Tong Meng Hock |
| 37. | PU 026 | Lim Cheong Ming | 2500 | | Lim Cheong Ming |

| | | | | | |
|-----|---------|------------------|------|--|------------------|
| 38. | PU 055 | Don Guo Sheng | 1200 | | Don Guo Sheng |
| 39. | PU 021 | Wong Yee Hoo | 1000 | | Wong Yee Hoo |
| 40. | PU 048 | Wong Yee Hoo | 1000 | | Wong Yee Hoo |
| 41. | PU 068 | Ang Choo Tuen | 2000 | | Ang Choo Tuen |
| 42. | PU 040 | SIA Tse Kwang | 1200 | | SIA Tse Kwang |
| 43. | PU 060 | Chen Heng Kwai | 1000 | | Chen Heng Kwai |
| 44. | PU 023 | Li Hee's Garden | 2000 | | Li Hee's Garden |
| 45. | PU 049 | Tan Hoon Yam | 2800 | | Tan Hoon Yam |
| 46. | PU 012 | Lim Tai Kwang | 1500 | | Lim Tai Kwang |
| 47. | PU 041 | Thay See Peng | 1000 | | Thay See Peng |
| 48. | PU 004 | Low Kwong Heng | 2800 | | Low Kwong Heng |
| 49. | PU 038 | Lee Jit Huan | 2000 | | Lee Jit Huan |
| 50. | PU 067 | Tai Wilson | 1500 | | Tai Wilson |
| 51. | PU 105 | Chin Hong Chung | 1200 | | Chin Hong Chung |
| 52. | PU 028 | Teoh Kwi Lam | 1200 | | Teoh Kwi Lam |
| 53. | PU 025 | Teoh Chiang Chiu | 1100 | | Teoh Chiang Chiu |
| 54. | PU 048 | Lim Wei Heng | 1500 | | Lim Wei Heng |
| 55. | PU 111X | | | | |
| 56. | PU 108 | Tan Jee An | 500 | | Tan Jee An |
| 57. | PU 054 | Beh Chee Hoo | 600 | | Beh Chee Hoo |
| 58. | PU 005 | Lee Ah Koo | 1000 | | Lee Ah Koo |
| 59. | PU 083 | Lee Ah Koo | 800 | | Lee Ah Koo |
| 60. | PU 091 | Lee Joo Huan | 800 | | Lee Joo Huan |

| | | | | | |
|-----|--------|-----------------|------|--|-----------------|
| 61. | PU 001 | Teoh Keow Theng | 3000 | | Teoh Keow Theng |
| 62. | PU 094 | Chua Shit Choh | 1200 | | Chua Shit Choh |
| 63. | PU 040 | SIA Tse Kwang | 1200 | | SIA Tse Kwang |
| 64. | PU 116 | Sang Tiang Ang | 2000 | | Sang Tiang Ang |
| 65. | PU 086 | Ang Tiek Thye | 800 | | Ang Tiek Thye |

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Intent to continue participation towards an agreement of individual and collective terms and conditions to be proposed after detailed study of each farm.

在对每个农场进行详细研究后，有意向继续参与达成个人和集体条款和条件的协议。

1/2

| NO. | DVS Code | Name | Signature |
|-----|------------|---------------------------|---------------------------|
| 1. | PU 064 | Ng Kwai Kwang | Ng Kwai Kwang |
| 2. | PU 112 | Ng Chee Lee | Ng Chee Lee |
| 3. | PU 032 | Ng Joo Heng | Ng Joo Heng |
| 4. | PU 009 | Ng Joo Hong | Ng Joo Hong |
| 5. | PU 006 | Lim Joo King | Lim Joo King |
| 6. | PU 071 | Lim Poh Huan | Lim Poh Huan |
| 7. | PU 008 | Lee John Shen | Lee John Shen |
| 8. | PU 042 | Lee John Shen | Lee John Shen |
| 9. | PU 090 | Tan Kiang Seang | Tan Kiang Seang |
| 10. | PU 065 | Ang Kim Huet | Ang Kim Huet |
| 11. | PU 047 | Tan Peng Hoo | Tan Peng Hoo |
| 12. | PU 022 | Low Keng Seng | Low Keng Seng |
| 13. | PU 029 | Ng Joo King | Ng Joo King |
| 14. | PU 106 | Hwa Chin Wah | Hwa Chin Wah |
| 15. | PU 020 | Tan Chay Yee | Tan Chay Yee |
| 16. | PU 056 | Tan Chay Yee | Tan Chay Yee |
| 17. | PU 043 | Lee Ching Cheong | Lee Ching Cheong |
| 18. | PU 015 | Low Chai Huan | Low Chai Huan |
| 19. | PU 013 | Tan Song Meng | Tan Song Meng |
| 20. | PU 034 | Low Jui Huan | Low Jui Huan |
| 21. | PU 031 | Lim Heng Lee | Lim Heng Lee |
| 22. | PU 003 | Teoh Chiew Seng | Teoh Chiew Seng |
| 23. | PU 059 | Lim Chai Li | Lim Chai Li |
| 24. | PU 074 | Lim Teak Kwok | Lim Teak Kwok |
| 25. | PU 102 | Geok Cheong Hong | Geok Cheong Hong |
| 26. | PU 050 | Tan Jui Sun | Tan Jui Sun |
| 27. | PU 039 | Lee Trai Theng | Lee Trai Theng |
| 28. | PU 087 | Low Kim Chan | Low Kim Chan |
| 29. | PU 024 | Teon Ah Ba | Teon Ah Ba |
| 30. | PU 010-051 | Don Kean Huan | Don Kean Huan |
| 31. | PU 077 | Loo Kwai Joo | Loo Kwai Joo |
| 32. | PU 093 | Ng Wei Hui | Ng Wei Hui |
| 33. | PU 115 | Ng Soon Peng | Ng Soon Peng |
| 34. | PU 033 | Ng Seng Teo | Ng Seng Teo |
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| | | | |
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| 39. | PU 021 | Wong Yee Hoo | Wong Yee Hoo |
| 40. | PU 048 | Wong Yee Hoo | Wong Yee Hoo |
| 41. | PU 068 | Ang Choo Tuen | Ang Choo Tuen |
| 42. | PU 040 | SIA Tse Kwang | SIA Tse Kwang |
| 43. | PU 060 | Chen Heng Kwai | Chen Heng Kwai |
| 44. | PU 023 | Li Hee's Garden | Li Hee's Garden |
| 45. | PU 049 | Tan Hoon Yam | Tan Hoon Yam |
| 46. | PU 012 | Lim Tai Kwang | Lim Tai Kwang |
| 47. | PU 041 | Thay See Peng | Thay See Peng |
| 48. | PU 004 | Low Kwong Heng | Low Kwong Heng |
| 49. | PU 038 | Lee Jit Huan | Lee Jit Huan |
| 50. | PU 067 | Tai Wilson | Tai Wilson |
| 51. | PU 105 | Chin Hong Chung | Chin Hong Chung |
| 52. | PU 028 | Teoh Kwi Lam | Teoh Kwi Lam |
| 53. | PU 025 | Teoh Chiang Chiu | Teoh Chiang Chiu |
| 54. | PU 048 | Lim Wei Heng | Lim Wei Heng |
| 55. | PU 111X | | |
| 56. | PU 108 | Tan Jee An | Tan Jee An |
| 57. | PU 054 | Beh Chee Hoo | Beh Chee Hoo |
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| 59. | PU 083 | Lee Ah Koo | Lee Ah Koo |
| 60. | PU 091 | Lee Joo Huan | Lee Joo Huan |
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| 62. | PU 094 | Chua Shit Choh | Chua Shit Choh |
| 63. | PU 040 | SIA Tse Kwang | SIA Tse Kwang |
| 64. | PU 116 | Sang Tiang Ang | Sang Tiang Ang |
| 65. | PU 086 | Ang Tiek Thye | Ang Tiek Thye |

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65 out of 69 Farmers in Kg Selamat attended the Community Engagement Session giving details of number of pigs for each farm



All 65 out of 69 Farmers in Kg Selamat agreed to continue participation towards an agreement of individual & collective terms and conditions to be proposed after detailed study of each farm.

UNPRECEDENTED BOTTOM UP COMMON CONSENSUS BY KG SELAMAT PIG FARMERS IN THE HISTORY OF PIG FARMING IN MALAYSIA



Thank You

bksinha

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Thank you!

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