

# THE PENANG PARADIGM

THE FRAMEWORK FOR  
CREATING AN INTERNATIONAL  
AND INTELLIGENT STATE



PENANG  
PARADIGM



قارادىگم قولو قىنىغ • 檳城典範 • پىناڭكىن پتىي پرىماڭم

making ideas work

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# THE 3 DRIVERS OF PROGRESS

PENANG PARADIGM  
TOWARDS 2023

## IDEAS

### IDEAS ON

- Freedom, justice and equity
- Individual rights, social responsibilities and global welfare
- Aesthetics and nature
- Innovation and entrepreneurship

## PRIVATE INVESTMENT

### PRIVATE INVESTMENT TO DRIVE EFFICIENCY IN

- Production, and
- Distribution

subject to regulations to maximize social welfare


## PUBLIC INFRASTRUCTURE

### PUBLIC SECTOR TO ADMINISTER

- The soft infrastructure (state institutions), to govern society and economy efficiently and fairly; and
- The hard infrastructure (like communications) to provide high quality, cost-effective services



# THE 3 SYSTEMIC PROPERTIES



HORIZONTAL  
INTEGRATION OF  
THE 3 DRIVERS OF  
PROGRESS CREATES  
PROCESSES  
THAT PRODUCE  
3 SYSTEMIC  
PROPERTIES

**ECONOMIC  
DYNAMISM,  
LIVEABILITY &  
SUSTAINABILITY  
AND SOCIAL  
DEVELOPMENT &  
INCLUSION**

## **ECONOMIC DYNAMISM (ED)**

- 1 The Growth Fundamentals
- 2 High-Tech Manufacturing
- 3 Modern Services
- 4 Moving SMEs up the Value Chain
- 5 Providing the Required Hard Infrastructure
- 6 Science & Technology Policy

## **LIVEABILITY & SUSTAINABILITY (L&S)**

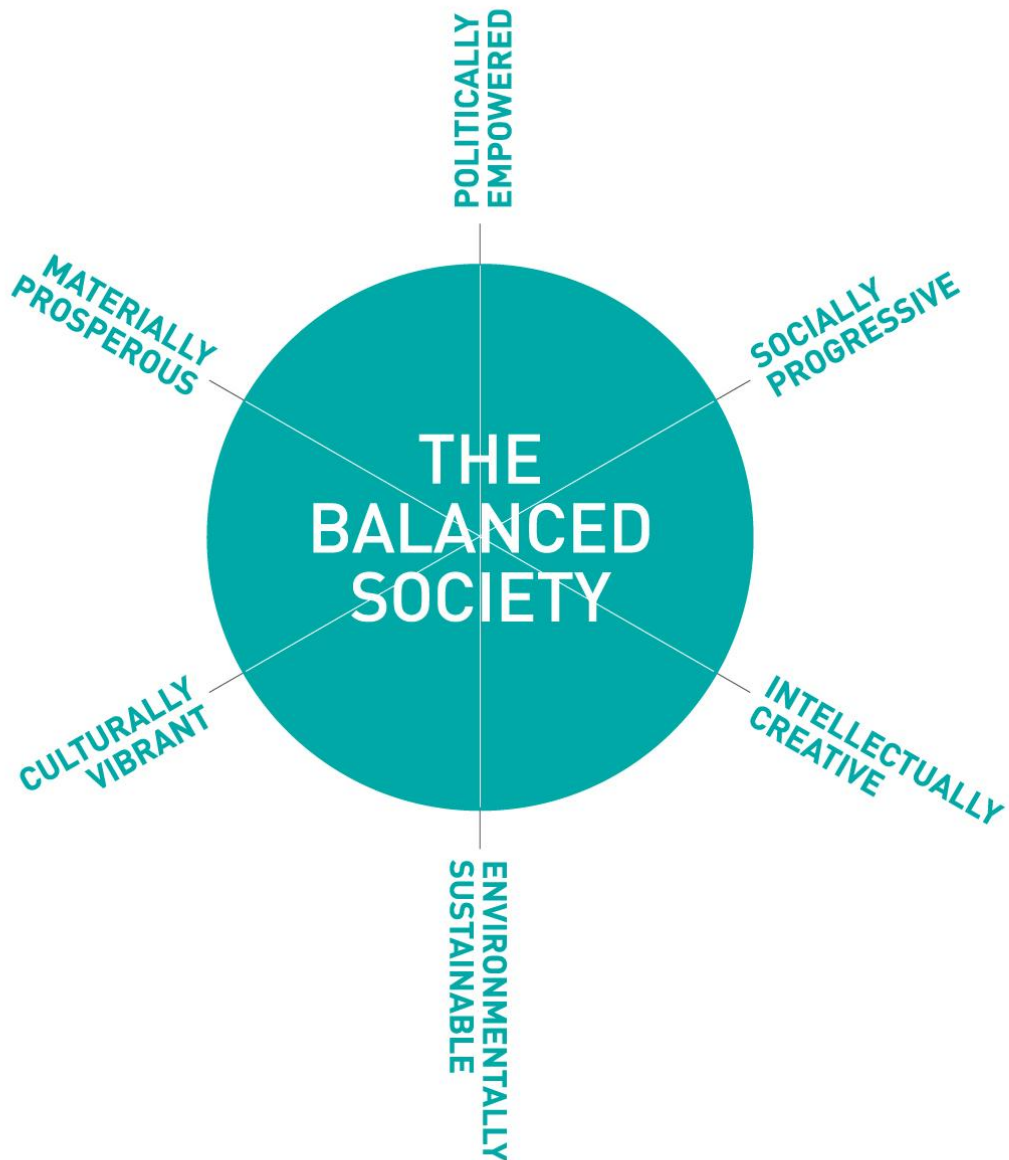
- 1 Sustainable Planning
- 2 Transport System
- 3 Affordable Housing
- 4 Environment
- 5 Public Spaces
- 6 Heritage, Culture & Arts

## **SOCIAL DEVELOPMENT & INCLUSION (SD&I)**

- 1 Combatting Poverty, Inequality and Discrimination
  - 2 Family and Community Support
  - 3 Economic Empowerment through Education
  - 4 Democratic Empowerment
- 

# THE BALANCED SOCIETY

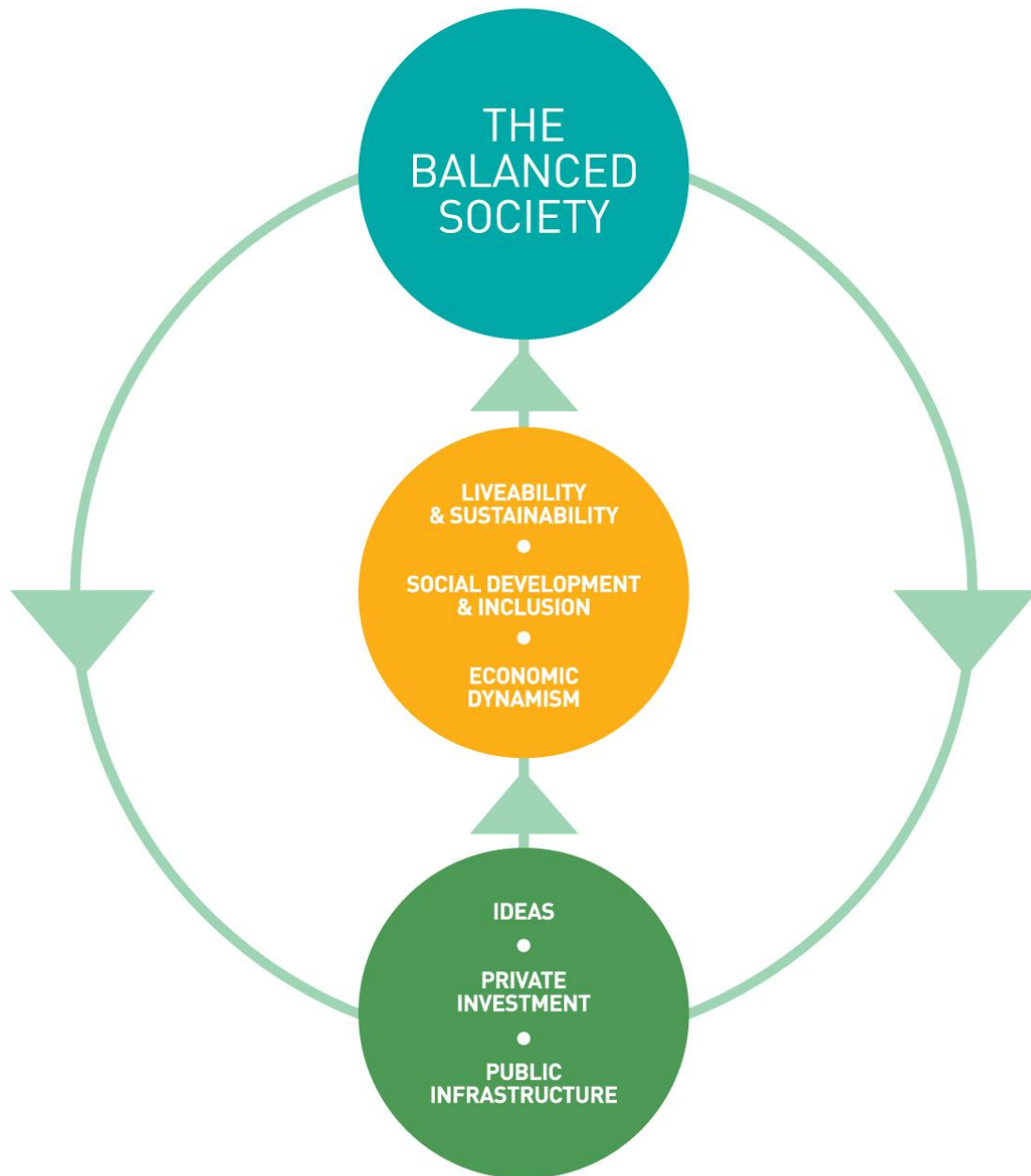
PENANG PARADIGM  
TOWARDS 2023



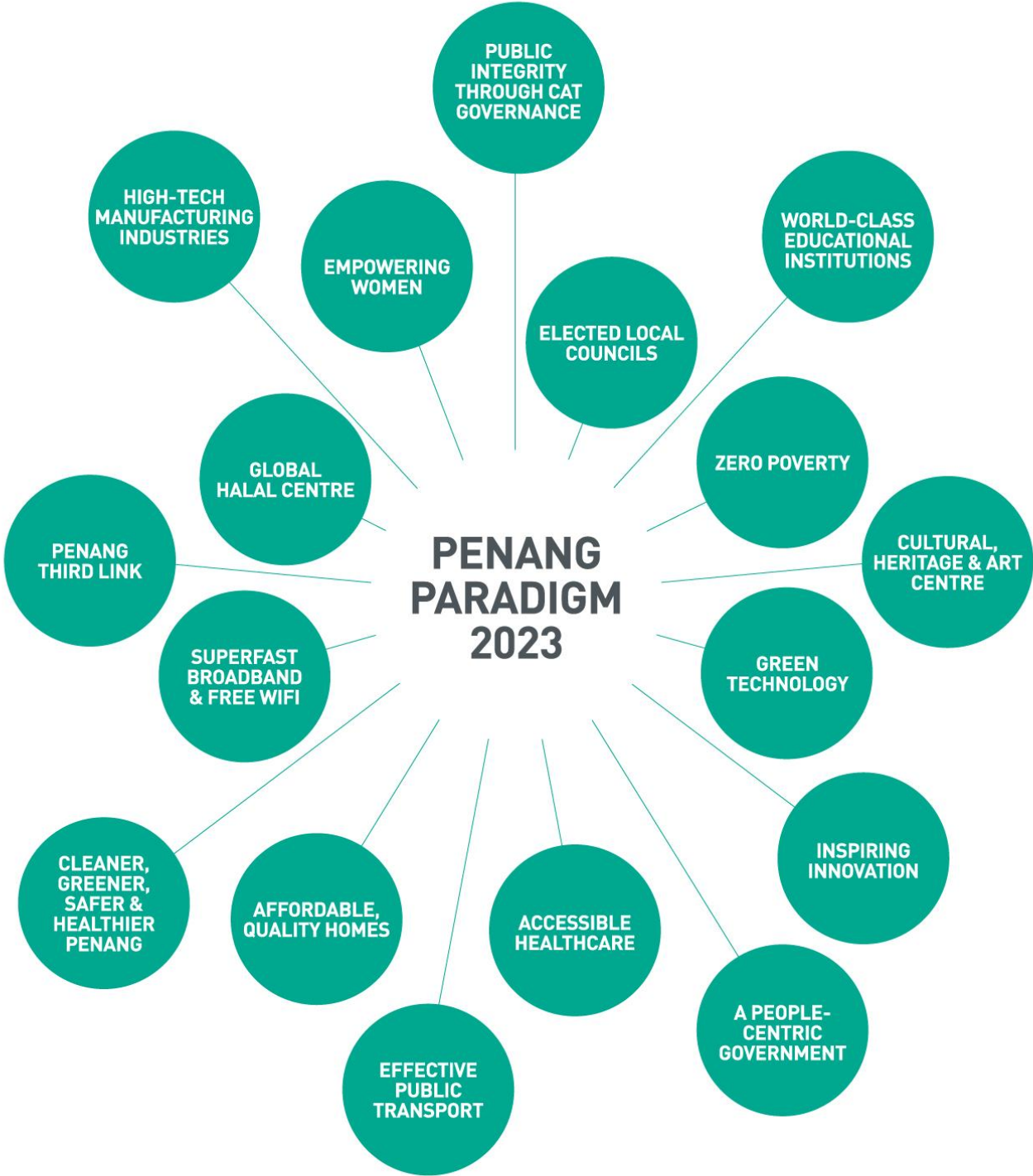
HORIZONTAL INTEGRATION OF THE  
3 SYSTEMIC PROPERTIES (ED, L&S, AND SD&I)  
**YIELDS THE BALANCED SOCIETY**

# THE SELF-SUSTAINING CYCLE

PENANG PARADIGM  
TOWARDS 2023



THE SIX TRAITS CREATE THE ATMOSPHERE CONDUCTIVE TO THE FORGING OF A **HOLISTIC PARTNERSHIP** OF PUBLIC INFRASTRUCTURE, PRIVATE INVESTMENT AND CIVIL SOCIETY



# ECONOMIC DYNAMISM

**ACTION A**  
STRENGTHEN THE  
GENERATION OF  
CREATIVE IDEAS

**ACTION B**  
BOOST PRIVATE INVESTMENT IN  
PENANG IN HIGH-VALUE ADDED  
MANUFACTURING AND SERVICE  
INDUSTRIES THROUGH PUBLIC-  
PRIVATE PARTNERSHIPS

**ACTION C**  
UPGRADE PUBLIC  
SECTOR SERVICES

VB1 VB2 VB3 VB4

# THE ABC OF ECONOMIC DYNAMISM

ECONOMIC DYNAMISM

THE RATE OF ECONOMIC GROWTH (Y) DEPENDS ON 3 DRIVERS

**A**

THE PACE THAT NEW IDEAS ARE GENERATED

**B**

THE AMOUNT OF PRIVATE SECTOR INVESTMENT

**C**

THE ADEQUACY OF INFRASTRUCTURAL SUPPORT FROM THE PUBLIC SECTOR

## FACTOR A

THE NUMBER OF NEW USEFUL IDEAS DEPENDS ON THE NUMBER OF CREATIVE PEOPLE AND THE LEVEL OF TECHNOLOGICAL KNOWLEDGE.

## FACTOR B

PRIVATE INVESTMENT CAN OCCUR ONLY IN A PRIVATE MARKET ECONOMY, AND THE LEVEL DEPENDS ON THE ANTICIPATED RATE OF RETURN WHICH IS, IN TURN, DETERMINED BY THE INCOME TAX RATE AND THE LEVEL OF CORRUPTION.

## FACTOR C

ADEQUACY IN TWO TYPES OF PUBLIC INFRASTRUCTURE

- SOFT INFRASTRUCTURE: THE QUALITY OF GOVERNANCE INSTITUTIONS THAT SUPPORT THE MARKET MECHANISM, E.G. LEGAL ADJUDICATION, LICENSING REGULATIONS
- HARD INFRASTRUCTURE: THE COST OF SERVICES PROVIDED BY PUBLIC PHYSICAL CAPITAL, E.G. FEES FOR AIRPORT, INTERNET, ELECTRICITY, AND ROADS.

**IN THE LONG-RUN**, GROWTH (Y) IS A MULTIPLICATIVE PROCESS PRODUCED BY THE **HORIZONTAL INTEGRATION** OF THE 3 FACTORS:

$$Y = A \times B \times C,$$

WHERE GROWTH IS ZERO IF ANY FACTOR IS ZERO.

**IN THE SHORT-RUN**, GROWTH (Y) CAN BE AN ADDITIVE PROCESS:

$$Y = A + B + C,$$

WHERE GROWTH CAN BE GENERATED EVEN IF TWO FACTORS ARE ZERO.

AN EXAMPLE THAT GROWTH IS ULTIMATELY A MULTIPLICATIVE PROCESS (A HOLISTIC PHENOMENON): *THE USSR GENERATED HIGH GROWTH FOR 50 YEARS AFTER 1917 WITH ZERO PRIVATE INVESTMENT, BUT USSR IS NOW NO LONGER IN EXISTENCE.*



# SITUATION ON ECONOMIC GROWTH IN MALAYSIA AND PENANG

ECONOMIC DYNAMISM

## CURRENT PRACTICES

## RESULTED IN

|  |   |
|--|---|
| <p>BRAIN DRAIN THROUGH SYSTEMATIC ANTI-MERITOCRATIC PRACTICES AND A STEADY DECLINE OF THE EDUCATION SYSTEM, AND CAPITAL FLIGHT INDUCED BY STATE-IMPOSED EQUITY QUOTA ON PUBLIC-LISTED COMPANIES.</p>                                       | <p>EXISTING ECONOMIC POLICIES PUSH FACTORS A AND B TOWARDS ZERO.</p>  |
| <p>A STATE CANNOT BORROW TO BUILD INFRASTRUCTURE WITHOUT FEDERAL APPROVAL, AND INFRASTRUCTURE SUCH AS AN AIRPORT RUNWAY CANNOT BE BUILT WITHOUT FEDERAL APPROVAL EVEN IF FUNDED BY THE STATE.</p>  | <p>OVER-CENTRALIZATION OF POWER IN THE FEDERAL GOVERNMENT BLOCKS INDEPENDENT DEVELOPMENT INITIATIVES BY STATE GOVERNMENTS, THEREBY REDUCING INVESTMENT IN THE REQUIRED HARD INFRASTRUCTURE.</p> |
| <p>STEADY DECLINE IN QUALITY OF SOFT INFRASTRUCTURE, E.G. <i>ADORNA PROPERTIES</i> DECISION OF CHIEF JUSTICE EUSOFF CHIN IN 2000 DEPRIVING LAND-SCAM VICTIMS OF LEGAL REDRESS (RULING WAS REVERSED ONLY IN 2010 BY NEW FEDERAL COURT).</p> | <p>DETERIORATION OF SOFT INFRASTRUCTURE, RESULTING IN RED TAPE, DELAYS AND MORAL HAZARDS</p>  |

## BEFORE

YEAR 2000

## AFTER

NEGATIVE GROWTH ASPECTS WERE OUTWEIGHED BY:

- MASSIVE INWARD FDI;
- BIG INVESTMENTS BY GLCS;
- LARGE INFRASTRUCTURE PROJECTS FINANCED BY OIL AND GAS REVENUE.

- POST-1990 EXTERNAL TRENDS AND PRE-2000 EXTENDED PERIOD OF MISMANAGEMENT HAVE GREATLY REDUCED THE MAGNITUDES OF OFFSETTING FACTORS, RESULTING IN SIGNIFICANT SLOWDOWN IN GROWTH
  - MALAYSIA IN THE MIDDLE-INCOME TRAP,
- ALSO SIGNIFICANT:
  - (A) WORSENING IN INCOME EQUALITY;
  - (B) LOSS IN BIO-DIVERSITY.

# OVERVIEW OF AGENDA TO RESTORE ECONOMIC DYNAMISM TO PENANG

## **ACTIONS NEAR COMPLETION**

REDUCE THE DELETERIOUS EFFECTS OF PRESENT FEDERAL POLICY REGIME IN PENANG:

- REPLACE CRONY CAPITALISM WITH FAIR COMPETITION E.G. OPEN TENDER PROJECTS;
- DECENTRALISE POWER E.G. TO HOLD LOCAL COUNCIL ELECTIONS;
- STOP THE DECLINE IN QUALITY OF GOVERNMENT SERVICE E.G. ADOPT CAT (COMPETENCY-ACCOUNTABILITY-TRANSPARENCY) PRINCIPLES.

## **ACTION A**

STRENGTHEN THE GENERATION OF CREATIVE IDEAS:

- RETAIN HUMAN TALENT AND ATTRACT HUMAN TALENT FROM ELSEWHERE BY STRENGTHENING:
  - THE PRACTICE OF MERITOCRACY;
  - GROWTH OF HIGH WAGE INDUSTRIES;
  - LIVEABILITY;
  - SOCIAL HARMONY.
- ENHANCE HUMAN CAPITAL INVESTMENT THROUGH:
  - EFFECTIVE MOBILISATION OF TALENTS BORN IN LOW-INCOME FAMILIES BY ELIMINATING POVERTY;
  - STATE ALLOCATIONS TO IMPROVE SCHOOLS AND EARLY CHILDHOOD EDUCATION.

## **ACTION B**

BOOST PRIVATE INVESTMENT IN PENANG IN HIGH-VALUE ADDED MANUFACTURING AND SERVICE INDUSTRIES THROUGH PUBLIC-PRIVATE PARTNERSHIPS:

- IMPROVE INFRASTRUCTURE;
- HELP SMES GROW INTO WORLD-CLASS COMPANIES;
- INCREASE SUPPLY OF SKILLED MANPOWER.

## **ACTION C**

UPGRADE PUBLIC SECTOR SERVICES:

- REFORM GOVERNANCE STRUCTURE TO EMPOWER LOCAL INITIATIVES, E.G. ADOPT FISCAL FEDERALISM;
- ADOPT CAT PRINCIPLES IN GOVERNANCE.

EMBED THE PEOPLE-CENTRIC 3E-VISION OF PUBLIC SERVICES TO

- ENABLE THE PEOPLE WITH SKILLS, KNOWLEDGE AND EXPERTISE;
- EMPOWER THE PEOPLE WITH RIGHTS, FREEDOM AND OPPORTUNITIES;
- ENRICH THE PEOPLE BY ENSURING THAT THE WEALTH IS EQUITABLY SHARED.

# CURRENT SITUATION IN MANUFACTURING & BIO-AGRO SECTOR

- AROUND 50% OF PENANG'S GDP COMES FROM MANUFACTURING; MORE THAN 60% OF THAT IS FROM THE ELECTRICAL AND ELECTRONICS (E&E) INDUSTRY.
- E&E GROWTH IN MALAYSIA HAS SLOWED DOWN SINCE THE 1990S, AND THE SITUATION HAS BEEN WORSENERD IN THE 2000S BY THE DIVERSION OF FDI TO OTHER EMERGING COUNTRIES IN ASIA.
- MALAYSIA'S COST IS UNCOMPETITIVE COMPARED TO LOWER-INCOME COUNTRIES, AND MALAYSIA IS TECHNOLOGICALLY BACKWARD COMPARED WITH THE ADVANCED COUNTRIES.
- FROM LATE 2000S, HOWEVER, OWING TO EFFECTIVE PROGRAMMES BY THE STATE GOVERNMENT AND LOCAL AGENCIES TO PROMOTE GROWTH OF HIGH-VALUE-ADDED INDUSTRIES AND TO CREATE AN ENABLING BUSINESS AND INNOVATION ENVIRONMENT, MNCs STARTED TO MOVE UP THEIR VALUE CHAIN BY LAUNCHING R&D CENTRES AND LOCATING SHARED SERVICES CENTRES IN PENANG FOR THEIR GLOBAL OPERATIONS IN ACTIVITIES SUCH AS HR AND FINANCE.
- MEDICAL DEVICE INDUSTRIES (MDI) AND BIO-PHARMACEUTICALS (E.G. CONTRACT RESEARCH OUTSOURCING AND CLINICAL RESEARCH) ARE MOVING FROM ADVANCED COUNTRIES (US/EU/JP) TO EMERGING ASIA DUE TO COST INCENTIVES AND MARKET OPPORTUNITIES.
- WITH THE PRESENCE OF MNCs IN MDI AND SMES IN BIO-PHARMACEUTICALS, PENANG IS IN THE EARLY STAGE IN THESE FIELDS, AND THE POTENTIAL TO GROW IS HUGE.
- FOOD PROCESSING ALSO REPRESENTS A SIGNIFICANT SOURCE OF INCOME FOR PENANG, ESPECIALLY WITH THE DEVELOPMENT OF THE GLOBAL HALAL CENTRE IN PENANG.
- PENANG SHOULD BECOME THE SERVICE AND TRANSPORTATION HUB OF THE FAST-GROWING SEAFOOD AQUACULTURE INDUSTRY IN KEDAH, PERLIS AND PERAK.



# CURRENT SITUATION OF TOURISM INDUSTRY

PENANG IS WELL POSITIONED TO CAPITALISE ON:

- **HERITAGE** TOURISM (UNESCO WORLD HERITAGE SITE);
- **RECREATIONAL** TOURISM (BATU FERRINGHI BEACH, PENANG HILL);
- **MEDICAL** TOURISM (GROWING MORE THAN 10% ANNUALLY; ENGLISH & MULTILINGUAL HOSPITALS);
- **RELIGIOUS** TOURISM;
- **FOOD** TOURISM (WIDE RANGE OF EXOTIC STREET FOOD THAT REFLECTS OUR MULTICULTURAL HERITAGE);
- **ECO-TOURISM** (TELUK BAHANG ESCAPE THEME PARK, BUTTERFLY FARM, BOTANICAL GARDENS);
- **MICE** - MEETINGS, INCENTIVES, CONFERENCES AND EXHIBITIONS - TOURISM (sPICE, PENANG WATERFRONT CONVENTION CENTRE).

TOURISM POTENTIAL NOT FULLY DEVELOPED FOR THE MIDDLE-INCOME AND HIGH-INCOME TOURISTS

- YAHOO TRAVEL LISTED PENANG AS ONE OF TOP 8 ISLANDS IN THE WORLD TO EXPLORE; BUT PENANG AIRPORT CANNOT ACCOMMODATE AIRBUS A380S AND RUNWAY IS TOO NARROW/ SHORT TO ALLOW LARGE AIRCRAFTS TO TAKE OFF.

# CURRENT SITUATION OF THE SHARED SERVICES OUTSOURCING (SSO) SECTOR

- MALAYSIA HAS BEEN RANKED 3RD IN SSO (SHARED SERVICES OUTSOURCING) FOR 8 YEARS IN A ROW SINCE 2004, BEHIND CHINA AND INDIA.
- PENANG WAS NAMED ONE OF THE NEW EMERGING ICT-BPO (INFORMATION AND COMMUNICATION TECHNOLOGY – BUSINESS PROCESS OUTSOURCING) DESTINATIONS BY KPMG IN 2009.
- THE VALUE OF ICT-BPO INDUSTRY TO PENANG IS ESTIMATED TO BE ABOUT US\$800 MILLION.
- MNCS ARE ALSO “INSOURCING” THEIR SERVICES (SUCH AS HR, PAYROLL PROCESSING AND FINANCE), AND BASING THEIR GLOBAL OPERATIONS IN PENANG, E.G. AMD, INTEL AND DELL. CITIGROUP IN PENANG IS NOW A GLOBAL TRADE PROCESSING CENTRE, SERVICING TRADE & CASH BUSINESSES.
- PENANG CYBERCITY IS CREATED ALONG WITH OTHER CYBERCITIES AND CYBERCENTRES (KLANG VALLEY, JOHOR, PERAK, KEDAH, ETC) TO PROMOTE ICT GROWTH BY PROVIDING PHYSICAL LOCATION AND OTHER INCENTIVES (E.G. LIBERAL EMPLOYMENT, OWNERSHIP & FUND-RAISING REGULATIONS, LOWER TARIFFS) VIA BILL OF GUARANTEES (BOG). HOWEVER, UNLIKE CYBERJAYA, THE CYBERCITIES (INCLUDING PENANG) ARE NOT GIVEN WORLD-CLASS NETWORK INFRASTRUCTURE.

## COMPANIES WITH SSO IN PENANG:

AMD  
INTEL  
IHS  
MOTOROLA  
DELL  
CITI GROUP  
PLEXUS  
AVAGO TECHNOLOGIES  
JABIL  
AGILENT TECHNOLOGIES

## TOTAL SALES OF MSC MALAYSIA COMPANIES IN 2011:

**RM 31.73  
BILLION**

## AMOUNT OF ICT SPENDING EXPECTED IN MALAYSIA IN 2013:

**RM10  
BILLION**

## ICT SPENDING GROWTH RATE FOR 2012:

**7.6%**

# CURRENT SITUATION IN EDUCATION SERVICE INDUSTRY

- PENANG POSSESSES HUGE POTENTIAL TO GROW AS AN EDUCATION HUB BECAUSE OF ITS LIVEABILITY AND GOOD SECURITY, AND THE FAST GROWTH OF THE MIDDLE CLASS IN THE REGION.
- PENANG OFFERS A FULL RANGE OF EDUCATIONAL INSTITUTIONS FOR DOMESTIC AND FOREIGN STUDENTS:
  - INTERNATIONAL SCHOOLS (PRE-SCHOOL, PRIMARY AND SECONDARY);
  - DIFFERENT TYPES OF INDEPENDENT HIGH SCHOOLS;
  - PRE-UNIVERSITY COLLEGES;
  - SPECIALISED AND COMPREHENSIVE TERTIARY INSTITUTIONS;
  - PROFESSIONAL INSTITUTIONS TO PROVIDE RETRAINING AND UPGRADING OF SKILLS, E.G. PENANG SKILLS DEVELOPMENT CENTRE.
- RECENT EXPERIENCES IN PENANG SUGGEST THAT THE MINISTRY OF HIGHER EDUCATION NEEDS TO:
  - UPDATE ITS APPROVAL CRITERIA FOR THE UPGRADING OF UNIVERSITIES AND THE ESTABLISHMENT OF NEW TERTIARY INSTITUTIONS; AND
  - REDUCE THE PROCESSING TIME FOR SUCH APPLICATIONS.
- IN THE DETERMINATION OF THE SUPPLY OF VARIOUS TYPES OF EDUCATIONAL INSTITUTIONS, THE MINISTRY OF EDUCATION AND THE MINISTRY OF HIGHER EDUCATION ARE STILL PUTTING TOO MUCH ATTENTION TO THE OBJECTIVES OF SOCIAL ENGINEERING AND NOT ENOUGH ATTENTION TO THE PREFERENCES OF THE GENERAL PUBLIC. BECAUSE EDUCATION IS A GLOBAL INDUSTRY, THE RESULT IS THAT MANY MALAYSIANS HAVE GONE ABROAD TO STUDY – POSSIBLY, BOOSTING OUTWARD MIGRATION OF FUTURE TALENTS IN THE PROCESS.

# CURRENT SITUATION IN THE SME SECTOR

- SMES CONSTITUTE THE BACKBONE OF THE MALAYSIAN ECONOMY, CONTRIBUTING 32.5% OF MALAYSIAN GDP, AND EMPLOYING 57% OF THE WORKFORCE. WITHIN THE MALAYSIAN MANUFACTURING SECTOR, SMES ACCOUNT FOR 97% OF THE FIRMS AND 50% OF THE EMPLOYMENT.
- PENANG IS HOME TO 6% OF THE COUNTRY'S SMES. WITHIN THE PENANG MANUFACTURING SECTOR, SMES ACCOUNT FOR 88% OF THE FIRMS AND 26% OF THE EMPLOYMENT. KEY SME SECTORS IN PENANG INCLUDE FABRICATED METAL PRODUCTS; AUTOMATION, MACHINERY & PRECISION TOOLING AND FOOD & BEVERAGES; ALL OF WHICH ACCOUNT FOR 41% OF THE SME ESTABLISHMENTS AND 33% OF SME EMPLOYMENT.
- PENANG IS THE ONLY STATE WITH A STRATEGY TO ACCELERATE THE DEVELOPMENT OF THE SME SECTOR. SINCE 2008, PENANG HAS ADOPTED A FORWARD-LOOKING 3-PRONGED APPROACH WITH THE ESTABLISHMENT OF THE SMART CENTRE, SME CENTRE AND SME VILLAGES. THIS NEW WAVE OF SUPPORT IS HAVING A POSITIVE EFFECT ON THE DEVELOPMENT OF SMES IN THE STATE. INDEED, OF THE SIX WINNERS IN THE NATIONAL SME INNOVATION AWARDS IN 2012, FOUR WINNERS WERE FROM PENANG.
- YET CHALLENGES REMAIN. KEY OBSTACLES TO THE GROWTH OF THE SME SECTOR ARE, THE EQUITY QUOTA REQUIREMENT IMPOSED BY THE FEDERAL GOVERNMENT ON PUBLIC LISTED FIRMS, THE BARRIERS IN OBTAINING INVESTMENT CAPITAL AND WORKING CAPITAL, A SHORTAGE OF MEDIUM-SKILLED TECHNICAL PERSONNEL AND DIFFICULTIES IN MARKETING PRODUCTS ABROAD.
- THE EXPERIENCE OF TAIWAN SHOWS THAT THE BENCHMARK FOR THE SUCCESS OF AN SME IS ITS EMERGENCE AS A WORLD-CLASS EXPORTER. THE FEDERAL AGENCIES SHOULD FACILITATE THE TRANSITION OF SMES TO WORLD-CLASS EXPORTERS BY:
  1. HELPING TO FUND THE INDEPENDENT INITIATIVES BY STATE GOVERNMENTS (SUCH AS THE 3-PRONGED SME STRATEGY OF THE PENANG STATE GOVERNMENT) TO PROMOTE SME DEVELOPMENT, AND
  2. REFORMING FEDERAL POLICIES THAT RETARD THE GROWTH OF SMES, E.G. BY REMOVING TARIFF PROTECTION ON GLCS THAT SUPPLY INPUTS TO SMES BECAUSE THE CONSEQUENTLY HIGHER-PRICED OUTPUTS ARE RENDERING MALAYSIAN SMES LESS COMPETITIVE INTERNATIONALLY.



The diagram illustrates Penang's 3-pronged approach to SME development. It features a central red circle labeled "PENANG'S 3-PRONGED APPROACH". Three orange circles are arranged around it, each containing one of the three prongs: "SMART CENTRES" at the top, "SME VILLAGES" at the bottom left, and "SME CENTRE" at the bottom right.

**SMART  
CENTRES****PENANG'S  
3-PRONGED  
APPROACH****SME  
VILLAGES****SME  
CENTRE**

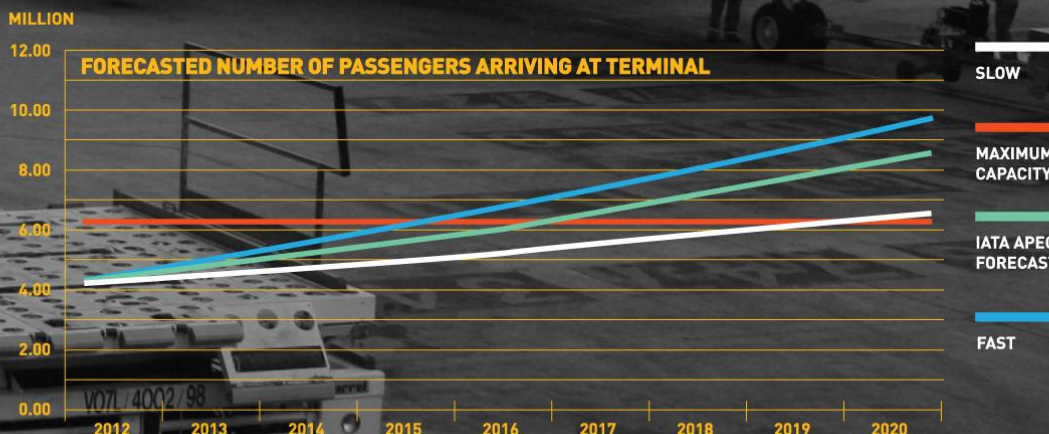
# CURRENT SITUATION INFRASTRUCTURE

PENANG'S GROWTH IN POPULATION AND ECONOMY IN THE LAST 30 YEARS HAS PUT UNPRECEDENTED PRESSURE ON ITS LOGISTICS AND INFRASTRUCTURE NETWORK:

- PENANG HAS THE LOWEST WATER TARIFF AND HIGHEST WATER CONSUMPTION PER CAPITA IN ALL MALAYSIA.
- OVER-RELIANCE ON 1 RAW WATER SOURCE: 80% OF ITS RAW WATER COMES FROM ONE LOCATION, SUNGAI MUDA.
- MALAYSIA RANKED IN THE BOTTOM FIFTH IN DESKTOP INTERNET SPEED IN GOOGLE'S STUDY (2012), ONLY ABOVE VENEZUELA, INDIA, PHILIPPINES AND INDONESIA.
- PENANG PORT'S SEABED LACKS THE DEPTH NEEDED FOR WIDER SHIPS TO CALL. THE RM350 MILLION PENANG PORT DREDGING PROJECT WAS PROMISED IN 9TH MALAYSIA PLAN (2006-2010) AND SUGGESTED TO BE DONE IN *THE CORRIDORS AND CITIES TRANSFORMATION PROGRAMME*.
- SWETTENHAM PIER WAS OPENED IN 2009 TO BRING IN TOURISTS VIA CRUISE SHIPS.
- THE PENANG FERRY IS AN ICONIC TOURIST ATTRACTION, BUT IT IS BADLY MAINTAINED AND NEEDS A MAJOR OVERHAUL. THE FERRY OPERATION IS EXPECTED TO LOSE RM15.7 MILLION IN 2012.
- BY 2014 THE PENANG INTERNATIONAL AIRPORT (PEN) WILL HAVE INCREASED ITS CAPACITY TO 6.5 MILLION PASSENGERS PER YEAR. IT IS PROJECTED THAT MAXIMUM CAPACITY WILL BE HIT BY 2016. ITS RUNWAY IS STILL TOO SHORT TO ALLOW A FULLY-LOADED FULLY-FUELLED LARGE COMMERCIAL AIRCRAFT TO TAKE OFF.

**BOTTOM 10 IN  
DESKTOP SPEEDS  
(IN SECONDS)**

10. CHILE (10)
9. COLOMBIA (10.2)
8. PERU (11.7)
7. BRAZIL (11.8)
6. ARGENTINA (12.8)
5. **MALAYSIA (14.3)**
4. VENEZUELA (14.9)
3. INDIA (15.1)
2. PHILIPPINES (15.4)
1. INDONESIA (20.3)





# CURRENT SITUATION IN SCIENCE & TECHNOLOGY ECO-SYSTEM

## COMPONENTS INVOLVED IN GENERATION OF SCIENTIFIC KNOWLEDGE, NEW TECHNOLOGY & ENTREPRENEURSHIP

LIMITED KNOWLEDGE POOL + LOW QUALITY RESEARCH AND EDUCATION INSTITUTIONS → POOR TECHNO-PRENEURSHIP

### PRIVATE SECTOR

- 92.2% OF TOTAL PATENTS GRANTED IN MALAYSIA IN 2009 ARE OWNED BY FOREIGNERS.
- TOP 5 FIELDS OF TECHNOLOGY WHERE PATENTS WERE GRANTED: CHEMISTRY & METALLURGY (837 PATS), HUMAN NECESSITIES (656 PATS), OPERATIONS & TRANSPORT (633 PATS), ELECTRICITY (497 PATS), PHYSICS (488 PATS).
- MAINLY PRODUCT DESIGN & DEVELOPMENT (D&D) WORK.
- MNCs PREFER TO DO HIGH-END RESEARCH IN HOME COUNTRY, PARTLY DUE TO LACK OF EXPERTISE, RIGHT ATTITUDE & RIGHT APTITUDE IN MALAYSIA.
- LOCAL COMPANIES LACK RESOURCES TO CONDUCT R&D.
  - FINANCIAL BARRIERS
  - PROBLEMS RETAINING HIGHLY-SKILLED LABOR
- MOST LOCAL ENTREPRENEURS ARE FORMER EMPLOYEES OF MNCs AND ARE SATISFIED TO RELY ON MNC TECHNOLOGY - THERE IS A LACK OF DRIVE TO BE INNOVATIVE.



### RESEARCH & EDUCATION INSTITUTIONS (REIS)

- INTERNATIONALLY, REIS ARE GENERALLY THE CENTRES FOR NEW KNOWLEDGE, BUT IN MALAYSIA, MANY REIS ARE RIGID IN OPERATION AND ARE OUTDATED IN KNOWLEDGE. MANY GRADUATES FROM MALAYSIAN UNIVERSITIES LACK CREATIVITY AND COMMUNICATIONS AND PROBLEM-SOLVING SKILLS, AND HAVE A LOW APTITUDE FOR NEW KNOWLEDGE.
- PRIVATE COLLEGE / UNIVERSITIES: FOCUSED ON INCREASING ENROLMENT & NUMBER OF STUDENTS GRADUATING; LITTLE R&D.
- PUBLIC UNIVERSITIES:
  - ANECDOTAL ASSESSMENT OF RESEARCH ACTIVITY RANGE FROM "OUT-DATED" TO "TOO ACADEMIC" (NOT PRACTICAL). ALBEIT, SOME POCKETS OF VERY GOOD RESEARCH STILL SEEN.
  - LACK RESOURCES TO IMPROVE R&D.

# STATE GOVERNMENT MEASURES SINCE 2008

## MANUFACTURING & SMES

- STRENGTHENED THE CAPACITY OF INVEST PENANG AND PDC TO ATTRACT NEW INVESTMENT:
  - DEVELOPMENT OF BATU KAWAN INTO A HIGH-TECH GREEN PARK;
  - TOP MEDICAL DEVICES COMPANIES HAVE SET UP OPERATIONS IN PENANG;
  - HALAL PARK IN BUKIT MINYAK ACHIEVED FULL TENANCY IN 2012, WITH GLOBAL HALAL CENTRE NOW BEING ESTABLISHED.
- ESTABLISHING A CENTRE OF EXCELLENCE FOR SCIENCE AND TECHNOLOGY (S&T) THROUGH CREATING:
  - PENANG SCIENCE CLUSTER IN 2010 TO HELP DEVELOP S&T TALENT;
  - PENANG SCIENCE COUNCIL JOINTLY WITH INDUSTRIES TO ENCOURAGE INNOVATION;
  - PENANG TECHNOLOGY CENTRE (TECH-DOME PENANG) TO BE THE HOME FOR PENANG SCIENCE CLUSTER SET;
  - CAREER ASSISTANCE AND TALENT (CAT) CENTRE TO BUILD, RETAIN AND ATTRACT TALENT;
  - R&D FACILITIES TO SPEARHEAD INNOVATION, E.G. SHARED LABS BY PENANG SKILL DEVELOPMENT CENTRE (PSDC).
- IMPLEMENTED A COMPREHENSIVE STRATEGY TO FACILITATE SME FORMATION AND MOVE THEM UP THE VALUE CHAIN:
  - RM 6 MILLION FOR MICRO-FINANCING PROJECT / 'PROJEK TITIAN SAKSAMA RAKYAT' (PTSR) WITH PROVISION FOR A DOUBLING OF THAT SUM IN FUTURE;
  - SME MARKET ADVISORY, RESOURCE AND TRAINING (SMART) CENTRE;
  - SME CENTRE IN BAYAN LEPAS;
  - SME VILLAGES IN BATU KAWAN;
  - PENANG RESEARCH, INNOVATION AND SCIENCE MODE (PRISM) TO ENCOURAGE R&D ACTIVITIES IN SUNRISE INDUSTRIES;
  - 4 OF 6 NATIONAL SME INNOVATION AWARDS IN 2012 WON BY PENANG SMES.

## TOURISM

- ESTABLISHED PENANG GLOBAL TOURISM (PGT) IN 2008 TO PROMOTE TOURISM;
- ENACTED THE PENANG HILL CORPORATION (PHC) TO DEVELOP PENANG HILL INTO THE PREMIER HILL RESORT IN MALAYSIA;
- FOUNDED THE GEORGE TOWN WORLD HERITAGE INCORPORATED (GTWHI) TO PROTECT, CONSERVE AND PROMOTE GEORGE TOWN'S HERITAGE;
- FACILITATED FAST-TRACK APPROVAL FOR HOSPITAL EXPANSIONS TO CATER TO FAST GROWTH OF MEDICAL TOURISM;
- FACILITATED NEW ECO-TOURISM ATTRACTIONS SUCH AS ESCAPE THEME PARK;
- BOOSTED EDUCATION TOURISM BY MAKING BALIK PULAU AN EDUCATION HUB: ASIAN WOMEN'S LEADERSHIP UNIVERSITY (AWLU), ASSOCIATED WITH SMITH COLLEGE IN USA, HAS APPLIED FOR FEDERAL APPROVAL TO ENROL STUDENTS IN 2015.

## HARD INFRASTRUCTURE

- ESTABLISHED PENANG FREE WIFI WITH FREE PUBLIC ACCESS IN PUBLIC PLACES;
- STARTED NEXT GENERATION NETWORK (NGN) PROJECT OF PDC TELCO: OPEN TENDER IN 2013 FOR MICRO-TRENCHING TO LAY FIBRE-OPTIC CABLES THROUGHOUT PENANG;
- INITIATED PROCESS TO UNDERTAKE 4 MAJOR ROAD PROJECTS, INCLUDING TO STUDY BUILDING A THIRD LINK (A SEA TUNNEL) TO CONNECT PENANG ISLAND AND NORTH SEBERANG PERAI.

SUMMARY OF CHAPTER 2

MOVING UP THE INDUSTRIAL VALUE CHAIN

| AN INEFFICIENT ECONOMIC SYSTEM  | SHORTAGE OF KNOWLEDGE WORKERS   | LACK OF LOCAL INNOVATIVE CAPACITY  | UNREALISED POTENTIAL OF STRATEGIC LOCATION   |
|---|---|--|--|
| <b>STRATEGIES</b>   |   |  |  |
| <b>Economic System</b>  | <b>Human Capital</b>  | <b>Innovative Eco-system</b>   | <b>Regional Cooperation</b>  |
| <b>INITIATIVES (TO 2025)</b>  |   |  |  |
| <ul style="list-style-type: none"> <li>Increasing economic efficiency by empowering the private sector within a competitive environment</li> <li>Developing the coast on the island and on Seberang Perai to enhance convergence of trade liberalisation and freedom of movement of capital and labour</li> </ul> | <ul style="list-style-type: none"> <li>Cultivating human capital by training, retaining and attracting talent</li> <li>Pushing the Federal Government to extend the 15% income tax rate presently enjoyed by returning experts and professionals with similar skill sets nationwide</li> <li>Collaborating with universities to structure high-quality curriculum that is consistent with knowledge-led growth</li> <li>Establishing a merit-based scholarship fund for talented Malaysians with a bond to be served in Penang</li> </ul> | <ul style="list-style-type: none"> <li>Promoting interest in S&amp;T among the youth</li> <li>Identifying international firms that develop innovative products and attracting them to Penang</li> <li>Accelerating the diffusion of new developments in S&amp;T in Penang</li> <li>Spurring the teaching of ESTEEM to cultivate the innovative ideas outside classroom</li> <li>Creating innovative R&amp;D ecosystem through more joint initiatives between industry and state government agencies</li> </ul> | <ul style="list-style-type: none"> <li>Encouraging the teaching and learning of regional languages</li> <li>Becoming the regional hub of the manufacturing supply chain and marketing chain linking northern Sumatra, southern Thailand, southern Myanmar and Peninsular Malaysia</li> <li>Capitalise on economies of scale, freedom of movement of skilled labour and regional trade through AEC</li> </ul> |
| <b>MILESTONES BY 2018</b>   |   |  |  |
| <ul style="list-style-type: none"> <li><b>CAT principles</b> institutionalised within all State agencies and contracts.</li> </ul>  | <ul style="list-style-type: none"> <li><b>20%</b> knowledge workers (managerial &amp; professionals) in total workforce (2010: 16.8%).</li> <li><b>1</b> additional comprehensive university.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Increased</b> number of patents registered.</li> <li><b>Expanded</b> programmes under the Penang Science Cluster &amp; Tech-Dome Penang Initiatives.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Active support</b> for the Indonesia-Malaysia-Thailand Growth Triangle; and trade missions in northern Sumatra, southern Thailand and southern Myanmar.</li> </ul>   |

## SUMMARY OF CHAPTER 3

### SUMMARY OF CHAPTER 3

# MODERN SERVICES

| UNEXPLOITED SYNERGY FROM CIVIL- SOCIETY- GOVERNMENT- BUSINESS PARTNERSHIP   | LONG-TERM UNDERINVESTMENT IN AIRPORT, SEA PORT, FERRY AND PUBLIC TRANSPORT  | LOW BROADBAND PENETRATION AND LOW INTERNET SPEED   | ECOLOGICAL NICHE NOT UTILISED   |
|---|---|--|---|
| <b>STRATEGIES</b>   |   |  |   |
| <b>Industry – Government – University Cooperation</b>   | <b>Federal transport infrastructure</b>   | <b>Improvement of internet infrastructure</b>  | <b>Agriculture and aquaculture</b>  |
| <b>INITIATIVES (TO 2025)</b>  |   |  |   |
| <ul style="list-style-type: none"> <li>Enhancing cooperation between industry and universities in consulting relationships and in curriculum design</li> <li>Building up partnerships between hospitals and research institutes for clinical research purposes</li> </ul>                         | <p>Working with Federal authorities to:</p> <ul style="list-style-type: none"> <li>Expand the airport terminal (scheduled to reach full capacity by 2016), build an integrated cargo complex, a MRO hub and a second runway plus lengthen and broaden the current runway</li> <li>Deepen the North Channel and improve cargo-handling capacity</li> <li>Enlarge the Penang Port through reclamation to allow development of a logistics hub, halal centre and centralised tanking facilities</li> </ul> | <ul style="list-style-type: none"> <li>Expecting the 2nd Cybercity in Bertam with high-speed broadband</li> <li>Reducing barriers to entry to promote competition in the telecom market</li> <li>Expanding super speed broadband to the whole state</li> </ul> | <ul style="list-style-type: none"> <li>Developing AIDZ to increase fish production and to fulfil the increased demand towards fish consumption</li> <li>Establishing a Young Agro-Entrepreneurs Fund to assist young and new entrepreneurs</li> <li>Reducing red tape to achieve a more efficient approval process</li> <li>Providing logistics and marketing channel for international seafood processing companies</li> </ul> |
| <b>MILESTONES BY 2018</b>   |   |  |   |
| <ul style="list-style-type: none"> <li><b>Cluster</b> of E&amp;E, Medical Devices, and Bio Pharmaceuticals.</li> <li><b>Database</b> of technical experts as consulting resource for firms.</li> <li><b>Apprenticeships &amp; internships</b> for college students in local industries</li> </ul> | <ul style="list-style-type: none"> <li>Airport runway extended to <b>3,700m</b> to allow direct B747 flights; runway, aprons and gate widths expanded and broadened to allow operation of Airbus A380.</li> <li>North Channel dredged to <b>15m</b>.</li> <li><b>Further expansion</b> and modernisation of Penang port from the present feeder port to an international port.</li> <li><b>Penang Sentral</b> transport hub in <b>Butterworth</b>.</li> </ul>   | <ul style="list-style-type: none"> <li>On the way to completing <b>2nd</b> Cybercity by 2020.</li> <li>Increase internet speed to <b>10 Mbps</b>.</li> <li><b>&gt;50%</b> of Penang population linked with fibre-optic cables.</li> </ul>                      | <ul style="list-style-type: none"> <li>Service and transportation hub for <b>seafood aquaculture</b> in the region.</li> <li><b>Maintain</b> Penang's position of having the highest yield in rice cultivation in Malaysia.</li> </ul>  |

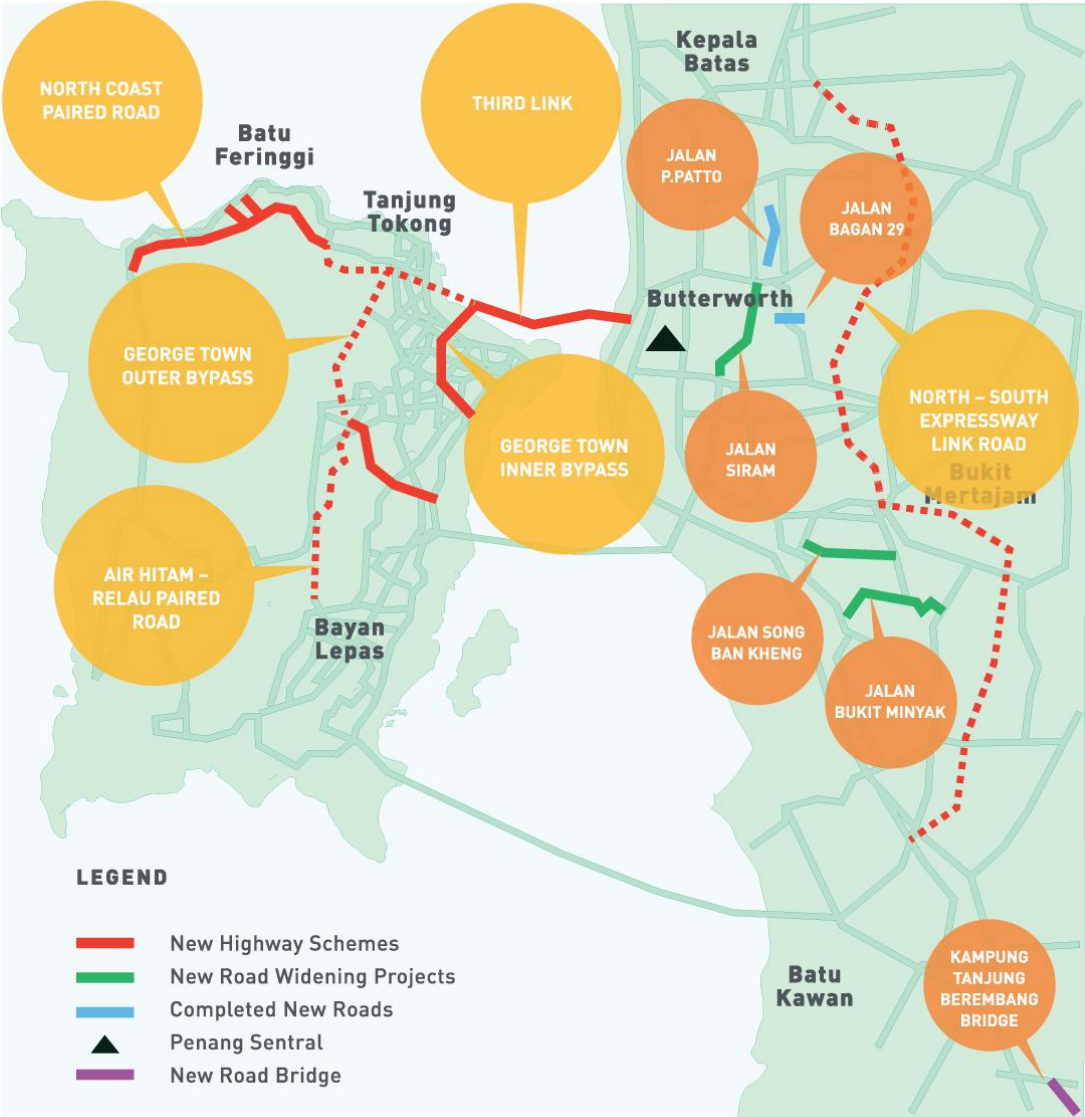
## SUMMARY OF CHAPTER 4

MOVING PENANG'S SMEs  
ONTO THE GLOBAL STAGE

| LARGE AND GROWING DEMAND FOR HALAL FOOD, A POTENTIAL TO BE TAPPED   | SME SECTOR IN MALAYSIA IS UNDERDEVELOPED: SMES SELDOM DEVELOP INTO WORLD-CLASS EXPORTERS LIKE IN TAIWAN.  | TRANSPORT INFRASTRUCTURE NOT KEEPING UP WITH POPULATION & ECONOMIC GROWTH  |
|---|---|--|
| <b>STRATEGIES</b>   |   |  |
| <b>Penang as a Global Halal Centre</b>  | <b>Moving SMEs up the value chain</b>   | <b>Improving Transport Connectivity</b>  |
| <b>INITIATIVES (TO 2025)</b>  |   |  |
| <ul style="list-style-type: none"> <li>Working with hospitality, catering and business schools to increase number of halal training modules.</li> <li>Expanding halal training via PSDC.</li> <li>Partnering with private sector on trade missions to tap potential export markets for halal food.</li> </ul> | <ul style="list-style-type: none"> <li>Working with MNCs to strengthen State SME programmes.</li> <li>Working with financial institutions to encourage SME access to funding and attracting industrial venture capital funds to invest in Penang SMEs.</li> <li>Working with Federal Government to:               <ul style="list-style-type: none"> <li>Encourage SME growth by reviewing the requirements for listing on the stock exchange;</li> <li>Remove the subsidies given to GLCs because the unfair competition keeps the SMEs from achieving the economies of scale that would enable them to become exporters; and</li> <li>Stop limiting the banking sector to a few big banks because small banks are much more willing to lend to small businesses.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Developing new strategic road links including a Third Link between the Island and Mainland by 2030 (see map in next page).</li> <li>Developing a plan for new public transport infrastructure based on trams and bus rapid transit.</li> <li>Promoting Penang to be an international seaport, with regional port status to be the medium-term target.</li> <li>Promoting free bus shuttle services and park-and-ride schemes</li> </ul> |
| <b>MILESTONES BY 2018</b>   |   |  |
| <ul style="list-style-type: none"> <li><b>1</b> institute to offer specialised halal training.</li> <li><b>RM500 million</b> worth of investment achieved.</li> </ul>   | <ul style="list-style-type: none"> <li><b>New</b> formal structure for MNCs to mentor SMEs</li> </ul>   | <ul style="list-style-type: none"> <li><b>4</b> new strategic road links under construction.</li> <li><b>Expanded</b> free bus shuttle services and park-and-ride schemes.</li> <li>Upgrading and new road works being planned on the mainland on a comprehensive scale linking not just the 3 districts on the Mainland but also to the Island.</li> </ul>  |

# SUMMARY OF CHAPTER 5

## PROVIDING THE REQUIRED HARD INFRASTRUCTURE



Source: New proposed highway schemes from Penang Integrated Transport Master Plan, 2012 & Jabatan Kerja Raya. Alignments shown for illustration purposes only.

## SUMMARY OF CHAPTER 6

DEVELOPING INNOVATION THROUGH  
SCIENCE & TECHNOLOGY

| NEED TO MAXIMISE POTENTIAL IN KEY TOURISM GROWTH AREAS:<br>• HERITAGE • RECREATIONAL<br>• MEDICAL • RELIGIOUS<br>• FOOD • FRUIT • ECOLOGICAL<br>• SPORTS • MICE   | NEED TO ESTABLISH PENANG AS AN EXOTIC WINTER RETREAT FOR MIDDLE- AND HIGH-INCOME TOURISTS IN TEMPERATE ZONES   | NEED TO ESTABLISH PENANG AS A REGIONAL EDUCATION HUB  |
|---|--|---|
| <b>STRATEGIES</b>   |  |   |
| <b>Improving tourism infrastructure and promotion</b>   | <b>Focussing on key tourism growth areas</b>   | <b>Establishing Penang as a regional education hub</b>  |
| <b>INITIATIVES (TO 2025)</b>  |  |   |
| <ul style="list-style-type: none"> <li>Working with airlines to increase direct flights to key destinations</li> <li>Working with Federal Government agencies to develop George Town &amp; Butterworth waterfronts and improve condition of Swettenham Cruise Terminal and build 4 more berths</li> <li>Encouraging development of marina facilities by private sector</li> <li>Better coordination with Tourism Malaysia and Malaysia Healthcare Travel Council</li> </ul> | <ul style="list-style-type: none"> <li>Promoting Penang as a heritage and eco-tourism destination for high- and middle-income travellers</li> <li>Marketing Penang's rich cultural, religious and culinary heritage as unique attracting factor</li> <li>Developing MICE tourism with new conference and exhibition venues</li> <li>Equipping airport with medical services and facilities to receive medical tourists</li> <li>Establishing Penang Hill as the premier hill resort in Malaysia</li> <li>Increasing the number of hotel rooms</li> <li>Safeguarding the authenticity of local Penang food</li> </ul> | <ul style="list-style-type: none"> <li>Attracting foreign universities to set up campuses in Penang</li> <li>Increasing industry-universities linkages</li> <li>Providing specialised professional courses</li> <li>in collaboration with famous Penang individuals</li> <li>Promoting education via regional education fairs and through new trade and investment offices in northern Sumatra, southern Thailand and southern Myanmar</li> <li>Working with Federal agencies to:               <ul style="list-style-type: none"> <li>- Update their criteria and procedures for approving the upgrading and setting up of educational institutions; and</li> <li>- Improve the visa issuance process for foreign students seeking to study in Malaysia</li> </ul> </li> </ul> |
| <b>MILESTONES BY 2018</b>   |  |   |
| <ul style="list-style-type: none"> <li><b>Direct flights</b> to key destinations in Europe and Northeast Asia.</li> <li><b>George Town &amp; Butterworth</b> waterfront developments underway.</li> <li><b>New marinas</b> and waterfronts on Mainland &amp; Island linked by fast ferries.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Pulau Jerejak</b> developed as an eco-heritage resort.</li> <li><b>Penang cultural and food fairs</b> in major target cities around the world.</li> <li><b>2</b> new MICE venues.</li> <li><b>50%</b> increase in tourist receipts.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Federal approval</b> for establishment of Asian Women Leadership University.</li> <li><b>New</b> professional training institutes.</li> <li><b>Increased</b> number of international students</li> </ul>  |

# LIVEABILITY & SUSTAINABILITY

TRANSPORTATION

ENVIRONMENT

PUBLIC SPACES

HOUSING

PLANNING

CULTURE, HERITAGE & ARTS





# CURRENT SITUATION PLANNING AND CULTURE, ARTS & HERITAGE

## PLANNING

- HISTORICALLY, PENANG'S DEVELOPMENT FOCUS HAS BEEN EXCLUSIVELY ON ITS INDUSTRIAL STRATEGY. DURING PENANG'S RAPID INDUSTRIALISATION, PLANNING FOR A 'LIVEABLE CITY' WAS NOT A HIGH PRIORITY, LEADING TO AN AD-HOC PLANNING AND MITIGATION APPROACH, WHERE THE DEVELOPMENT FOCUS WAS ON EXPLORING NEW LAND, LEADING TO URBAN SPRAWL.
- AN INCREASINGLY GLOBALISED WORLD OFFERS PEOPLE GREATER CHOICE ABOUT WHERE THEY LIVE: MORE PEOPLE CHOOSE WHERE THEY LIVE BEFORE CHOOSING WHERE THEY WORK.
- PENANG'S POPULATION IS PROJECTED TO REACH 2.5 MILLION BY 2030, WHICH WILL LEAD TO MORE COMPETITION FOR SPACE AND HIGHER DEVELOPMENT PRESSURES ON LIMITED LAND.
- PENANG NEEDS TO BECOME MORE LIVEABLE IN ORDER TO RETAIN LOCAL TALENTS AND TO ATTRACT GLOBAL TALENTS.
- LAND-USE PLANNING AND THE BUILT ENVIRONMENT WILL BE DECIDING FACTORS IN THE FUTURE SUSTAINABILITY OF PENANG.

## CULTURE, ARTS & HERITAGE

- PENANG IS A MELTING POT OF DIVERSE CULTURES WHICH HAVE EACH LEFT A VIBRANT ARTISTIC AND CULTURAL LEGACY.
- PENANG'S LIVING HERITAGE FINDS EXPRESSION THROUGH A COMBINATION OF ARCHITECTURE, ETHNIC QUARTERS, LANGUAGES, FESTIVALS, DANCES, COSTUMES, ARTS, MUSIC, FOOD AND LIFESTYLES.
- PENANG HAS BEEN THE HOME TO SIGNIFICANT PIONEERS OF MODERN ARTS.
- SINCE 2008, GEORGE TOWN'S INSCRIPTION AS A UNESCO WORLD HERITAGE SITE HAS LED TO A LARGE GROWTH OF HERITAGE TOURISM.
- MORE RECENTLY, INNOVATIVE MURALS AND OTHER STREET ART HAVE ADDED TO THE VIBRANCY OF GEORGE TOWN'S STREETS.
- CHALLENGES:
  - MIGRATION OF ORIGINAL COMMUNITIES AND TRADITIONAL BUSINESSES AWAY FROM THE HERITAGE SITE;
  - SUSTAINABLE USE OF SPACE AND HERITAGE PREMISES;
  - INCREASING NEED TO ENHANCE THE CAPACITY OF STATE AGENCIES;
  - TO FORMULATE AND IMPLEMENT EFFECTIVE POLICIES;
  - VISIONARY AND STRATEGIC PLANNING TO DEVELOP THE ART INDUSTRIES IN PENANG.

# CURRENT SITUATION TRANSPORTATION AND HOUSING

## TRANSPORTATION

PENANG HAS MORE PRIVATE VEHICLES THAN PEOPLE (RESULTING IN WORSENING TRAFFIC CONGESTION) AND LOW FREQUENCIES OF LOCAL PUBLIC TRANSPORT SERVICES.

PENANGITES ARE COMPELLED TO CHOOSE PRIVATE VEHICLES DUE TO A POOR PUBLIC TRANSPORTATION SYSTEM, LACK OF ACCESSIBILITY, AND POOR AND UNSAFE PEDESTRIAN ACCESS ACROSS PENANG.

PENANG'S POPULATION IS PROJECTED TO REACH 2.5 MILLION BY 2030. WITH NO INTERVENTION:

- THE NUMBER OF COMMUTING TRIPS WILL INCREASE FROM CURRENT WEEKDAY MORNING PEAK OF 250,000 TO 335,000 BY 2030;
- TOTAL NUMBER OF VEHICLE MILES ON ROADS WILL INCREASE BY OVER 70%; AVERAGE SPEEDS AT MORNING PEAK HOUR WILL SLOW DOWN BY APPROXIMATELY 25%;
- PUBLIC TRANSPORT WILL REMAIN AT JUST 3.8% OF ALL JOURNEYS.

## HOUSING

THE HOUSING MARKET IN PENANG FACES DUAL CHALLENGES, WITH A LACK OF AFFORDABLE PROPERTY FOR MIDDLE-INCOME GROUPS AND POOR HOUSING QUALITY FOR LOWER INCOME GROUPS.

- THE AVERAGE PROPERTY PRICE HAS INCREASED BY 42% OVER THE PAST 5 YEARS, WHILE AVERAGE HOUSEHOLD INCOME INCREASED BY ONLY 25%, A GROWING AFFORDABILITY GAP IS OPENING UP WITH ACCESS TO MORTGAGE FINANCE ALSO TIGHTENED.
- OUTDATED LOW-COST AND LOW-MEDIUM-COST HOUSING POLICIES INHERITED FROM PREVIOUS ADMINISTRATIONS ARE NO LONGER FIT FOR PURPOSE AND HAVE RESULTED IN POORLY CONSTRUCTED AND POORLY MAINTAINED LOW-COST HOUSING.

A NEW HOUSING POLICY FRAMEWORK TO ADDRESS THESE TWIN CHALLENGES IS REQUIRED.

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# CURRENT SITUATION ENVIRONMENT AND PUBLIC SPACES

## ENVIRONMENT

- DUE TO LIMITED LAND ON PENANG ISLAND, DEVELOPMENT HAS BEEN PUSHED FURTHER UPHILL AND INTO THE SEA, RESULTING IN THE NEED FOR ECOLOGICALLY SUSTAINABLE HILLSLOPE TREATMENT AND COASTAL RECLAMATION.
- INADEQUATE SEWAGE INFRASTRUCTURE, LOOSE CONTROL OF COMMERCIAL WASTE DISPOSAL AND PRIMITIVE CONTROL AND TREATMENT OF DOMESTIC WASTE HAVE LED TO PENANG HAVING AMONG THE POOREST-QUALITY RIVERS AND SEAS IN THE COUNTRY.
- LOSS OF ECOLOGICAL HABITATS AND BIODIVERSITY AND LOSS OF AGRICULTURAL LAND WILL HAVE LONG-TERM IMPLICATIONS TO PENANG.

## PUBLIC SPACES

### TOWN & COUNTRY PLANNING DEPARTMENT (PEN. M'SIA)

equals  
**6 to 7 ha**  
PER 1,000 POPULATION

### DEVELOPED COUNTRIES

equals  
**4 to 12 ha**  
PER 1,000 POPULATION

### STATE STRUCTURE PLAN

equals  
**1 ha**  
PER 2,500 POPULATION

### CURRENT TOTAL PUBLIC SPACES

**449.4 ha**

equals to  
**0.29 ha**  
PER 1,000 POPULATION

### CURRENT PUBLIC SPACE SHORTFALL

**= ± 1,000 ha**  
FOR PENANG ISLAND;

**= ± 1,300 ha**  
FOR SEBERANG PERAI



# STATE GOVERNMENT MEASURES SINCE 2008

## PLANNING

- SPEAD COUNCIL;
- DRAFT SPECIAL AREA PLANS (SAPS) FOR GEORGE TOWN WHS, BOTANIC GARDENS & PENANG HILL;
- INTEGRATED TRANSPORT MASTER PLAN;
- DRAFT LOCAL PLANS FOR THE MAINLAND.

## TRANSPORTATION

- SET UP FREE CAT SHUTTLE BUS SERVICE IN GEORGE TOWN;
- "BEST" AND "BEST KOMTAR" PARK-AND-RIDE SERVICES;
- PLANNED RECREATIONAL CYCLE LANES FOR ISLAND AND MAINLAND;
- INTEGRATED TRANSPORT MASTER PLAN;
- OFFERED RM10 MILLION TO PROVIDE FREE PEAK-HOUR BUS SERVICES THROUGHOUT THE STATE OF PENANG;
- WEEKLY GEORGE TOWN CAR-FREE ZONE.

## PUBLIC SPACES

- PENANG HILL PUBLIC SQUARE;
- GREENING GEORGE TOWN;
- SUBTERRANEAN PENANG INTERNATIONAL CONVENTION AND EXHIBITION (sPICE) CENTRE, WITH UPGRADED PENANG INTERNATIONAL SPORTS ARENA (PISA), AQUATIC CENTRE AND A PUBLIC PARK ON THE SURFACE;
- TWO SPEAKERS' SQUARES;
- PLANNED PRANGIN CANAL REVITALISATION AND HERITAGE SQUARE AT SIA BOEY IN GEORGE TOWN.

## HOUSING

- RM500 MILLION AFFORDABLE HOUSING FUND;
- 15,000 AFFORDABLE HOUSING UNITS GIVEN OC;
- 18,000 AFFORDABLE HOUSING UNITS PLANNED IN ALL DISTRICTS;
- 300 UNITS CONVERTED FOR SOCIAL RENTED HOUSING;
- 5 ABANDONED HOUSING DEVELOPMENTS REVIVED.

## ENVIRONMENT

- CLEANER, GREENER PENANG INITIATIVE;
- NO-FREE PLASTIC BAG CAMPAIGN;
- BAN ON POLYSTYRENE FOR LICENSED FOOD OPERATIONS;
- PENANG GREEN COUNCIL;
- NEW SOLID-WASTE MANAGEMENT SYSTEM;
- FOOD-WASTE COLLECTION FOR BIO-FUEL AND BIO-FERTILISER;
- REVITALISATION OF SUNGAI PINANG & SUNGAI JURU.

## CULTURE, HERITAGE & ARTS

- GEORGE TOWN WORLD HERITAGE INCORPORATED;
- GEORGE TOWN FESTIVAL;
- GEORGE TOWN LITERARY FESTIVAL & IN-BETWEEN FESTIVAL;
- PENANG STATE HERITAGE ENACTMENT 2011.

SUMMARY OF CHAPTER 7

PLANNING

THE VISION FOR PENANG IS ONE WHERE ITS ECONOMIC POTENTIAL AND ITS LIVEABILITY ARE DEVELOPED SIMULTANEOUSLY AND TO THEIR FULLEST EXTENT. PENANG SHOULD, IN ADDITION TO BEING A PROSPEROUS PLACE WITH OPPORTUNITIES FOR ALL, BE A PLACE WHERE THE LOCAL ENVIRONMENT IS CARED FOR AND CLEAN, A PLACE WHICH IS SAFE AND CHARACTERISED BY ACCESSIBLE AND AFFORDABLE HOUSING, EFFICIENT TRANSPORTATION SYSTEMS, SUPPORT FOR LIVING CULTURE AND HERITAGE, AND ACCESS TO THE MANY NATURAL FEATURES THAT PENANG HAS TO OFFER.

|   |   |  |
|---|---|--|
| <b>PLANNING IS LARGELY SHUT OFF FROM PUBLIC DEBATE AND INPUT.</b>   | <b>CURRENT ZONING PRACTICES AND INCENTIVES ARE NOT PROMOTING MIXED-USE DEVELOPMENT.</b>   | <b>LACK OF ATTENTION ON STRENGTHENING THE RELATIONSHIP BETWEEN THE MAINLAND AND ISLAND.</b>  |
| <b>PLANNING: 3 MAIN INITIATIVES IDENTIFIED</b>  |   |  |
| <b>STRATEGIES</b>   |   |  |
| <b>Improving the Physical Planning System</b>   | <b>Managing Growth Sustainably</b>  | <b>Enhancing the Built Environment</b>   |
| <b>INITIATIVES (TO 2025)</b>  |   |  |
| <ul style="list-style-type: none"> <li>• Improving institutional capacity through training and recruitment.</li> <li>• Developing a community-engaged planning process.</li> <li>• Integrating planning across tiers of government and between mainland and island.</li> <li>• Aligning land-use and transport planning.</li> <li>• Professionalising and de-politicising enforcement.</li> </ul> | <ul style="list-style-type: none"> <li>• Strengthening the relationship between the mainland and the island.</li> <li>• Encouraging live-work-play neighbourhoods through mixed-use development.</li> <li>• Influencing sustainable development through incentive-based zoning.</li> <li>• Restructuring charges and fees to incentivise positive outcomes.</li> <li>• Removing conflicts of interest in impact assessments.</li> <li>• New Land Reclamation Strategy to ensure sustainability and public benefit.</li> </ul> | <ul style="list-style-type: none"> <li>• Adopting Universal Design codes to enhance the public realm.</li> <li>• Developing an urban regeneration and renewal strategy.</li> <li>• Engaging with local business communities to take ownership of urban improvements, e.g. George Town BIDS.</li> <li>• Regenerating the George Town, Butterworth and Bayan Lepas waterfronts to harness the potential of the historic Penang Channel.</li> </ul> |
| <b>MILESTONES BY 2020</b>   |   |  |
| <ul style="list-style-type: none"> <li>• <b>Local Plans</b> adopted in each district with community involvement.</li> <li>• <b>SPEAD Council</b> to include civil society representatives.</li> <li>• <b>Planning</b> applications accessible online.</li> <li>• New Structure and Local Plans based on <b>Integrated Transport Masterplan</b>.</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Batu Kawan 'Eco City'</b> as a model for sustainable mixed-use development.</li> <li>• <b>Planning and zoning</b> guidelines and development fees and charges restructured.</li> <li>• <b>Impact assessments</b> directly commissioned by local authorities.</li> </ul>   | <ul style="list-style-type: none"> <li>• New <b>enforceable design codes</b> for buildings and streetscapes.</li> <li>• Plans developed for <b>enhanced waterfront spaces</b>.</li> <li>• New <b>Business Improvement District Schemes</b> e.g. in Batu Feringghi and Bayan Lepas FTZ.</li> </ul>  |

## SUMMARY OF CHAPTER 8

## TRANSPORTATION

PENANG'S CURRENT TRANSPORT SYSTEM WILL BE TRANSFORMED INTO ONE WHICH ENABLES PEOPLE TO TRAVEL EFFICIENTLY AND SAFELY AROUND THE STATE BASED ON THE PRINCIPLE OF 'MOVING PEOPLE, NOT CARS'. TRANSPORT POLICY WILL AIM TO INCREASE PERSONAL MOBILITY ACROSS A RANGE OF DIFFERENT MODES, AND RESOURCES WILL BE REBALANCED TO ADDRESS THE NEEDS OF PEDESTRIANS, CYCLISTS, THE ELDERLY AND DISABLED PUBLIC TRANSPORT USERS AS WELL AS PRIVATE VEHICLE USERS. A HOLISTICALLY-PLANNED TRANSPORT SYSTEM WILL INCREASE ECONOMIC EFFICIENCY AND PRODUCTIVITY, REDUCE NEGATIVE ENVIRONMENTAL IMPACTS AND IMPROVE THE GENERAL QUALITY OF LIFE IN PENANG.

| INCREASING TRAFFIC AND CONGESTION.   | LACK OF A RANGE OF TRANSPORT OPTIONS FOR PENANGITES.   | LIMITS TO STATE POWER WITH REGARD TO TRANSPORT IMPROVEMENTS.  |  |
|--|--|---|--|
| <b>TRANSPORT: 4 MAIN INITIATIVES IDENTIFIED</b>  |  |   |  |
| <b>STRATEGIES</b>  |  |   |  |
| <b>Rationalising Transport Governance and Management</b>   | <b>Building New Strategic Road Links</b>   | <b>Improving Public Transport</b>   | <b>Improving Pedestrian and Cycling Facilities</b>   |
| <b>INITIATIVES (TO 2025)</b>   |  |   |  |
| <ul style="list-style-type: none"> <li>Working with Federal authorities to create integrated transport management structures.</li> <li>Strengthening local enforcement capabilities with towing, clamping local traffic wardens, etc.</li> <li>Creating a new road safety policy.</li> </ul> | <ul style="list-style-type: none"> <li>Planning and implementing Third Link and other recommended strategic road links.</li> <li>Creating new road hierarchy for planning and enforcement.</li> </ul>  | <ul style="list-style-type: none"> <li>Working with RapidPG to improve frequency and routing of bus service.</li> <li>Expanding Park &amp; Ride systems.</li> <li>Planning dedicated BRT/ tram networks.</li> <li>Working with Federal authorities to introduce commuter rail services, improve taxis and develop high-speed ferry services.</li> </ul> | <ul style="list-style-type: none"> <li>Building safe pedestrian walkways in urban areas linked to public transport facilities.</li> <li>Building dedicated recreational and commuter cycle lanes with cycle parking facilities.</li> </ul>           |
| <b>MILESTONES BY 2020</b>  |  |   |  |
| <ul style="list-style-type: none"> <li><b>Integrated</b> transport management structures in place.</li> <li>Penang Island given <b>city status</b> and right to appoint <b>local traffic wardens</b>.</li> <li><b>Reduced</b> road fatalities.</li> </ul>                                    | <ul style="list-style-type: none"> <li><b>4</b> strategic road projects under construction.</li> <li><b>Third Link</b> design work complete.</li> <li>Comprehensive upgrading and new road works planned on the mainland linking not just the 3 districts on the Mainland but also to the Island.</li> </ul> | <ul style="list-style-type: none"> <li><b>Improved</b> hub-and-spoke bus routes and frequencies.</li> <li><b>Park &amp; Ride</b> extended.</li> <li><b>Free</b> bus services at peak hours.</li> <li>Implementation of <b>commuter rail</b> underway.</li> </ul>  | <ul style="list-style-type: none"> <li><b>60%</b> of key urban public transport routes with disabled-friendly walkways.</li> <li><b>Phase 1</b> of round-island and mainland cycle routes complete.</li> <li>Bike Share System completed.</li> </ul> |

SUMMARY OF CHAPTER 9

# HOUSING

HOUSING IN PENANG WILL BE 'AFFORDABLE FOR ALL', WITH A MIXTURE OF QUALITY HOUSING OPTIONS DISTRIBUTED OVER A RANGE OF PRICE LEVELS AND ACROSS LOCATIONS SUITED TO THE NEEDS AND ASPIRATIONS OF THE LOCAL POPULATION, WHILE ALSO SUPPORTING THE NEEDS OF INCOMING MIGRANTS AND INVESTORS WHO ARE ESSENTIAL TO FUTURE ECONOMIC GROWTH. THE PENANG STATE HOUSING BOARD WILL BE THE PREMIER STATE-LEVEL DEVELOPER AND MANAGER OF AFFORDABLE HOUSING IN MALAYSIA.

|  |  |   |
|--|--|---|
| <b>INCREASING HOUSING PRICES:</b><br>PENANG'S LIMITED LAND, GROWING POPULATION AND INCREASED ECONOMIC VITALITY IS LEADING TO DEMAND FOR AFFORDABLE HOUSING OUTSTRIPPING SUPPLY.  | <b>POOR BUILDING MAINTENANCE:</b><br>AGING HOUSING STOCK COMBINED WITH WEAK INSTITUTIONAL FRAMEWORK FOR THE MAINTENANCE OF SHARED BUILDINGS.   | <b>EXISTING LOW-COST HOUSING POLICY NOT FIT FOR PURPOSE:</b><br>PRIVATE DEVELOPERS BUILD LOW-COST HOUSES TO MINIMISE COST RATHER THAN TO MAXIMISE UTILITY OR QUALITY.   |
| <b>HOUSING: 3 MAIN INITIATIVES IDENTIFIED</b>  |  |   |
| <b>STRATEGIES</b>  |  |   |
| <b>Improving Housing Governance, Delivery and Management</b>   | <b>Steering Private Sector Development</b>   | <b>Increasing Access to Housing</b>   |
| <b>INITIATIVES (TO 2025)</b>   |  |   |
| <ul style="list-style-type: none"> <li>Creating an effective State Housing Board with knowledge and expertise in affordable housing.</li> <li>Developing affordable housing policies based on evidence and international best practice.</li> <li>Developing requirement models and standards for affordable housing.</li> <li>Building public housing through open-tender processes.</li> <li>Supporting management committees with training and enforcement.</li> <li>Developing non-profit housing cooperatives to manage and maintain social rented housing.</li> </ul> | <ul style="list-style-type: none"> <li>Using incentive-based zoning to encourage the development of affordable units instead of large luxury units.</li> <li>Introducing progressive development charges on a sliding scale based on Gross Development Value per square foot (GDV psf) to encourage more affordable units.</li> <li>Replacing the existing developer-built low-cost housing quotas with progressive financial contributions also based on GDV psf.</li> <li>Restructuring green-building incentives.</li> <li>Incentivise better quality construction and build then sell delivery systems.</li> </ul> | <ul style="list-style-type: none"> <li>Setting up housing support centres to provide advice and assistance on affordable housing options.</li> <li>Reviewing subsidised housing eligibility.</li> <li>Developing more social rented housing schemes.</li> <li>Piloting matched equity loans scheme.</li> <li>Promoting shared ownership schemes as a pathway to home ownership.</li> <li>Working with employers to improve foreign worker housing.</li> </ul> |
| <b>MILESTONES BY 2020</b>  |  |   |
| <ul style="list-style-type: none"> <li><b>State Housing Board</b> fully staffed and functioning.</li> <li><b>New</b> requirement models and standards developed.</li> <li><b>19,000</b> quality affordable housing units built across all five districts in the State.</li> <li>Sustainable management of low cost and affordable homes.</li> </ul>  | <ul style="list-style-type: none"> <li><b>Progressive</b> development charges and affordable housing contributions in place.</li> <li><b>Mandatory</b> GBI certification for new medium- and high-end developments.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Housing support centres</b> set-up</li> <li><b>Improved</b> system for allocation of subsidized units.</li> <li><b>Better</b> foreign workers accommodation</li> <li>Shared ownership policy implemented across multiple developments. Social rented market facilitated by the State.</li> </ul>  |

## SUMMARY OF CHAPTER 10

## PUBLIC SPACE

PENANG SEEKS TO BE A PLACE WHERE THE PUBLIC REALM IS SHARED BY ALL AND IS CLEAN, GREEN AND SAFE FOR ALL TO ENJOY. PENANG WILL DEVELOP URBAN STREETSCAPES AND OPEN SPACES THAT ENCOURAGE SOCIAL VIBRANCY, THAT PROMOTE WALKING, CYCLING AND OTHER HEALTHY RECREATIONAL ACTIVITIES, AND THAT ARE ACCESSIBLE TO THE ELDERLY AND DISABLED MEMBERS OF THE COMMUNITY. PENANG'S CHILDREN AND YOUTH WILL HAVE ADEQUATE AND SAFE PLACES TO PLAY AND TO ENGAGE IN SPORT, AND PENANG HILLS, BEACHES, RIVERS AND PARKS WILL BE CONNECTED AND OPEN FOR ALL TO ENJOY.

| INSUFFICIENT PUBLIC SPACE:<br>SIGNIFICANT SHORTFALL ON BOTH ISLAND AND MAINLAND.   | INADEQUATE CONDITION OF PARKS:<br>INSUFFICIENT MAINTENANCE AND MANAGEMENT.  | POOR PARKS CONNECTIVITY:<br>GREEN SPACES ISOLATED WITH NO PEDESTRIAN INTER-CONNECTIVITY.  |
|--|---|---|
| <b>PUBLIC SPACE: 3 MAIN INITIATIVES IDENTIFIED</b>   |   |   |
| <b>STRATEGIES</b>  |   |   |
| <b>Increasing Quantity and Quality of Public Space</b>   | <b>Improving Accessibility and Connectivity</b>   | <b>Managing and Maintaining Open Spaces</b>   |
| <b>INITIATIVES (TO 2025)</b>   |   |   |
| <ul style="list-style-type: none"> <li>Increasing public space requirements and incentives for affordable housing.</li> <li>Restructuring open-space requirements and incentives to emphasise quality of open space in new developments.</li> <li>Land Reclamation Strategy to include coastal linear parks on new reclaimed land.</li> <li>Converting Jelutong landfill into a park.</li> <li>Leasing/adapting under-utilised private and council land for public use.</li> </ul> | <ul style="list-style-type: none"> <li>Investing in pedestrian and cycling infrastructure to link green spaces.</li> <li>Adopting universal design concept to improve disabled and elderly access to the entire built environment.</li> <li>Revitalising and improving access to beaches, riverbanks and dams.</li> <li>Creating a State hiking trail network.</li> <li>Developing access schemes to open private recreational facilities to the public.</li> </ul> | <ul style="list-style-type: none"> <li>Implementing new SAPs for Penang Hill and Botanic Gardens.</li> <li>Sharing expertise between State departments and local authorities.</li> <li>Improving enforcement for illegal use of public open spaces.</li> <li>Greater State involvement in management of the Penang National Park</li> </ul> |
| <b>MILESTONES BY 2020</b>  |   |   |
| <ul style="list-style-type: none"> <li><b>Gurney Drive coastal park</b> reclaimed.</li> <li><b>Urban parks</b> established on brownfield sites.</li> <li>George Town public realm improved.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Phase 1</b> of recreational cycle lanes on Island and Mainland.</li> <li><b>Disabled-friendly</b> pedestrian walkways linking local parks.</li> <li>State <b>hiking trail network</b> laid out.</li> <li><b>Public access strategy</b> adopted by PBA.</li> </ul>   | <ul style="list-style-type: none"> <li><b>SAPs</b> for Penang Hill &amp; Botanic Gardens in place</li> <li><b>Public spaces</b> rehabilitated for public use.</li> </ul>  |



## SUMMARY OF CHAPTER 11

# ENVIRONMENT

THE VISION IS FOR PENANG TO BECOME A GREEN STATE, WHERE GREENER LIFESTYLES BECOME THE NORM, AN ECO-CITY WHERE COMMERCIAL ACTIVITIES COEXIST WITH NATURE IN A SUSTAINABLE MANNER. PENANG'S FUTURE SUSTAINABILITY REQUIRES THE PROTECTION OF ITS NATURAL ECOSYSTEMS, MAINTAINING BIOLOGICAL AND GEOLOGICAL DIVERSITY, BALANCING DEVELOPMENT IN HARMONY WITH RURAL AND NATURAL AREAS, CREATING QUALITY URBAN AND RURAL ENVIRONMENTS AND A CIVIC MINDSET WHERE PEOPLE AND BUSINESS CARE FOR THEIR ENVIRONMENT.

|   |  |  |
|---|--|--|
| <b>FRAGMENTED ENVIRONMENTAL MANAGEMENT:</b> OVERSEEN BY MANY DIFFERENT GOVERNMENT DEPARTMENTS.  | <b>DEGRADED ENVIRONMENT:</b> DEVELOPMENT AND COMMERCIAL ACTIVITIES NEGATIVELY AFFECTING ENVIRONMENTAL QUALITY.   | <b>INSUFFICIENT INFRASTRUCTURE:</b> LACK OF INVESTMENT IN SEWERAGE AND WASTE MANAGEMENT INFRASTRUCTURE.  |
| <b>ENVIRONMENT: 3 MAIN INITIATIVES IDENTIFIED</b>   |  |  |
| <b>STRATEGIES</b>   |  |  |
| <b>Improving Environmental Management</b>   | <b>Tackling Waste and Pollution</b>  | <b>Facing Up to Climate Change</b>   |
| <b>INITIATIVES (TO 2025 )</b>   |  |  |
| <ul style="list-style-type: none"> <li>Forming a Penang State Environmental Council with civil society.</li> <li>Developing and monitoring a holistic Environmental Management System with KPIs.</li> <li>Protecting and restoring green reserves and limiting urban sprawl.</li> <li>Involving the community in environmental monitoring and reporting.</li> </ul> | <ul style="list-style-type: none"> <li>State-wide food waste and used oil collection and recycling for bio-fuel.</li> <li>Waste-to-energy conversion plants.</li> <li>Implementing separation at source of recyclables in solid waste.</li> <li>Building infrastructure to tackle water pollution from commercial activities.</li> </ul>       | <ul style="list-style-type: none"> <li>Requiring green building design and techniques for all new developments on a staged basis.</li> <li>Greening urban areas.</li> <li>Designing a new master drainage and water-harvesting plan.</li> <li>Encouraging sustainable agricultural practices.</li> <li>Reducing water demand through education and pricing.</li> <li>Rolling out an environmental disaster control and mitigation plan.</li> </ul> |
| <b>MILESTONES BY 2020</b>   |  |  |
| <ul style="list-style-type: none"> <li><b>Penang State Environment Council</b> in place.</li> <li><b>Environmental Management System</b> with KPIs in operation.</li> <li>Enhanced <b>Better Penang</b> mobile platform.</li> <li>New <b>State Hydraulic Survey</b>.</li> </ul>   | <ul style="list-style-type: none"> <li>Increase recycling level to <b>40%</b>.</li> <li><b>50%</b> reduction in per capita waste generation.</li> <li>New <b>transfer station</b> on Island.</li> <li><b>Generating energy</b> from waste.</li> <li>All rivers at <b>Class III+</b>.</li> <li>Pilot waste to energy scheme running.</li> </ul> | <ul style="list-style-type: none"> <li><b>All</b> new medium- and high-end developments GBI certified.</li> <li><b>Greening Master Plan</b> in place.</li> <li><b>20%</b> reduction in domestic water consumption per capita.</li> </ul>   |

## SUMMARY OF CHAPTER 12

## CULTURE, ARTS &amp; HERITAGE

PENANG WILL BE A CULTURAL HUB IN SOUTHEAST ASIA, WITH A RICH URBAN ENVIRONMENT AND DIVERSE LIVING HERITAGE THAT IS COUPLED WITH A VIBRANT INTERNATIONAL ARTS AND CULTURAL SCENE, AND A CENTRE OF EXCELLENCE FOR HERITAGE RESEARCH AND FOR ARTS AND DESIGN. PENANG WILL WORK WITH THE LOCAL ARTS COMMUNITY TO TRAIN AND RETAIN LOCAL ARTISTIC AND CULTURAL TALENT, AND WILL DEVELOP WORLD-CLASS PERFORMANCE VENUES AND A LIBERAL CULTURAL ENVIRONMENT THAT CAN ATTRACT TOP PERFORMERS FROM AROUND THE WORLD.

| <b>UNDERDEVELOPED INSTITUTIONAL INFRASTRUCTURE:</b><br>NEED TO DEVELOP CAPACITY TO COORDINATE AND PROMOTE CULTURE, HERITAGE AND ARTS.  | <b>LACK OF SUITABLE SPACES:</b><br>NEED TO EXPAND THE RANGE OF SUITABLE VENUES FOR THE ARTS AND RESTORE THE BUILT HERITAGE OF PENANG.   | <b>INSUFFICIENT POOL OF TALENT:</b><br>NEED TO EXPAND TRAINING AND SKILLS RETENTION IN ORDER TO GROW AND DEVELOP TALENT.   |
|--|---|--|
| <b>CULTURE, ARTS &amp; HERITAGE: 3 MAIN INITIATIVES IDENTIFIED</b>   |   |  |
| <b>STRATEGIES</b>  |   |  |
| <b>Effective Governance and Management</b>   | <b>Infrastructure, Premises and Space</b>   | <b>Education, Training and Capacity Building</b>   |
| <b>INITIATIVES (TO 2025)</b>   |   |  |
| <ul style="list-style-type: none"> <li>Establishing ArtsPenang as an coordinating and implementing body for the arts and culture.</li> <li>Constituting the new Penang Heritage Council and State Heritage Commissioner under the State Heritage Enactment.</li> <li>Establish a One-Stop Centre for arts events permits.</li> </ul> | <ul style="list-style-type: none"> <li>Creating international-standard performance spaces for the arts.</li> <li>Returning the main State reference library to George Town and setting up heritage resource centres.</li> <li>Categorising and managing all heritage sites under the State Heritage Enactment.</li> <li>Setting up a scheme to resolve problem of 'ownerless' abandoned and derelict heritage buildings.</li> </ul> | <ul style="list-style-type: none"> <li>Expanding access to arts education for school and college students.</li> <li>Developing apprenticeship schemes and artisanal training through vocational colleges.</li> <li>Encouraging the setting up of a new arts and design college.</li> <li>Working with heritage bodies and higher education sector to develop heritage management courses.</li> </ul> |
| <b>MILESTONES BY 2020</b>  |   |  |
| <ul style="list-style-type: none"> <li><b>ArtsPenang</b> established with community participation.</li> <li><b>State Heritage</b> institutions operating effectively.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Refurbished</b> performance venues in Dewan Sri Pinang and Town Hall.</li> <li><b>New</b> State Library, resource centre and/or performance venue in Prangin Heritage Square.</li> <li><b>Comprehensive</b> heritage register established.</li> <li><b>Abandoned buildings</b> redevelopment scheme in operation.</li> </ul>  | <ul style="list-style-type: none"> <li><b>State-wide</b> community arts workshops for schoolchildren.</li> <li><b>New</b> private vocational and arts and design colleges.</li> <li><b>Internationally accredited</b> heritage management courses.</li> </ul>  |

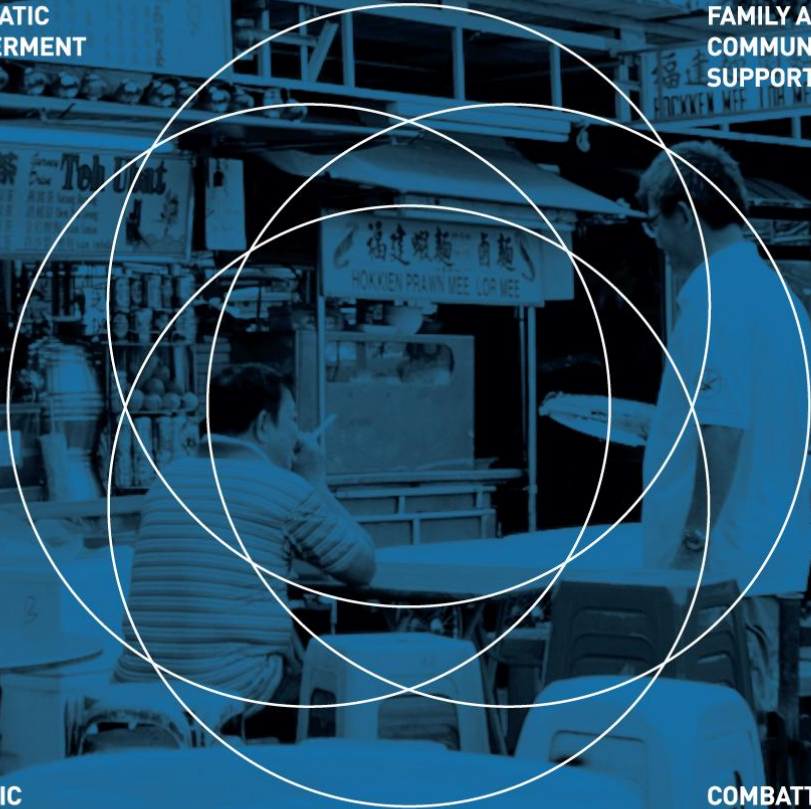
# SOCIAL DEVELOPMENT & INCLUSION

DEMOCRATIC  
EMPOWERMENT

FAMILY AND  
COMMUNITY  
SUPPORT

ECONOMIC  
EMPOWERMENT  
THROUGH  
EDUCATION

COMBATTING POVERTY,  
INEQUALITY AND  
DISCRIMINATION



# CURRENT SITUATION OF PENANG AND MALAYSIA

## POVERTY AND INEQUALITY

- NATIONWIDE, **OVERALL POVERTY** DROPPED FROM NEARLY **50% IN 1970** TO **5.7% IN 2004**, AND THEN TO **3.8% IN 2009**. IN PENANG, THE INCIDENCE OF POVERTY STOOD AT **1.2% IN 2009**.
- **HARDCORE POVERTY** WAS REDUCED NATIONWIDE FROM **1.2% IN 2004** TO **0.7% IN 2009**. IN 2009, PENANG REDUCED THE INCIDENCE OF HARDCORE POVERTY IN THE STATE TO **0%** THROUGH INCOME SUPPORT.
- **WHILE ABSOLUTE POVERTY IS IN DECLINE, INCOME DISTRIBUTION HAS WORSENE**D, WITH A NATIONAL GINI CO-EFFICIENT OF 0.462 IN 2011. PENANG'S GINI COEFFICIENT WAS 0.419 IN 2009.
- NATIONAL SOCIO-ECONOMIC POLICIES HAVE REDUCED INTER-ETHNIC INEQUALITY NATIONWIDE BUT HAVE FAILED TO CURB THE **WIDENING INCOME GAP WITHIN ETHNIC GROUPS**.

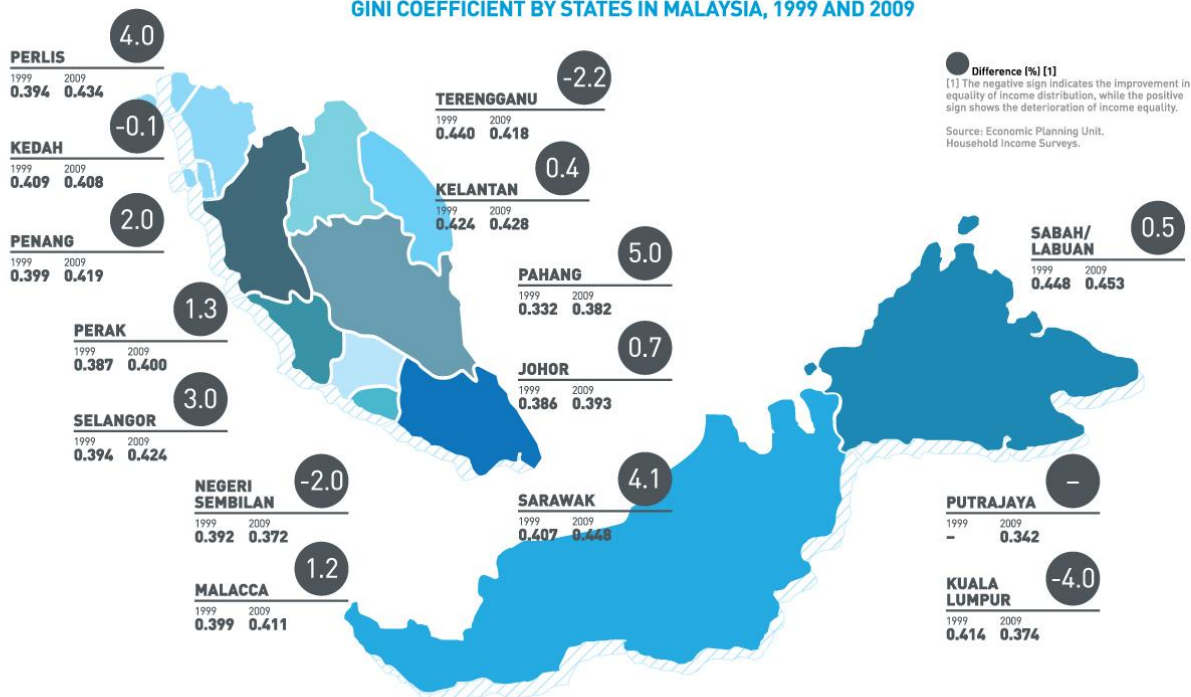
## DEMOGRAPHICS

- **7% OF PENANG'S 1.5 MILLION POPULATION ARE AGING ADULTS**, AND WHILE BIRTH RATE HAS BEEN DROPPING, PENANG HAS A SIZEABLE POPULATION OF **YOUTHS AGED 0-14 AT 26%** (352,975).
- A HIGH NUMBER OF THE **YOUNG ADULT POPULATION ARE AGED BETWEEN 20-29 19.2%** (287,407). THESE ARE INTUITIVELY THE MOST PRODUCTIVE BUT ALSO A **VULNERABLE GROUP** AS THEY HAVE YET TO ATTAIN SOCIAL AND FINANCIAL STABILITY ACHIEVED IN LATE ADULTHOOD WHILE HAVING THE BURDEN OF CARING FOR THE YOUNG AND OLD ("SANDWICH" FAMILIES).

## STATELESS, REFUGEES AND MIGRANT WORKERS

- THERE IS A LARGE NUMBER OF "**STATELESS**" MALAYSIANS, MANY OF WHOM RESIDE IN THE NORTHERN STATES INCLUDING PENANG. WITHOUT ANY DOCUMENTATION, MANY WORK IN "3D" JOBS (DIRTY, DANGEROUS AND DEMANDING). PENANG'S **FOREIGN WORKERS**, UP TO 80,000 IN SOME ESTIMATES.

GINI COEFFICIENT BY STATES IN MALAYSIA, 1999 AND 2009

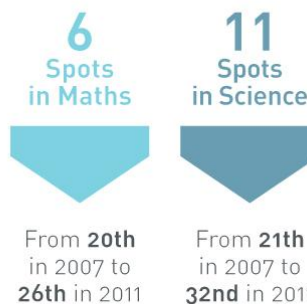


# CURRENT SITUATION OF PENANG AND MALAYSIA

## EDUCATION

- MALAYSIA IS IN THE **BOTTOM 1/3** IN THE 76-COUNTRY PISA EXERCISE, WORSE THAN THAILAND.
- **60% OF MALAYSIAN STUDENTS FAILED TO MEET THE MINIMUM BENCHMARK IN MATHEMATICS AND SCIENCE.**
- IN THE **TIMSS** STUDY, MALAYSIA'S PERFORMANCE HAS SLIPPED TO BELOW THE INTERNATIONAL AVERAGE IN BOTH MATHEMATICS AND SCIENCE.
- NATIONALLY, **100,000 POST-SPM STUDENTS ARE ENTERING THE WORKFORCE WITH NO MARKETABLE SKILLS** AND UNDER-EMPLOYMENT OF FRESH LOCAL GRADUATES IS INCREASING.
- **1 IN 5 PRIMARY SCHOOL STUDENTS DROP OUT BEFORE SECONDARY SCHOOLS** AND THE DROPPING-OUT PROCESS CONTINUES IN SECONDARY SCHOOLS.
- AT THE TERTIARY LEVEL, INCREASING NUMBERS OF GRADUATES ARE UNEMPLOYED OR IN LOW-PAID JOBS DUE IN PART TO ACADEMIC TRAINING WHICH DOES NOT MEET MARKET REQUIREMENTS.
- AS THE REGULATION OF EDUCATION IS ENTIRELY A FEDERAL MATTER, **PENANG IS PAYING THE PRICE FOR NATIONAL FAILURES IN EDUCATION.**

Trends in International Mathematics and Science Study (TIMSS) 2011 saw Malaysia ranking drop.



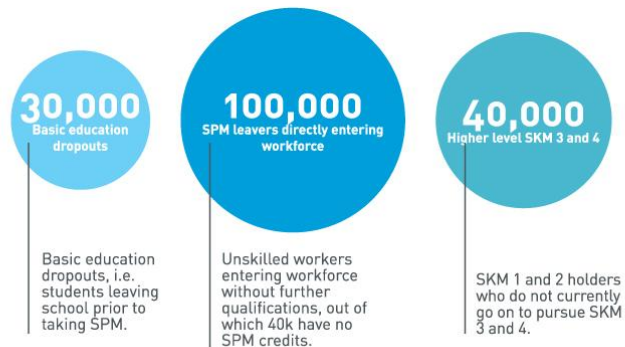
### What is TIMSS?

A global assessment of maths and science of Standard Four and Form Two students.

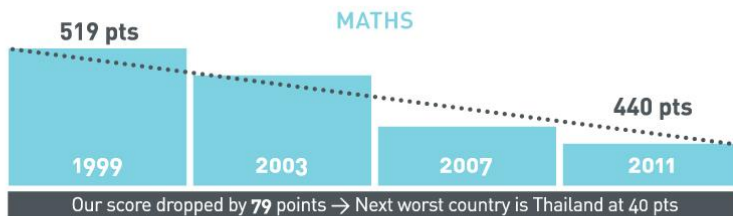
Only secondary school students participated in Malaysia.

Students in 42 countries were tested for Mathematics and 45 countries for Science. [1]

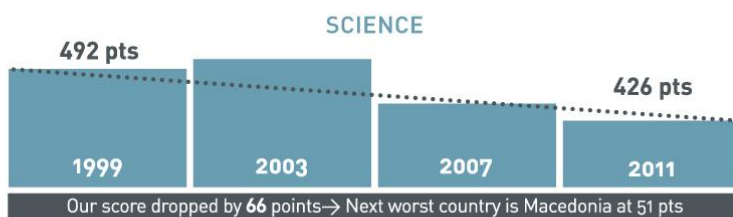
The numbers of drop-outs, SPM leavers and SKM holders at National Level



Source: MOHR 2010



Malaysia recorded the biggest drop in test scores among all countries for both **Math and Science** between 1999 to 2011.



Malaysia and Jordan are the only 2 countries that suffered from **decline** in scores in **all areas** for **Math and Science**.

Source: REFSA

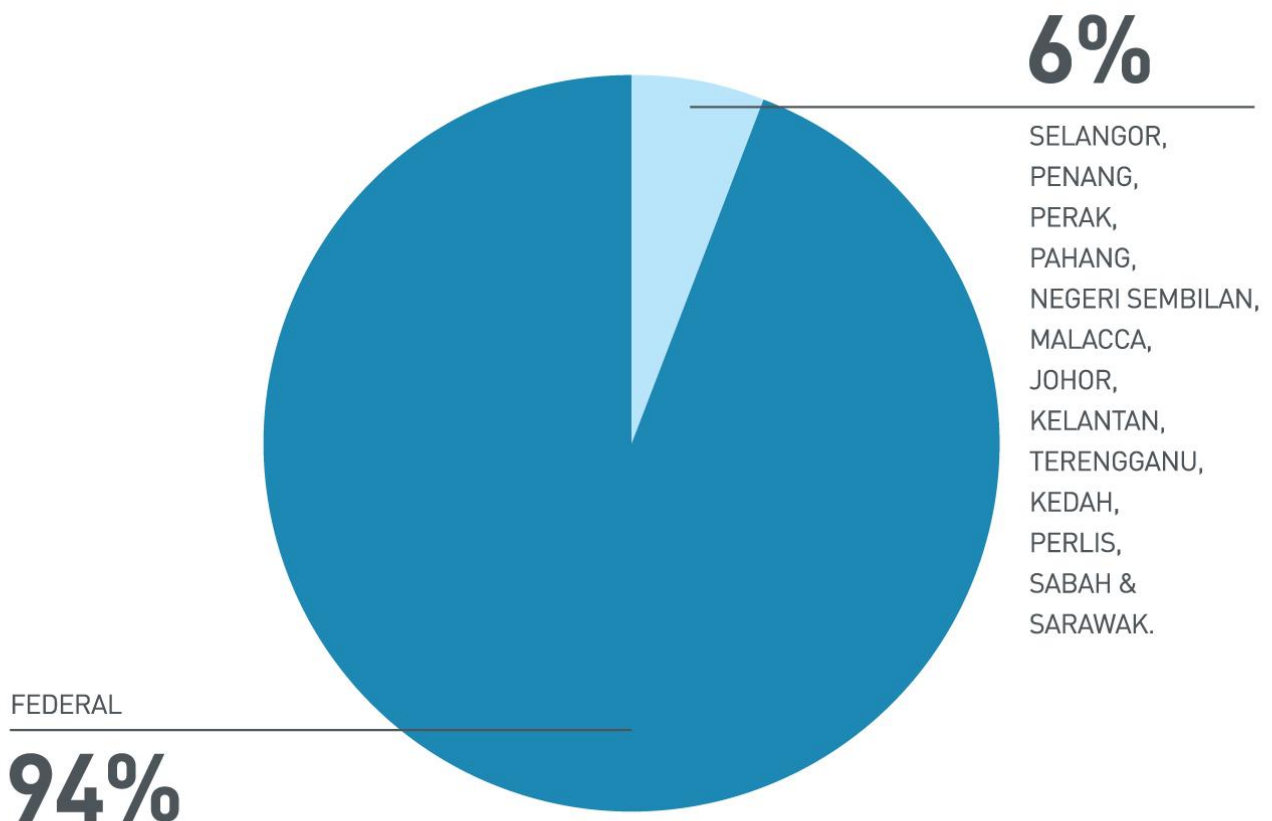
# CURRENT SITUATION OF PENANG AND MALAYSIA

SOCIAL  
DEVELOPMENT  
& INCLUSION

## GOVERNANCE

- THE FEDERAL SYSTEM IN MALAYSIA IS HEAVILY OVER-CENTRALISED IN TERMS OF BOTH POWER AND RESOURCES, WITH THE COMBINED BUDGETS OF **ALL 13 STATES** EQUIVALENT TO ONLY **6% OF THE FEDERAL BUDGET**. OVER-CENTRALISATION IN FORMERLY LOCAL AREAS OF RESPONSIBILITY SUCH AS SEWERAGE AND URBAN PUBLIC TRANSPORT HAS PROVEN TO BE **INEFFICIENT, UNRESPONSIVE TO LOCAL CONCERNS AND SUPPRESSIVE OF LOCAL INITIATIVES**.
- LOCAL DEMOCRACY IN MALAYSIA HAS BEEN SUPPRESSED SINCE THE 1960S, AND THIS HAS GENERALLY RESULTED IN POOR GOVERNANCE BY **UNDEMOCRATIC, UNACCOUNTABLE AND UNRESPONSIVE** LOCAL GOVERNMENTS.
- WIDESPREAD CORRUPTION AND CRONYISM IN MALAYSIA (WITH ILLICIT OUTFLOWS ESTIMATED AT **RM871 BILLION** OVER 2001-10 AND TREASURY LOSSES ESTIMATED AT **RM26 BILLION** PER ANNUM IN 2012) HAVE BEEN THE BIGGEST ENEMY OF DEMOCRATIC GOVERNMENT, **EMPOWERING THE FEW AT THE EXPENSE OF THE MANY** AND ELEVATING PRIVATE CONCERNS OVER THE PUBLIC INTEREST.

## FEDERAL & STATE GOVERNMENT REVENUES, 2013



# STATE GOVERNMENT MEASURES SINCE 2008

## **SOCIAL ASSISTANCE PROGRAMMES**

- ABOLISHING HARDCORE POVERTY THROUGH TOP-UP SUPPORT FOR HARDCORE POOR HOUSEHOLDS WITH MONTHLY CASH AID;
- APPRECIATION FOR SENIOR CITIZENS (RM100/YEAR);
- ONE-OFF BEREAVEMENT SUPPORT FOR FAMILIES OF SENIOR CITIZENS (RM1,000);
- SUPPORT FOR DISABLED PERSONS (RM100/YEAR);
- APPRECIATION OF SINGLE MOTHERS (RM100/YEAR);
- "GOLDEN CHILD" PROGRAMME (RM200);
- BUILT FIRST C.A.T. DIALYSIS CENTRES.

## **EDUCATION SUPPORT**

- GOLDEN STUDENT ASSISTANCE PROGRAMME (RM100/YEAR);
- ONE-OFF ASSISTANCE FOR IPTA STUDENTS (RM1,000);
- ANNUAL GRANTS TO INDEPENDENT AND PARTIALLY-AIDED SCHOOLS (RM12 MILLION/YEAR);
- PENANG EDUCATION COUNCIL,
  - ENHANCING PRESCHOOL EDUCATION PROGRAMMES;
  - TERTIARY COMMITTEE, PROFESSIONAL DEVELOPMENT TRAINING WORKSHOPS;
  - LANGUAGE ENRICHMENT PROGRAMMES;
  - HELPLINE FOR STUDENTS;
  - "CHILDREN WITH SPECIAL NEEDS" PROGRAMME;
  - ARTS EDUCATION.

## **DEMOCRACY AND GOOD GOVERNANCE**

- OPEN, COMPETITIVE TENDERS THROUGH ONLINE E-PROCUREMENT;
- RULING-PARTY LEGISLATORS BARRED FROM APPLYING FOR LAND;
- APPOINTMENT OF INDEPENDENT, PROFESSIONAL STATE APPEALS BOARD.
- FREEDOM OF INFORMATION ENACTMENT;
- ESTABLISHMENT OF SPEAKERS CORNERS;
- LOCAL GOVERNMENT ELECTIONS ENACTMENT;
- ASSET DECLARATIONS FOR ALL EXCO MEMBERS;
- ANTI-HOPPING AMENDMENT TO STATE CONSTITUTION.
- FULL DISCLOSURE OF GOVERNMENT CONTRACTS WITH THE PRIVATE SECTOR.

## **GENDER-SENSITIZED INITIATIVES**

- GENDER-RESPONSIVE BUDGETING AT LOCAL AUTHORITY LEVEL;
- ESTABLISHMENT OF PENANG WOMEN'S DEVELOPMENT CORPORATION AS A NEW AGENCY TO ENHANCE WOMEN'S RIGHTS AND GENDER EQUALITY;
- WOMEN'S SERVICE CENTRE;
- TWO STATE-FUNDED CHILDCARE CENTRES.
- BREAST-FEEDING FACILITIES IN GOVERNMENT OFFICES AND IN NEW PRIVATE DEVELOPMENTS.

SUMMARY OF CHAPTER 13

# COMBATTING POVERTY, INEQUALITY AND DISCRIMINATION

PENANG WILL BE A MODEL STATE IN MALAYSIA WHICH STRIVES FOR BALANCED DEVELOPMENT BEYOND THE MERE GROWTH OF MATERIAL WEALTH, AND EQUITABLE SHARING OF THAT DEVELOPMENT. THE STATE WILL COMBAT POVERTY AND INEQUALITY THROUGH TARGETED INITIATIVES THAT LEAVE NO ROOM FOR RACISM, CORRUPTION AND NEPOTISM. PENANG WILL ALSO PROMOTE GENDER EQUALITY AND INCLUSION OF SENIOR CITIZENS AND THE DISABLED. THE STATE WILL BUILD A SENSE OF BELONGING AND SOLIDARITY OF ALL PENANGITES, TO LEAVE NO ROOM FOR UNFAIR DISCRIMINATION IN BOTH PUBLIC AND PRIVATE SECTORS.

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| <p><b>GROWING INCOME GAP:</b> UNEQUITABLE DEVELOPMENT POLICIES DESIGNED TO BENEFIT THE RICH AND WELL-CONNECTED HAVE LEFT THE MAJORITY OF MALAYSIANS STRUGGLING TO MAKE ENDS MEET.</p>   |  | <p><b>FAILURE OF RACE-BASED AFFIRMATIVE ACTION:</b> EXISTING SOCIO-ECONOMIC POLICIES HAVE FAILED TO UPLIFT THE BUMIPUTERA POOR DUE TO CORRUPTION AND CRONYISM, AND HAVE FAILED TO ADDRESS OTHER SOURCES OF DISCRIMINATION SUCH AS GENDER AND DISABILITIES.</p>  |   |
| <p><b>COMBATTING POVERTY, INEQUALITY AND DISCRIMINATION</b></p>   |  |   |   |
| <p><b>STRATEGIES</b></p>  |  |   |   |
| <p><b>Penang Social Inclusion and Equal Opportunities Committee (SAKSAMA)</b></p>   | <p><b>Support for Poor Households</b></p>  | <p><b>Support programmes to improve quality of life for senior citizens</b></p>   | <p><b>Support for the disabled</b></p>  |
| <p><b>INITIATIVES (TO 2025)</b></p>   |  |   |   |
| <ul style="list-style-type: none"> <li>• Committee to present annual social inclusion reports.</li> <li>• Policy proposals to empower those excluded due to poverty, gender, ethnicity, etc.</li> <li>• Equal opportunity and gender equality in State-owned agencies and contractors.</li> </ul> | <ul style="list-style-type: none"> <li>• Top-up support to ensure minimum household income of RM 830 (regularly reviewed).</li> <li>• Expanding micro-credit schemes to help the poor lift themselves out of poverty.</li> </ul> | <ul style="list-style-type: none"> <li>• Continuing and expanding existing programmes to alleviate poverty amongst senior citizens.</li> <li>• Free Rapid Penang cards to ensure better mobility and fuller participation of senior citizens in the larger society.</li> <li>• Funding and supporting social activities for senior citizens.</li> </ul> | <ul style="list-style-type: none"> <li>• Providing disabled-friendly infrastructure to increase accessibility of the disabled in all public spaces.</li> </ul>                |
| <p><b>MILESTONES BY 2020</b></p>  |  |   |   |
| <ul style="list-style-type: none"> <li>• <b>SAKSAMA</b> established.</li> <li>• <b>State-level policies</b> to promote social inclusion and gender equality.</li> <li>• <b>Equal Opportunity &amp; Anti-Sexual Harassment policies</b> for State agencies and contractors.</li> </ul>             | <ul style="list-style-type: none"> <li>• Eradicating Poverty – 0% household income below national poverty line income.</li> <li>• <b>Expanding</b> micro-credit schemes.</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Free</b> Rapid Penang cards for senior citizens.</li> <li>• <b>Additional</b> social programmes for senior citizens through civil-society-led community centres.</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>More accessible</b> streetscape and public infrastructure.</li> <li>• <b>Free</b> Rapid Penang cards for the disabled.</li> </ul> |



## SUMMARY OF CHAPTER 14

## FAMILY AND COMMUNITY SUPPORT

PENANG WILL BE A JUST AND NURTURING SOCIETY WHERE NO-ONE WILL BE LEFT BEHIND BECAUSE OF DISADVANTAGES BY BIRTH OR GROUP MEMBERSHIP, AND WHERE INDIVIDUALS AND ESPECIALLY THE YOUNG CAN FLOURISH WITH THE SUPPORT OF FAMILY AND COMMUNITY. PENANG WILL EMPOWER AND ASSIST FAMILIES AND COMMUNITIES TO BE THE FOUNDATIONS OF A HEALTHY, STABLE AND COHESIVE SOCIETY.

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| <p><b>SURGING COST OF DOMESTIC HELP AND CHILDCARE:</b> DIFFICULTY IN ACCESSING AFFORDABLE GOOD QUALITY DAYCARE.</p>   | <p><b>LACK OF PREVENTIVE HEALTH CARE:</b> NON-COMMUNICABLE DISEASES SUCH AS OBESITY, HYPERTENSION, CARDIO-VASCULAR DISEASES AND DIABETES RISING AT AN ALARMING RATE NATIONWIDE.</p>   | <p><b>STATELESS:</b> HIGH NUMBER OF PEOPLE ON MAINLAND PENANG WITHOUT IDENTITY CARDS AND HIGH NUMBER OF REFUGEES.</p>  |
| <p><b>FAMILY AND COMMUNITY EMPOWERMENT: 3 MAIN INITIATIVES IDENTIFIED</b></p>   |   |  |
| <p><b>STRATEGIES</b></p>  |   |  |
| <p><b>Family, Youth &amp; Community Empowerment</b></p>   | <p><b>Healthcare policy</b></p>   | <p><b>Foreign workers, refugees and "Stateless" Malaysians</b></p>   |
| <p><b>INITIATIVES (TO 2025)</b></p>   |   |  |
| <ul style="list-style-type: none"> <li>Establishing a unit under PWDC to protect children's rights and to provide support and counselling in cases of child abuse and neglect, as well as to help formulate child welfare policies for the State.</li> <li>Expanding access to childcare and care for the elderly by facilitating start-ups and providing grants and fee assistance for the poor.</li> <li>Establishing a network of community centres for youth, community and senior citizens' programmes.</li> <li>Instilling ethics and morality among youths through civic and religious education.</li> <li>Improving health and social interaction through participatory sport.</li> </ul> | <ul style="list-style-type: none"> <li>Setting up mobile community clinics in urban and rural areas.</li> <li>Establishing a State health education programme on preventive care.</li> <li>Supporting the expansion and establishment of more affordable non-profit hospitals and hospices.</li> <li>Expanding free State-funded dialysis centres.</li> </ul> | <ul style="list-style-type: none"> <li>Setting up a foreign workers' task-force to work with employers and foreign workers, with one-stop centres for complaints, counselling and legal advice.</li> <li>Establishing district registration and assistance units for "stateless" Malaysians.</li> <li>Promoting an ethical employment policy for employers of foreign labour.</li> </ul> |
| <p><b>MILESTONES BY 2020</b></p>  |   |  |
| <ul style="list-style-type: none"> <li><b>New</b> community childcare centres.</li> <li><b>State-wide</b> network of civil-society-led community centres developed for youth, community and senior citizens' activities.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Smoke free</b> public buildings and enclosed public venues.</li> <li>Additional <b>CAT dialysis centres</b> in all five districts of the state.</li> </ul>  | <ul style="list-style-type: none"> <li><b>New</b> task-force and service centres for migrant workers.</li> <li><b>5</b> district registration and assistance units for "stateless" Malaysians.</li> </ul>  |

SUMMARY OF CHAPTER 15

# ECONOMIC EMPOWERMENT THROUGH EDUCATION

PENANG WILL BE A LEARNING SOCIETY WHERE CITIZENS WILL ACQUIRE KNOWLEDGE THROUGHOUT THEIR LIVES TO LIVE AND WORK BETTER. EQUITABLE ACCESS TO BOTH ACADEMIC AND VOCATIONAL EDUCATION WILL ALLOW ALL INDIVIDUALS TO FLOURISH AND SOCIETY TO PROSPER. PENANG WILL USE EDUCATION AS A MEANS TO ELEVATE THE MARGINALISED AND DISADVANTAGED FROM POVERTY, FULLY UTILISING ITS STRENGTHS OF MULTICULTURALISM AND MULTILINGUALISM.

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| <b>HIGH COST OF SETTING UP AND LACK OF INCLUSIVE PRESCHOOLS:</b><br>HIGH COST OF CONVERSION RATES WITH MOST SCHOOLS ONLY CATERING FOR MAINSTREAM CHILDREN.   | <b>LACK OF ALTERNATIVE EDUCATION PATHWAYS:</b> ONLY 2 GOVERNMENT VOCATIONAL SCHOOLS IN PENANG.   | <b>LACK OF UPSKILLING PROGRAMME FOR CURRENT LABOUR FORCE:</b><br>HIGH NUMBER OF WORKERS WITH NO SKILLS AND UNABLE TO DIVERSIFY THEIR WORK OPPORTUNITIES.  |
| <b>ECONOMIC EMPOWERMENT THROUGH EDUCATION: 3 MAIN INITIATIVES IDENTIFIED</b>   |  |   |
| <b>STRATEGIES</b>  |  |   |
| <b>Enhancing and Scaling Up Preschool Education</b>  | <b>Intervention Programmes for Primary &amp; Secondary School Students</b>   | <b>Lifelong Learning and Upskilling Programmes</b>  |
| <b>INITIATIVES (TO 2025)</b>   |  |   |
| <ul style="list-style-type: none"> <li>One-Stop Centre for establishing preschools and childcare centres at each local council.</li> <li>Public Private Partnership in establishing Preschool Education integrating mainstream children and those with special needs.</li> </ul> | <ul style="list-style-type: none"> <li>Creative Learning Programmes for primary and secondary students in reading, writing, maths, science and English.</li> <li>Providing alternative educational pathways through private (including international) vocational education.</li> </ul> | <ul style="list-style-type: none"> <li>Setting up an apprenticeship programme via a public-private partnership.</li> <li>Expanding retraining and upskilling programmes through Penang Skills Development Centre (PSDC) and professional institutions.</li> </ul> |
| <b>MILESTONES BY 2020</b>  |  |   |
| <ul style="list-style-type: none"> <li>Committee for preschools and childcare.</li> <li><b>Lower</b> conversion rates for establishing of preschools.</li> </ul>   | <ul style="list-style-type: none"> <li><b>5</b> district Penang Learning Centres with Creative Learning Programmes focussing on band 5 &amp; 6 schools.</li> </ul>   | <ul style="list-style-type: none"> <li><b>Apprenticeship</b> programme up and running.</li> <li><b>Expanding</b> retraining and upskilling programmes through PSDC.</li> </ul>  |





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