About investPenang

- The Principal Investment Promotion Agency of the Penang State Government for the promotion of the manufacturing & services sectors
- Point of contact for investors.
- Collaborates with Federal/State agencies

**Planning & Evaluation**
- Assist State in Planning
- Policy advocacy

**Opportunities for Investment**
- Provides information on the business opportunities in Penang

**Facilitation**
- Facilitates implementation of the investment projects in Penang

**Promotion**
Penang in the news:
An industrial base state, heritage city and campus for technology

- **Top 10 dynamic industrial cluster** locations in the world to have demonstrated a successful manufacturing experience among developing economies (UNIDO Industrial Development Report 2009)
- Georgetown – **UNESCO World Heritage Site in 2008**
- The 16th most livable cities in Asia (ECA Intl. 2014)
- Top in **Green initiatives** in Malaysia
- **Top 10 best city to visit** in the world (The Guardian 2014)
- **Top culinary spot** (Lonely Planet 2014)
- **Top 8 islands** in the world ‘You must see before you die' (Yahoo! Travel, Feb 2011)
- **Top 15 best street art** in the world (The Guardian 2013)

Penang: Facts & Figures

- 1,031 sq km area
- 1.7 mil population
- 65% working age group
- Literacy rate 96.3%
- Multilingual
  - English, Malay, Mandarin, Japanese etc
- 797,700 workforce
- 250k in industry
- RM 54.9 B GDP
- 7% of national GDP
- 4.6% growth
- 40 years of cumulative industrial intelligence
- >300 MNCs & >3,000 SMEs
- Green Belt
Evolution of industry in Penang

Local industry value add
- MNC's
  - High tech traders
  - Test automation
  - Outsourcing services
  - Internationalization
  - Outsourcing services
  - Global supply chains
  - Medical devices
  - Non-core outsourcing
  - Global procurement
  - R&D
  - Sales/marketing
  - Global ICT integration
  - Equipment mfg

Low Vol/High Mix CM.
- Trading
  - Sub-Assembly CM's
  - Technical services
  - Software/firmware
  - Localization – backend automation & tooling
  - Die fabrication
  - Quality revolution
  - Local CM's
  - Local high tech traders
  - Test automation
  - Quality revolution
  - Local CM's
  - Local high tech traders
  - Test automation

SME value add

Local SME's

Approved Investment in Penang

Total investment in Penang has increased 93.6% to RM48.2B for the 7 yrs period of 2008-2014, compared to 2001 to 2007.

Penang captured 17% of Malaysia’s FDI out of RM154.3 Billion over 5 years from 2010-2014.

2010
- US
- Germany
- Switzerland
- Taiwan
- Japan

2011
- Japan
- US
- Netherlands
- Canada
- Singapore

2012
- Netherlands
- Switzerland
- British Virgin Island
- Singapore
- US

2013
- Singapore
- US
- Germany
- British Virgin Island
- Japan

2014
- Singapore
- Ireland
- US
- Netherlands
- Switzerland
APPROVED MANUFACTURING PROJECTS IN PENANG 2014

<table>
<thead>
<tr>
<th>State</th>
<th>Domestic Investment (RM)</th>
<th>Foreign Investment (RM)</th>
<th>Total Capital Investment (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johor</td>
<td>13,309,976,691</td>
<td>7,866,401,202</td>
<td>21,176,377,893</td>
</tr>
<tr>
<td>Sarawak</td>
<td>1,277,795,651</td>
<td>8,402,231,728</td>
<td>9,680,027,379</td>
</tr>
<tr>
<td>Penang</td>
<td>3,048,778,075</td>
<td>5,143,594,294</td>
<td>8,192,372,366</td>
</tr>
<tr>
<td>Selangor</td>
<td>3,836,871,787</td>
<td>3,205,388,198</td>
<td>7,042,259,985</td>
</tr>
<tr>
<td>Kedah</td>
<td>768,319,918</td>
<td>4,516,895,350</td>
<td>5,285,215,268</td>
</tr>
<tr>
<td>Pahang</td>
<td>280,146,117</td>
<td>4,920,260,640</td>
<td>5,200,406,757</td>
</tr>
<tr>
<td>Melaka</td>
<td>2,688,241,941</td>
<td>1,831,352,539</td>
<td>4,519,594,480</td>
</tr>
<tr>
<td>Negeri Sembilan</td>
<td>983,884,728</td>
<td>2,111,023,795</td>
<td>3,094,908,523</td>
</tr>
<tr>
<td>Sabah</td>
<td>2,369,935,466</td>
<td>547,765,521</td>
<td>2,917,700,986</td>
</tr>
<tr>
<td>Perak</td>
<td>1,320,561,497</td>
<td>387,411,648</td>
<td>1,707,973,145</td>
</tr>
<tr>
<td>Terengganu</td>
<td>822,179,945</td>
<td>675,845,427</td>
<td>1,567,025,372</td>
</tr>
<tr>
<td>Kelantan</td>
<td>1,242,776,376</td>
<td>0</td>
<td>1,242,776,376</td>
</tr>
<tr>
<td>Perlis</td>
<td>212,908,237</td>
<td>0</td>
<td>212,908,237</td>
</tr>
<tr>
<td>FT Kuala Lumpur</td>
<td>34,593,746</td>
<td>14,541,114</td>
<td>49,044,858</td>
</tr>
<tr>
<td>FT Labuan</td>
<td>33,081,891</td>
<td>0</td>
<td>33,081,891</td>
</tr>
<tr>
<td>Total</td>
<td>32,259,962,083</td>
<td>39,592,711,453</td>
<td>71,852,673,536</td>
</tr>
</tbody>
</table>

Penang contributes 8% from Malaysia’s 10% contribution for back end semiconductor global output

Breakdown of Manufacturing Project in Penang, 2014

- Electronics & Electrical Products: 59%
- Machinery Manufacturing: 27%
- Scientific & Measuring Equipment: 6%
- Others: 12%
- Basic Metal Products: 4%
- Fabricated Metal Products: 3%
- Others: 11%

Penang’s Recent Investment Updates

**SanDisk**
- SanDisk set-up RM1.2 billion plant in Batu Kawan Industrial Park, completed 344k sqft, 4-storey facility in 10 months, to replicate 3 more same buildings at the same site

**Bose**
- Bose’s first overseas site for the past 17 years, 360k sq ft facility completed in 10 months. Began operations in June 2013 and employing 2,000 workers

**HP**
- HP to invest more than RM1 billion for their worldwide consumer ink supply chain management, 550k sqft facility, started construction in May 2015, to be completed in 12 months

**Jabil**
- Jabil expanded operations in Batu Kawan Industrial Park, to start construction in 2016 Focus on Enterprise, industrial medical and aerospace sectors, creating 2,500 skilled jobs

**Seagate**
- Seagate to re-invest RM1.05 billion in Penang for manufacturing of hard disk drive and storage solutions, started construction for their 2.8mil sq ft facility in March 2015

**B.Braun**
- B.Braun’s expansion in Penang Re-invested RM300 mil in 2009 and RM1.75B in 2013

**Haemonetics**
- Haemonetics’ new facility in Batu Kawan Industrial Park First establishment in Asia, created 700 new jobs. Collaboration with Sanmina-SCI on machineries manufacturing, distribution and after sales services

**Toshiba Medical Systems**
- Toshiba Medical established Malaysia’s first diagnostic imaging systems manufacturing base in Penang. Started operations in Dec 2014, employs 200 employees
Key sectors to boost Penang economy

Industry
- Electrical & Electronics
- Electronics Manufacturing Services (EMS)
- Medical Devices
- Light Emitting Diodes (LED)
- Aerospace / Avionics
- Renewable Energy (RE)
- Halal & Food Industry

services
- Shared Services & Outsourcing (SSO)
- IC Design & Development
- ICT / Software development & Creative Multimedia
- Operational Headquarters, International Procurement Centre and Regional Distribution Centers
- Logistics & Transportation
- Healthcare & Wellness Services
- International Education
- Meeting, Incentives, Conferences, and Exhibitions (MICE)
- High value Tourism / Hospitality

Over 300 multinational companies have chosen Penang as their location of choice to do business

No of companies
- Japan: > 85
- Taiwan: > 70
- US: > 50
- Singapore: > 30
- Germany: > 10
- Others: > 50

and many more...
• World class capabilities, robust supply chain, proven track record and critical support services
• Provides shorter development cycles, steeper learning curves and reduced cost and time to market
• Vibrant E&E ecosystem with over 3,000 well diversified and competent local suppliers

• Local and international EMS companies

• Vision inspection system, test handlers and material handling systems
• Products, components and services – flex circuits, plating, assembly etc
• Paper and boards, polystyrene, sponge and hard rubber, antistatic

Penang E&E Clusters

Companies that are engaged primarily in the design and manufacturing of the following components and products:

1. Electronic Components
2. Consumer Electronics
3. Industrial Electronics
4. Electrical Components
5. Electrical Appliances
6. Industrial Electrical
Malaysian Semiconductor Ecosystem

SEMICON Southeast Asia 2016

- **SEMICON Southeast Asia** - the region’s largest microelectronics event
- **First time** SEMI hosted event outside of Singapore on 22-24 June, 2015. SEMI to repeat event in June 2016
- Penang chosen because of strong semiconductor cluster which contributes 8% of global back end products
- **investPenang as supporting partner** for SEMI successfully hosted Networking Night, site visits to industrial parks, “CEO Speaks” event and business matching for local companies
- **SEMICON SEA 2015 Facts and Figures**
  - Total attendees: 6,940
  - Number of exhibiting companies: 181
  - 31% increase in attendance over 2014
  - Top visiting companies: Advantest, Applied Materials, Freescale Semiconductor, Global Foundaries, KLA Tencor, Lam Research, Kulicke and Soffa
**Medical Devices Cluster in Penang & Northern Region**

**Materials:** Rubber, Plastics, Steel, Electronics, etc.

- **Technology**
  - Products: Consumables, Implants & Surgical Instrument, Healthcare Equipment
    - Consumables: Latex Plastic, Metal, Machining, Electronics, Furniture
      - Consumables: Glove, Catheters, Sutures, IVD, SUD
    - Implants & Surgical Instrument: Pacemaker, Orthopedics, Surgical instrument, blood management systems
    - Healthcare Equipment: Life Science Instrument, Electrodes, Hospital beds

**Supporting Infrastructure (Nationwide)**

- **Sterilization**
  - **Packaging**
  - **Certification**
  - **Testing**
  - **Industry Group**
  - **Education Training**
  - **Regulatory**

**Strong Medical Devices Ecosystem in Penang**

**Penang - Major medical devices cluster in Malaysia**

- Home for 1/3 of medical devices companies in Malaysia (55 out of total 190)
- In 2013, the total value of medical devices export from Malaysia is RM15.35B, 1/3 of it: RM5B is from Penang.

**Strong presence of established supporting industries and supply chain**

- Many local suppliers are certified with ISO 9001, ISO 13485, ISO 14000, ISO/TS 16949 and FDA certified for Medical Devices

- 2 Class 3 Medical Devices Manufacturer in Penang
Electronic Manufacturing Services (EMS) Industry in Penang

- Top 10 EMS providers / ODM in Penang (ranked by 2014 full year financial results)

<table>
<thead>
<tr>
<th>Company</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flextronics</td>
<td>2</td>
</tr>
<tr>
<td>Jabil</td>
<td>3</td>
</tr>
<tr>
<td>Sanmina</td>
<td>5</td>
</tr>
<tr>
<td>Celestica</td>
<td>6</td>
</tr>
<tr>
<td>Benchmark electronics</td>
<td>7</td>
</tr>
<tr>
<td>Plexus</td>
<td>9</td>
</tr>
</tbody>
</table>

- > 50 companies operating as CMS / EMS in Malaysia
- Other EMS providers in Penang

Penang’s value propositions

COMPETITIVE COST OF DOING BUSINESS
- Among the cheapest utility rates in Asia
- Lower median salary

AVAILABILITY OF TALENT
- Home to talent pool
- Relatively lower attrition rate compared to other region
- State Govt’s effort to increase and retain talents in Penang

STRONG IP PROTECTION
- Active membership in international IP Treaties
- Recognized internationally

CONducive BUSINESS ENVIRONMENT
- Batu Kawan – complete township for business and habitat to live
- Good connectivity & infrastructure
- Quality lifestyle & vibrant cultures / heritage city
- Great location for “Work-Live-Learn-Play”

Penang - Tranquil Island Resort in a Vibrant City...
Competitive cost of doing business

- Among cheapest water rates in Malaysia
  - RM1.36/m³ (USD0.36) vs KL/Selangor RM2.27/m³ (USD0.61) and Johor RM2.93/m³ (USD0.78/m³)

- Among cheapest electricity rate in region
  - Compared to Asian region

- Lower median salary
  - Kuala Lumpur – RM1,900/month (USD507.78)
  - Johor – RM1,500/month (USD400.88)
  - Penang – RM1,450/month (USD387.52)

### Country Electricity Tariff (per KWh) (USD)

<table>
<thead>
<tr>
<th>Country</th>
<th>(per KWh) (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>0.11</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.11</td>
</tr>
<tr>
<td>India</td>
<td>0.12</td>
</tr>
<tr>
<td>China</td>
<td>0.13</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.23</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.27</td>
</tr>
<tr>
<td>Japan</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Availability of talent and continuous production of skilled worker

Malaysia produces 220,555 university graduates yearly
39,606 Engineering graduates per annum

- 2 public universities
- 3 private universities
- 2 polytechnics
- 6 community colleges
- 27 colleges
- 4 Industrial Training Institutes
- 3 Youth Skills Development Institutes
- 2 Teacher Training Institutes

Malaysia graduate output 2013

- Basic Prog. 34%
- Education 9%
- Arts & Hum. 7%
- Soc Sc, Biz & Law 10%
- Sc, Maths & Comp. 4%
- Eng, Mfg & Constr. 9%
- Agri & Vet 10%
- Health & W'fare 4%
- Services 2%
Availability of talent and continuous production of skilled worker

State Government’s initiatives

- www.penangcatcentre.my
  “resource centre and point of contact for employers and job seekers”
- Matching job seekers with potential employers
- Policy advocacy on how to address talent gap
- Initiatives to attract and retain talent
  - Penang Future Foundation Scholarship Award
    – Scholars bond to serve organizations in Penang
  - Affordable housing scheme
    – Priority given to talent working in Penang

Strong IP Protection

- Malaysia is a party of the following treaties:
  - World Intellectual Property Organisation (WIPO), 1967;
  - Paris Convention for the Protection of Industrial Property 1883;
  - Berne Convention for the Protection of Literary and Artistic Works, 1886;
  - Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement
  - Patent Cooperation Treaty (PCT) 1970

- In April 30, 2012, the US Trade Representative announced via its Special 301 Report that Malaysia has been removed from the Watch List after making significant improvements in its intellectual property rights

Source: http://iipdigital.usembassy.gov/st/english/article/2012/05/201205024914.html#axzz3b7FPHYMN

- IP in Malaysia comprises:
  - Patents
  - Trademarks
  - Industrial Designs
  - Copyrights
  - Geographical Indications
  - Layout Designs of Integrated Circuits
Conducive business environment
Batu Kawan – The next growth centre

- Comprehensive master plan
- Eco-friendly township – work, live & play
- World class technology and innovation led industries
- Supply chain at SME Village
- Education hub
- Affordable housing – 11,800 units

Innovation Led Manufacturing

PENANG
Strategic and Attractive Location for SSO companies

Semiconductor/ Manufacturing based (MNCs) with Global SSC in Penang

Global Shared Services & Design Centre/ 3rd party outsourcing companies in Penang

- Involves in Engineering R&D and Product Design, Market Research & Analysis, Finance & Accountancy, IT Services & Support, Human Resources, Management, Supply Chain Management, Procurement, Payroll Processing and Customer Contact Centre
- Served regional and global market
- To-date created >8000 jobs
### SSO Companies in Penang (selected) – Activities

<table>
<thead>
<tr>
<th>Company</th>
<th>Activities</th>
<th>Area Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altera</td>
<td>Design, Research &amp; Software Development</td>
<td>Global</td>
</tr>
<tr>
<td>Motorola</td>
<td>Global procurement services, Supply Chain Management</td>
<td>Global</td>
</tr>
<tr>
<td>Jabil</td>
<td>Finance &amp; Accounting, Provision of implementation, Technical Services and Maintenance</td>
<td>Regional</td>
</tr>
<tr>
<td>Dell</td>
<td>Information Technology, Service &amp; support shared services, Process Design &amp; Development</td>
<td>Global</td>
</tr>
<tr>
<td>Echo</td>
<td>Design &amp; Development, Customer Services</td>
<td>Global</td>
</tr>
<tr>
<td>Citi</td>
<td>Trade &amp; Cash Processing, Anti-Money Laundering, Security &amp; Fund, Fraud &amp; Authorization, Account Services Unit (ASU), Cash Management, Technology Infrastructure</td>
<td>Global</td>
</tr>
</tbody>
</table>

### SSO Companies in Penang (selected) – Activities

<table>
<thead>
<tr>
<th>Company</th>
<th>Activities</th>
<th>Area Served</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infosys</td>
<td>Finance (accounts payable and receivables), customer care, order management (processing, delivery), purchasing, product development, and Information aggregation &amp; analytics.</td>
<td>More than 160 countries</td>
</tr>
<tr>
<td>Wilmar</td>
<td>Finance &amp; Accounting</td>
<td>Global (excluding China)</td>
</tr>
<tr>
<td>AirAsia</td>
<td>Accounting (general ledger, billing, etc.), Financial &amp; Administration processes, Human Resources - payroll, sourcing &amp; procurement, IT helpdesk/tech support, technology on infrastructure</td>
<td>Global</td>
</tr>
<tr>
<td>National Instruments</td>
<td>Design &amp; Development / Customer Services</td>
<td>Global</td>
</tr>
<tr>
<td>PMC</td>
<td>Design &amp; Development &amp; IT</td>
<td>Global</td>
</tr>
<tr>
<td>Intel</td>
<td>HR, Finance &amp; Accounting, Supply chain, IT</td>
<td>Global</td>
</tr>
</tbody>
</table>
SSO Companies in Penang (selected) – Activities

<table>
<thead>
<tr>
<th>Company</th>
<th>Activities</th>
<th>Area Served</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seagate</strong></td>
<td>Information Technology Outsourcing (ITO), Business Process Outsourcing (BPO), IT Services and Support and, Human Resource Contact Centre.</td>
<td>Global</td>
</tr>
<tr>
<td><strong>AMD</strong></td>
<td>Business Process Outsourcing (BPO), Information Technology Outsourcing (ITO), Finance &amp; Accounting</td>
<td>Global</td>
</tr>
<tr>
<td><strong>TOLL</strong></td>
<td>Accounts payable, Human resource, Procurement, Financial support &amp; IT Services</td>
<td>Global</td>
</tr>
<tr>
<td><strong>OSRAM</strong></td>
<td>Finance &amp; Accounting, Human Resource, Procurement, Customer service support</td>
<td>APAC</td>
</tr>
</tbody>
</table>

Developing integrated industrial parks & offices as tools to foster business development

Focus on New Development Model: **Integrated Live-Work-Play-Learn**

- Integrated and complementary land uses
- Employment opportunities close to home
- Provision of facilities and amenities for residents and workers
- Potential for synergy and collaboration within and between industries
Penang International Technology Park (PITP)

- Heart of the “The Greater Penang”
- 862,000 sqm; GFA: 1.8m sqm
- Next to new 2nd Penang bridge
- Integrated “Work-Learn-Live-Play” township model
  - Advanced manufacturing / technology park
  - Residential space
  - Mixed used
  - Commercial (business space / retail space)

PITP: Positioned for Growth

**Strong Industrial Base**

Manufacturing base in automotive, engineering, medical devices, electronics
- Honda
- Haemonetics
- VAX
- SanDisk
- Seagate

**Emerging Supporting Clusters in Education and Logistics**

One Auto Hub – University of Hull Campus, PKT automotive logistics facilities, warehouses, jetty (by 2017)
- Degree courses in engineering, business, design, information systems (by 2017)

**New Retail and Recreational Facilities**

- IKEA – integrated shopping mall development with offices and residences (over 5-10 years)
- Planned theme park and golf resort

*…expects property developers in the Batu Kawan area to benefit from improved infrastructure, inflow of population and workers, and demand for property…* Mr Edmund Tham, Mercury Securities Head of Research

Source: Business Times, 17 Jan 2014
The Bill of Guarantees reflects the Government's intention to provide an environment in MSC Malaysia that is conducive to the development of MSC Malaysia Status entities.

1. Infrastructure: Provide world-class physical infrastructure
2. Knowledge Worker: Unrestricted employment of foreign knowledge worker
3. Ownership: Freedom of ownership
4. Capital & Borrowings: Freedom to source for borrowings and capital globally
5. Financial Incentives: No income tax up to 10 years or investment tax allowance up to 5 years
6. One-Stop Agency: MDeC as the one-stop agency
7. Infra. Tenders: Tender MSC infrastructure contracts to web-shapers
8. Telco Tariff: Globally competitive telecommunication tariffs
9. Censorship: No internet censorship
10. IP Protection: Intellectual property protection and cyber laws

Source: MDeC

Creating more innovation-driven entrepreneurs/ startups via existing program & new initiative – CAT Accelerator Zone @ WYCE

Accelerator, incubation, co-working space

- Penang’s unique tech start-up scene makes up of close community of local start-ups and founders
- Expand networks to wider outreach
- Collaborate/provide assistance for development of start-up ecosystem

Raising More Stars
Penang offers the right balance
“invest, work, live and play”

Thank you!
www.investpenang.gov.my