Innovative Wealth Creation: Seizing Business Opportunities Through Open Innovation

By
Mark Rozario
CEO
Agensi Inovasi Malaysia

4th April 2012
Agenda

• Open Innovation

• National Innovation Strategy and Open Innovation
01 OPEN INNOVATION

- a. Approach
- b. Process
- c. The iPhone Example
- d. Wealth Creation Acceleration
Open Innovation Approach

External knowledge/Idea sourcing
Eg. Crowd sourcing, open sourcing, innovation with communities

License, Spin-off, Divest

Internal/external technology sourcing
Eg R&D networks and clusters

Other firm’s markets

New markets

Our current market

Our current market

Internal/external technology sourcing
Eg R&D networks and clusters

Other firm’s markets

New markets
Open Innovation Process

You can’t innovate with today’s consumers using yesterday’s methods!

1. Consumer Insights
   - Netnography: Online Communities as a source of consumer insights and initial solutions
   - Lead User Method: Workshops with (lead) users and company members (interfunctional teams)

2. Ideas
   - Crowdsourcing: Platforms for external idea- and design contests
   - Co-Creation Toolkits: Concept tests and toolkits for concept evaluation and variation

3. Concepts & Prototypes

4. Product Solutions

5. Commercialization
The iPhone Example

...Assembled in China by FoxConn for US$6.50

Infineon (Germany)
- Camera Module
- Baseband
- RF Transceiver
- GPS Receiver

Samsung (Korea)
- Processor, SDRAM

Cirrus Logic (USA)
- Audio Codec

Other companies
- FEM, Processor Function etc
- Toshiba (Japan)
- Flash Memory
- Display Module
- Touchscreen

Broadcom (USA)
- Bluetooth/FM/WLAN
Wealth Creation Acceleration through Open Innovation

Aggressively pursue market-driven innovation to capture short-to-medium term opportunities for value creation.

Continue to actively support and facilitate technology-driven innovation for medium-to-long term benefits.

Diagram:
- **Open innovation**
- **Acquisition**
- **Techno-log (technology)**
- **Take to market**
- **Market identified**
- **Malaysia’s strategic market positioning and niches**
- **Market to be identified**

Steps:
1. **Science (basic research)**
2. **Technology**
3. **Take to market**
4. **Market identified**

Resources:
- **Research grants**
- **Technology grants**
- **Risk capital**

Timeframes:
- **10-15 years**
- **3-5 years**
a. The National Innovation Strategy
b. Open Innovation Initiatives in NIS
The National Innovation Strategy

Strengthen the Building Blocks of Innovation

- Build FutureSkills in the Education System, IHLs, the Private Sector and Government
- Nurture and Develop Intellectual Capital
- Creating a seamless funding pipeline for innovation

Leveraging on Innovation Enablers

- Utilizing multi-platform ICT technologies to engage the citizens
- Adopt open innovation collaboration between academia, industry, government and citizens
- Involve all levels of citizens in the nation’s innovation agenda

World class innovative nation

- Develop world-class PRIs and COEs in niche areas
- Develop global companies with distinctive capabilities through innovation, leading to global penetration
- Encourage the Rakyat to out-perform themselves
Open Innovation Initiatives in NIS

Strengthen the Building Blocks of Innovation

1. i-THINK
2. Market driven innovation
3. Tech Comm Office
4. i-EPP
5. NewCo
6. Public Funds, Angels, VCs and PE

Leveraging on Innovation Enablers

7. Innovation Accelerator Projects
8. National Biomass Strategy / Food InnoHub
9. KHIM/ Resource DB/ eLearning
10. Innoprenuers/ Bumi/ Returning Malaysian
11. i-THINK
12. World class CoE
13. Middle-Tier Cos and SMEs
14. GLC Innovation
15. National Challenge
New ideas are neither ‘common’ nor ‘sensible’
i-Think

**Building Blocks**

- Analytical & Critical Thinking Skills
- Creative Thinking Skills

**Job Market**

**Transferable Skills**

- Systematic, Structured Methodology

**Innovation Skills**

- Problem Solving
- Value Creation

**Innovative Malaysian Workforce**

**Defining in Context**

- Part-Whole Relationship
- Sequencing
- Cause & Effect
- Seeing Analogies
- Classifying
- Comparing & Contrasting
- Describing Qualities
- Defining in Context

**Pilot roll-out to 2,000 schools by 2013**
Industry driven Innovation

4 Institutes have signed up for the Pilot

1. **FRIM** – High-premium bamboo downstream technologies

2. **SIRIM + USM** – Next generation solar cells

3. **LUCT** – Augmented Reality software for Mobile Devices

4. **Monash Malaysia** – Using Neuroscience technologies to grow bigger fisher, faster
The National Technology Commercialization Office (NTCO)

• Roles of NTCO

  – Coordinate, synchronise and harmonise all the existing entities in individual Universities and PRIs

  – Enhance the skills and capabilities of the officers in the individual TTOs

  – Create international linkages to further enhance the reach of the individual TTOs and their commercialisation outputs

  – Establish an “Intellectual Capital Shop” to physically demonstrate the products, technologies or processes that have been created
Innovation EPPs

- Innovation developed into a project; aligned with PEMANDU’s NKEAs and EPPs as contributing projects
- AIM/PEMANDU will assist with the development of the innovation
- Business cases purpose built for innovations to highlight benefits to industry if innovation is adopted and commercialized
- Anchor customers will be secured to further enhance innovation attractiveness to industry
- Open bidding process will be used to select industry partners who will take-up, commercialize, market, and profit from the innovations (through licensing, JV or other methods)
NewCo Initiatives

- Equity participation in companies in the stage of commercialization and upscaling
- Innovations that are considered too early for the mass market but is strategic for the domain or for the country
- Require tipping point assistance to break into the market
- Including companies that have been recognised by the Government:
  - Have been previously funded by other Government agencies;
  - Falls within the various EPP initiatives of the NKEA;
  - Are recognised under specific agency programmes such as BioNexus status, 1Innocert, approved for GTFS, etc.;

AIM’s investment strategy is focused at the commercialisation and upscaling stage

<table>
<thead>
<tr>
<th>Criteria: Selection of Innovative Companies to Invest in</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SELF ASSESSMENT</strong></td>
</tr>
<tr>
<td>• <strong>MANDATORY REQUIREMENTS</strong></td>
</tr>
<tr>
<td>• Commercialization / Upscaling Stage</td>
</tr>
<tr>
<td>• Equity Participation</td>
</tr>
<tr>
<td>• Initial Evaluation</td>
</tr>
<tr>
<td>• Strength of Innovation</td>
</tr>
<tr>
<td>• Level of Commercial Potential</td>
</tr>
<tr>
<td>• National Strategic Fit</td>
</tr>
<tr>
<td><strong>BUSINESS PLAN EVALUATION</strong></td>
</tr>
<tr>
<td>• Innovation</td>
</tr>
<tr>
<td>• Partner &amp; Partnership Requirements</td>
</tr>
<tr>
<td>• Competition</td>
</tr>
<tr>
<td>• Market &amp; Marketing Capabilities</td>
</tr>
<tr>
<td>• Financials &amp; Management Capabilities</td>
</tr>
<tr>
<td>• Risks &amp; Mitigations</td>
</tr>
<tr>
<td>• Strategic Impact</td>
</tr>
<tr>
<td><strong>DUE DILIGENCE</strong></td>
</tr>
<tr>
<td>• Technical</td>
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<tr>
<td>• Commercial</td>
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<td>• Financials</td>
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<td>• Legal</td>
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Public Funds, Angels, VCs and PE

• **Public funds**
  – Investment Committee Public Funds has been formed
  – Focus in areas of competitive advantage, based on NSRC Sectoral Focus Areas
  – Performance management system to be established, and initial work has begun to implement the KISTEP framework to the relevant Ministries
  – Fund management best practices to be introduced

• **VCs**
  – Club investments in NewCos being pursued

• **Angels**
  – Matching with iEPPs on continuous basis

• **Private Equity**
  – Club investments in NewCos being pursued
Innovation Accelerator Projects

Innovation Accelerators – Collaborative projects between industry, academia, government in specific strategic areas such as:

- Agri-bio,
- Advanced Manufacturing,
- Green Technology,
- Automotive,
- Biotech,
- Economics,
- Clean & Green,
- Pharmaceutical,
- Telecommunication and
- Medicinal & Aromatic Plants.

Project Mission: To prepare and equip future automotive engineers for Green Technology Architecture in line with PROTON’s EV Project, the National Green Technology Policy and National Automotive Policy on EV

Sector: Automotive

SELVEC
Solar-Powered Electric Vehicle Charging Port Project

Project Objectives:
To promote E-Mobility lifestyle; to create innovation in the field of EV and Green Energy; to develop local talent pool
Strategic Innovation Projects

National Biomass Strategy 2020

- National Strategy on how to capture New Wealth by utilizing Agricultural Biomass for high-value downstream activities
  - Fertilizer, composting, Wood products, Pellets, Fibers, Bioenergy, biofuels, biochemical
  - Industry-led Portfolio approach
  - Launched 21 November 2011 at BioMalaysia

- Impact
  - Additional GNI ~RM30bn by 2020
  - Job Creation 70,000
  - ~12% CO2 e abatement of 2020 emissions by biogas to energy conversion of all mills

- Execution
  - 2 New EPPs in Palm Oil NKEA
  - Cross-agency Task-force to monitor and facilitate execution of NBS initiatives (MPOB, MPIC, BioTechCorp, MIDA, AIM)
Strategic Innovation Projects

Food Industry Innovation Center

- To establish Malaysia as the Asian Hub for Food Industry Innovation
  - Establish a PPP facility to catalyze the food industry

- Main drivers
  - MITI and AIM

- Impact
  - Additional GNI ~RM10bn by 2020
  - Job Creation TBD
Khazanah Hak Intelek Malaysia

- Digital Monetisation Strategies
  - Khazanah Harta Intelek Malaysia (KHIM) – a repository of all IP available for commercialisation
  - Part of National Technology Commercialization Office (NTCO) initiative
Innoprenuers/ Bumi/ Returning Malaysian

• Innoprenuers
  – Entice executives in MNCs to leave their comfort zone to explore and expand their entrepreneurial potential

• Bumi Agenda
  – Collaboration with MARA is on-going to ensure that the Bumiputera takes its rightful place on the innovation stage and benefits from the government’s initiatives

• Enticing Malaysians to Return Home
  – Create and offer innovative prospects and schemes that will entice its citizens to return with Talent Corp
World Class Center of Excellence

• Programs to be implemented through NTCO
  – Establish a network of PRIs & COEs that are closely linked with the commercial sector and form a support infrastructure that empowers industry to venture into higher-value products and services.
  – Create international linkages that enhance the exposure, skills and expertise of the PRIs & COEs
  – Set up “Productisation Centres” that bridge the gap between prototypes and commercially-viable end-products
  – Institutionalise Exchange programmes between the commercial sector and PRIs
Middle-tier firms and SMEs

- Establish a program to accelerate the growth of mid-tier firms and SMEs
  - Building the foundation for growth around innovative processes and practices
  - Strengthening leadership
  - Broaden networks and creating open source platform to foster innovation
  - Enabling access to funding to scale innovative business models
  - Growing beyond Malaysia
GLC Innovation

• Collaboration with KNB to create an Innovation Index for large firms (GLCs) that encourages them to innovate, including:
  – Establish an Innovation Methodology for creating new products, services, business models, processes, etc. that build and refine, distinctive capabilities
  – Emphasis on technology adoption and adaptation, ICT and Automation
  – Link firms with PRIs for technological expertise, skills and productisation
  – Establish an Innovation Fund for large firms that de-risks their innovation projects
National Challenge

• Challenges inspire and motivate individuals and firms to overcome their mental ceilings and achieve ambitious goals.
• A National Level Challenge is planned for Q2 2012 commencement.
• Possible themes:
  – Culture
    • Food, Architect, Industrial Design, Music, Fashion
  – Education
    • Apps, Family School IHL’s, Edutainment
  – Economy
    • NKEA’s, Business Plan Challenge, Product Improvement, Padi
  – Health & Beauty
    • Detox, Safe Nature, Save Energy, Sports & Fitness, Diseases
END OF LINKS