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SME Corp Malaysia  
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Industry 4.0  
and its implications to SMEs
Malaysia GDP growth expected to improve in 2017 supported by domestic demand amidst challenging economic situation

World growth is projected to pick up gradually in 2017-18, mainly in US, Canada and emerging markets

Malaysia Real GDP Growth Forecast, (%)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017(^f)</th>
<th>2018(^f)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Official (BNM)</strong></td>
<td>5.0</td>
<td>4.2</td>
<td><strong>4.3 - 4.8</strong></td>
<td>n.a</td>
</tr>
<tr>
<td><strong>IMF</strong></td>
<td>5.0</td>
<td>4.2</td>
<td>4.5</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Analysts Consensus</strong></td>
<td>5.0</td>
<td>4.2</td>
<td>4.4</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Source:
1) Asia Pacific Consensus Forecasts, April 2017
2) World Economic Outlook (WEO) Updates, April 2017

e: estimate \ f: forecast

Malaysia’s Major Trading Partners in 2016 (% share)

1. **Singapore**: 14.6%
2. **ASEAN-5**: 13.9%
3. **China**: 12.5%
4. **US**: 10.2%
5. **EU**: 8.1%
6. **Japan**: 6.6%

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Real GDP Growth Forecast (%)

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<tr>
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<tr>
<td><strong>Singapore</strong></td>
<td>2.2</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>ASEAN-5</strong></td>
<td>5.0</td>
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<td>1.6</td>
</tr>
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<td>1.2</td>
<td>0.6</td>
</tr>
</tbody>
</table>

* ASEAN-5 refers to Indonesia, Malaysia, Philippines, Thailand and Vietnam

Source: Department of Statistics, Malaysia
Prospects for SME GDP growth to hover around 5 - 6% in 2016 - 2017

Source: Department of Statistics, Malaysia and SME Corp. Malaysia

e: estimate  f: forecast

Global financial crisis

1Q 2017 Overall GDP: 5.6%
(1Q 2016: 4.1%)
SME Masterplan (2012 - 2020) to contribute significantly to SME growth

Recap on the SME Masterplan...

Focuses on productivity-driven & innovation-led growth

Implementation of:
- 6 High Impact Programmes (HIPs)
- 26 supporting initiatives

Monitoring & evaluation of the SME Masterplan

Complement other National plans (RMKe-11; sectoral blueprints)

GOALS

Increase business formation
- Average per year 6%

Increase no. of high growth & innovative firms
- 10% a year

Raise productivity
- 2020: RM76,400 per worker

Intensify formalisation
- 2020: 15% of GNI

MACRO TARGETS

8% New SME growth path
41% GDP Contribution
65% Employment
23% Exports
Aligning SMEs with the new trends will accelerate SME Masterplan

New trends will facilitate achievement of the targets in the SME Masterplan

- Megatrends
- Industrial Revolution 4.0
- Digital Free Trade Zone (DFTZ)

**Contribution of SME GDP to Overall GDP (%)**
- 2015: 36.3
- 2020: 41.0
- SME Masterplan target

**Contribution of SME Exports to Total Exports (%)**
- 2015: 17.6
- 2020: 23.0
- SME Masterplan target

**Share of SME Employment (%)**
- 2015: 65.5
- 2020: 65.5
- SME Masterplan revised target

**SME Labour Productivity**
- 2015: RM58,451 per worker
- 2020: RM76,400 per worker

Source: Department of Statistics, Malaysia and SME Corp. Malaysia
A two-pronged strategy need to be undertaken for sustainable and inclusive development

1. Ramping up creation of HIGH GROWTH & INNOVATIVE FIRMS for quantum leap in GDP

   Creation of more global SMEs through targeted assistance in automation, digitalisation & robotisation

   Aligning with IR4.0

2. Increasing MICROENTERPRISES (B40) contribution to the economy

   Reduction in income disparity through support for microenterprises & startups

   Increasing HIGH GROWTH & INNOVATIVE FIRMS for quantum leap in GDP
Government Initiatives to support growth of Innovative SMEs

Existing Innovation Programmes for SMEs

1. InnoCERT Certification Programme
2. HIP 5: Catalyst Programme
3. HIP 2: Technology Commercialisation Platform
4. HIP 6: Inclusive Innovation
5. InnoFund & TechnoFund
6. Commercialisation Financing
7. Venture Capital Investment
8. CIP 500 & CIP Catalyst
9. Public-Private Research Network (PPRN)
10. SIRIM- Fraunhofer
11. AIM-Steinbeis
12. TAF & CRDF
13. TPM Incubation Programme

Public
Private
Research
4 megatrends which will have far-reaching impact on SMEs

**High growth**

**M1**
- **DIGITAL FUTURE & IR4.0**

**M2**
- **GLOBALISATION**

**M3**
- **COMMUNITY LIVING**

**M4**
- **RISING OF ENTREPRENEURSHIP**

**Inclusiveness**
Digital Future & IR4.0: SMEs that seize the opportunities stand to gain significantly

Digital transformation changing business & delivery models

- Big data
- Cloud computing
- Social media
- Virtual stores
- Subscription-based models

Increasing mobile device adoption, a “mobile first” world

- 3D printing
- Robots
- IoT
- AI
- On-line platforms
- Digital village

Cloud, mobile and social technologies
Globalisation: Faster growth and favourable demographics in Asia & rapid-growth markets

- Global balance of power to BRIC & MINT nations
- Trading between emerging markets increasing
- ASEAN
  - Market size of 625 million people (60% - youth)
  - Internationalisation through regional cooperation
- Increased workers mobility and technological advances
- Asian middle class - significant spending power
- “New knowledge world order” emerging, with Asia as a hub
Globally there will be more devices connected to the internet than people (50 billion devices vs 7.5 billion people by 2020)

**CURRENT CHARACTERISTICS**

- More microenterprises in developing world (77% in Malaysia)
- Lack of automation
- More mobile phones; cheaper and more powerful each day.

**3 PUSH FACTORS FOR ICT ADOPTION**

- Low cost
- Easy access
- Peer pressure

**Community living: Empower communities with the power of ICT and broadband enabling creation**

**Go Global Malaysia #MYGoGlobal**

- build up business capabilities
- connect with digital ecosystem partners
- promote exports
- to be globally competitive companies
Rising of Entrepreneurship: The drivers of entrepreneurial activity moving from Necessity to Opportunity

Start-ups with innovative ideas, making a high-impact

The face of entrepreneurship is increasingly female

The face of entrepreneurship is increasingly young
What is Industry 4.0?

- **Industry 1.0**: End of 18th century
  - 1st industrial revolution
    - Through introduction of mechanical production facilities with the help of water and steam power

- **Industry 2.0**: Beginning of 20th century
  - 2nd industrial revolution
    - Through introduction of mass production with the help of electrical energy

- **Industry 3.0**: Beginning of 1970s of 20th century
  - 3rd industrial revolution
    - Through application of electronics and IT to further automate production

- **Industry 4.0**: Today
  - 4th industrial revolution
    - On the basis of cyber-physical production systems (CPPS), merging of real and virtual worlds

Degree of complexity
Industry Revolution 4.0 is not only about smart and connected machines or systems, it is much wider…

Fusion of these technologies & interaction across the physical, digital and biological domains make IR 4.0 is fundamentally different from previous revolutions.
Why IR 4.0?

The revolution will help elevate the industry further…

- Efficiency
- Productivity
- Return of Investment
- Technology Convergence
- Mega Trends
9 pillars of Industry Revolution 4.0 are interrelated

- Autonomous Robots
- Simulation
- System integration
- Internet of Things
- Cybersecurity
- Cloud Computing
- Additive Manufacturing
- Augmented Reality
- Big Data

Industry Revolution 4.0
Some **Tipping Points** of Technological Shifts expected to occur by 2025

- **10% of people wearing clothes** connected to the internet
- **90% of people** having unlimited and free storage
- **1 trillion sensors** connected to the internet
- **10% of reading glasses** connected to the internet
- **80% of people** with a **digital presence** on the internet
- **The 1st 3D-printed car** in production
- **The 1st Government** to replace its census with **big-data** sources

- **The 1st robotic pharmacist** in the US
- 5% of consumer products printed in 3D
- **90% of population** with regular access to the **internet**
- **Driverless cars** equaling 10% of all cars on US roads
- **The 1st transplant** of 3D-printed liver
- 30% of corporate **audits** performed by **AI**
- **Tax collected** for the 1st time by a Government via **blockchain**

Source: Global Agenda Council on the Future of Software and Society, WEF, Sep 2015
Examples of strong Government support in digitalisation and IR4.0 of SMEs in various countries...

DENMARK: Innovation Fund
- *Innovation Fund Denmark* for innovative SMEs to innovate further

FRANCE: Industrie du Futur
- *Invest for the Future Fund* comprises subsidised loans for SMEs and mid-tier, tax incentives for private investment and tax credit for research

GERMANY: Industries 4.0
- To finance projects and applied research centres, tax breaks for investments in tech start-ups

SOUTH KOREA: Technology & Innovation
- A three-year plan to spur the country’s biotech innovation
- Govt. R&D budget allocated

CHINA: “Internet Plus” & “Made in China 2025”
- To fund the “Made in China 2025” action plans

US: Manufacturing USA
- To fund research projects by SMEs

ITALY: Italia 4.0 Plan
- IR4.0 fund allocated for SMEs from 2017 to 2019

THAILAND: 4.0 Start-ups
- To sponsor and support local start-ups

SINGAPORE: Industry Transformation Programme
- IR4.0 fund allocated for the Industry Transformation Programme

AUSTRALIA: Advanced Manufacturing Industry Growth Centre
- *Growth Centre Project Fund* covers over 4 years from 2017 to 2020
Existing tax incentives on automation, robotics and ICT for SMEs in Malaysia

**Capital Allowance to Increase Automation in Labour Intensive Industries (MIDA)**
Capital Allowance (CA) of 200% maximum of RM 4 mil

**Accelerated Capital Allowance (IRB)**
for plant and machinery

**Enhance Use of ICT (IRB)**
for ICT equipment and software

**Reinvestment Allowance (IRB)**
60% on Qualifying Capital Expenditure incurred within 15 years

**Production of Selected Machinery and Equipment (MIDA)**
100% tax exemption for 10 years

**High Technology Companies (MIDA)**
100% tax exemption for 5 years
IR 4.0 has **four main effects** on business for SMEs

1. **Customer expectations** are shifting – packaging, brand, customer service, customised offering

2. Products are being enhanced by **data**, which improves asset productivity – new materials, data analysis of asset maintenance

3. **New partnerships** are being formed as companies learn the importance of new forms of collaboration – resource sharing through collaborative innovation

4. Business and delivery models are being transformed into **new digital models** – data-powered models are faster with greater agility, increasing productivity through e-Commerce
Global e-Commerce sales have reached $1.0 trillion in 2015 with double digit sales growth in all continents...

e-Commerce Sales Growth
(2015, USD, % sales growth compared to 2010)

United States: $ 271 Bn.
⬆️ 15% ⬆️ 79%

EU $ 158 Bn.
⬆️ 15% ⬆️ 75%

China: $ 293 Bn.
⬆️ 86% ⬆️ 52%

Japan: $ 69 Bn.
⬆️ 14% ⬆️ 81%

ASEAN $ 9 Bn.
⬆️ 29% ⬆️ 60%

ASEAN accounts for only <1% of global sales

World: $ 1 Tn.
⬆️ 24% ⬆️ 45%

Source: Euromonitor, Statistica, A.T. Kearney estimates
Within **ASEAN**, Malaysia ranks 3rd behind Indonesia and Singapore in B2C e-Commerce market size

ASEAN retail e-Commerce market size in 2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (m)</th>
<th>Netizens (m)</th>
<th>Retail eCommerce size (USD B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>253</td>
<td>43</td>
<td>~ USD 2.5B</td>
</tr>
<tr>
<td>Singapore</td>
<td>5.5</td>
<td>4.2</td>
<td>~ USD 1.9B</td>
</tr>
<tr>
<td>Malaysia</td>
<td>30</td>
<td>21</td>
<td>~ USD 1.5B</td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>40</td>
<td>~ USD 1.2B</td>
</tr>
<tr>
<td>Thailand</td>
<td>67</td>
<td>20</td>
<td>~ USD 1.1B</td>
</tr>
<tr>
<td>Vietnam</td>
<td>93</td>
<td>43</td>
<td>~ USD 1.1B</td>
</tr>
</tbody>
</table>

Source: AT Kearney
Malaysia e-Commerce GDP contribution is at 5.4% vs. US (35%), China (21%) and Chinese Taipei (14%)*

- E-Commerce GDP contribution growth is steady but gradual

**CRITICAL SUCCESS FACTORS**

- Favourable demographic & economic trends
- Ready infrastructure and ecosystem
- Specific government interventions

**e-Commerce GDP contribution growth (RM Bil)**

- 2012: 49
- 2013: 53
- 2014: 61
- 2015F: 68
- 2016F: 75
- 2017F: 83
- 2018F: 93
- 2019F: 103
- 2020F: 114

Additional government interventions will drive higher GDP contribution

Source: MDEC
1Q 2016 SME Survey: ICT and e-Commerce Adopted by SMEs

Usage of ICT for business increased from 27% in 2011 to 89% in 2016

- Computer / Laptop / Smartphones: 98.3%
- Internet Services: 90.1%
- Social Media: 78.2%
- E-Commerce & E-Payment: 32.3%
- Official Company Website: 30.9%
- Intranet: 14.3%
- Extranet: 4.2%
- CRM System: 4.5%

2,176 Respondents
1st Q 2016 Survey
SME Corp. Malaysia’s end-to-end approach for eCommerce adoption among SMEs in 2017

**eCommercePlus Strategic Approach – Collaboration with Agencies, eCommerce Players & Associations**

1. **Register User via eCommerce Portal**
   - eCommerce portal to guide SMEs in eCommerce adoption journey.

2. **Trained via eCommerce portal**
   - SMEs trained via eCommerce Wizard & eLearning Module
   - Portal gamification to enable SMEs earn ‘graduation’ points to redeem partners’ offers (e.g., Amazon Subscriptions, EasyParcel Credits)

3. **Trained via neutral training provider/ workshops/ seminar**
   - Develop and implement a common traditional eCommerce training programme. Partnership with the following partners:

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**Components of the Portal**

- eCommerce Wizard
- eCommerce References
- Integrated eCommerce Application Centre

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**COURSES**

- **BRICK & MORTAR SMES**
- **GETTING STARTED**
- **GOING GLOBAL**
Total immersion activities for SMEs to adopt eCommerce platform

- **Handholding & Coaching Programme with LAZADA**
  - Facilitate SMEs to get onboard Lazada eMarketplace via customised training;
  - Potential SMEs to be trained at Lazada Seller Conference

- **Go Global Malaysia Programme**
  - 1000 SMEs to be assisted – going digital via training and education programme regionally

- **11 Street Awareness & Training Activities**
  - Training activities to encourage SMEs to adopt 11 street eCommerce platform

- **Awareness & Outreach Programme on SME Enabler Programme and eBusiness Centre**
  - Regional coaching activities on SME Enabler programme;
  - Trade facilitation & Guidance on eCommerce solution via POS eBusiness Centre

- **Programme with Facebook-Avana**
  - Facebook eCommerce Marketing for SMEs via selection and coaching programmes regionally
New opportunities in DFTZ

...resulting in positive spillover effects to Malaysian economy

- **Malaysian SMEs** will get tax free with purchases higher than the current threshold
- **Benefiting** logistics services firms, freight forwarders (including SMEs)
- **More job opportunities** (expected to provide 60,000 new jobs)
- **Encourage business and traders to connect and collaborate**
- **Local SMEs** can **export** through DFTZ e-commerce platform
- **SMEs** can overcome **complex regulations**, processes and barriers
- **Additional tax revenue** to the Government for all companies
- **Holistic eCommerce** trading experience with **strategic** location and **global** best-in-class facilities

27
World’s 1st Digital Free Trade Zone (DFTZ)

To capitalize on the confluence & exponential growth of the Internet Economy & Cross Border e-Commerce activities

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**Strategic partnership with global leaders:**

- Alibaba Group
- CATCHA Group
- Alibaba Group

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**Enabling Policies**

**Investment**

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**Outcome:**

1. Increase SME e-Commerce exports
2. Make Malaysia a key sourcing & fulfillment hub for global marketplaces
3. Nurture an ecosystem to drive innovation in eCommerce and other Internet
4. Economy-related innovations Drive investments into Malaysia
Malaysia’s DFTZ e-Services Platform

DFTZ e-Services Platform
(to be developed and managed by MDEC)

- One Touch platform to be customised by Alibaba for Malaysia
- Firewall to separate National applications for governance and data protection

Customs
Permit Issuing Agencies (eg. SIRIM, MOH, FAMA)

Hangzhou
Shenzhen
Shanghai
...and others

SMEs
Alibaba Group
Alibaba OneTouch
Service Provider A
Service Provider B
Service Provider C

Linkage and data sharing with other cross border e-commerce platforms
KLIA Aeropolis has a comprehensive development Masterplan aligned to the objectives of DFTZ.
ALIBABA One Touch Platform

Enabling Seamless Cross Border Trade and Financing Services for SMEs

ALIBABA One Touch Platform facilitates Cross Border Trade by:

1. Performing end-to-end **customs clearance** on behalf of SMEs

2. Providing **foreign exchange** service to SMEs for convenience and better exchange rate, based on economies of scale

3. Providing fast **trade financing** services to SMEs based on their trading data

4. Consolidating **logistics** requirements for SMEs to lower cost for SMEs and consumers
Success Story #1: e-Commerce Adoption


- supplier and manufacturer of **Cable Tray, Cable Ladder and Cable Trunking**
- Established in May 2002

- Using Google AdWords to market its products and services
- Starts using Google AdWords in 2013

Before Google Adwords: Sales RM3mil
After Google AdWords: Sales RM8million
Increase by 166%
Success Story #2: e-Commerce Adoption

BookCafe.com.my

- Online Book Store established Dec 2010
- 19 employees
- 45,000 monthly visitors
- 54,894 subscribers
- 72,660 registered users
- 177 publishers

- 2010: RM132k
- 2016: RM2.7 mil
Increase by 1933%
Success Story #3: 1-Innocert programme resulted in higher domestic sales and exports

**JF Microtechnology Sdn Bhd**

- **1InnoCERT Rating**: AAA
- **SCORE Rating**: 4 Star
- **Sector**: Manufacturing
- **Nature of Business**: Design, develop, manufacture integrated circuit test socket, interconnect, test solutions for semi-conductor and electronic assembly

**New Product Developed – Bell Contacts**

- Smallest actuating Grounding Solution for IC final testing
- US Patent granted in Feb 2015

**Annual Sales (RM)**

- 2012: 6.0mil
- 2013: 6.2mil
- 2014: 9.7mil

Annual sales increased by 63% since 2012

**Exports**

- Successfully exporting to US & Singapore

**Manpower**

- 2012: 46
- 2013: 45
- 2014: 58

Manpower increased by 26%

**Assistance from SME Corp**

- Innovation Voucher RM400k
- Utilised on purchase of high precision machinery for the development of new product
Success Story #4: Innovative Products & Services Evolution

Bigger Production Capability

- Bigger space for storage of raw materials
- Increase by 200 percent of production capability
- Increase QCD of the products

R&D for New Products

- Medium intensity AOL Mi-20KP & Mi-20-2KP for TM
- R&D stage: Induction light for TNB, all new low intensity total internal reflection light Li-3201

Jobs

- New job creation for local community
- Hiring 2 new R&D engineers

Branding and Confidence

- Better confidence to win bigger contracts
- Launch Pad for international market

Milestones for New Factory

- 2004 - first prototype conceived
- 2005 - Li-3280 first production model
- 2006 - Li-3248 & Li-1016 prototype
- 2007 - Li-1016 Advanced (Li-1016A)
- 2008 - Li-3272 & Li-3272 Developed
- 2009 - SRL-1012 (Spare Bulb)
- 2010 - Li-32144
- 2012 - MS-960 Medium Intensity Solar
- 2013
- 2016

EPP 10 Programme

- Comprehensive assistance and machinery and systems upgrade

1-InnoCERT

- Strengthening of innovative practices and products
Conclusion

Industry 4.0

- is about companies orienting themselves to the customers through eCommerce, digital marketing, social media and the customer experience.

Productivity

- Investment into Automation
- Adoption of platforms such as eCommerce
- Digitalization of business

Policies

- To support SMEs
- More engagements
Thank you...