Government Facilitation Related to Industry 4.0 in Malaysia

MIDA – IME INDUSTRY 4.0 SHOWCASE

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Advanced Technology and R&D Division
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Introduction of MIDA
Who Are We?


1st point of contact for investors who intend to set up projects in the manufacturing and services sectors in Malaysia.

- Foreign Direct Investment
- Domestic Investment
- Manufacturing & Selected Services

PROMOTION

- Manufacturing Licenses
- Tax Incentives
- Expatriate Posts
- Duty Exemption
- Principal Hub & selected services

EVALUATION

- Assist companies in the implementation & operation of their projects
- Facilitate exchange & coordination among institutions engaged in or connected with industrial development
- Advisory Services

MONITORING

- Planning for industrial development
- Recommend policies & strategies on industrial promotion and development
- Formulation of strategies, programmes and initiatives for international economic cooperation

PLANNING
12 State offices

- Alor Setar
- Penang
- Ipoh
- Selangor
- Seremban
- Melaka
- Johor Bahru
- Kota Bharu
- Kuala Terengganu
- Kuantan
- Kota Kinabalu
- Kuching

12 Overseas Centres around the world

- Los Angeles
- Houston
- New York
- Boston
- San Jose
- Chicago
- London
- Stockholm
- Munich
- Frankfurt
- Milan
- Paris
- Dubai
- Tokyo
- Osaka
- Beijing
- Guangzhou
- Shanghai
- Seoul
- Mumbai
- Singapore
- Taiwan
- Sydney

Headquarter
KL Sentral, Kuala Lumpur

- Address:
  MIDA Sentral
  No. 5 Jalan Stesen Sentral 5
  KL Sentral
  50470 Kuala Lumpur
  Tel: 03 – 2267 3633
  Fax: 03 – 2274 7970
  www.mida.gov.my

KL Sentral
- 28 minutes (KLIA – KL Sentral) via KLIA Express Train
- Malaysia’s largest transit hub, is Kuala Lumpur’s integrated rail transportation centre.
MITI & Agencies

Based in MIDA

- Immigration Department
- Royal Malaysian Customs
- Labour Department
- Telekom Malaysia Berhad

Based outside MIDA

- MIDA
- MATRADE
- HDC
- SMECORP MALAYSIA
- MPC
- midf
- SME BANK
- MAI
- MEF
- CIDB MALAYSIA
- Tourism Malaysia
- MDEC
- Department of Occupational Safety & Health
Now, Malaysia’s investment environment consists of multiple national, regional and state investment promotion agencies.
Malaysia’s Economic Development Journey
Malaysia’s Economic Development

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>GDP CONTRIBUTION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1970</td>
</tr>
<tr>
<td>Agriculture</td>
<td>33.6</td>
</tr>
<tr>
<td>Mining</td>
<td>7.2</td>
</tr>
<tr>
<td>Construction</td>
<td>3.8</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12.8</td>
</tr>
<tr>
<td>Services</td>
<td>42.6</td>
</tr>
</tbody>
</table>

Malaysia has successfully transformed from a predominantly agriculture-based economy in the 1970s, to a more diversified economic structure.

(p) preliminary

Source: Department of Statistic Malaysia, BNM
Over 5,000 companies from more than 50 countries
MALAYSIA IS CONNECTED TO THE WORLD THROUGH FTAs

MALAYSIA IS THE STRATEGIC GATEWAY TO KEY MARKETS LEVERAGING ON FTAs

• Market size: **2.7 billion people**
• Tariff reduction and elimination: 2016

**Malaysia has implemented 13 FTAs:**

**ASEAN**
1. ASEAN Free Trade Area (1992)
2. ASEAN-China (2004)
3. ASEAN-Korea (2006)
4. ASEAN-Japan (2008)
5. ASEAN-India (2009)
6. ASEAN-Australia-New Zealand (2009)

**BILATERAL**
2. Pakistan (2007)
3. New Zealand (2009)
4. Chile (2010)
5. India (2011)
6. Australia (2012)
7. Turkey (1.8.2015)

Malaysia is still negotiating Regional Comprehensive Economic Partnership (RCEP), Malaysia-EU, Malaysia-EFTA and ASEAN-Hong Kong.
Malaysia As A Hub For ASEAN

- **4th largest** Economy by 2030
- **US$6.7 Trillion** GDP: 2030 target
  - GDP: US$ 2.55 trillion (2016)
  - GDP Growth: 4.8% (2016)
  - Per capita: US$ 4,021 (2016)
- **109 MILLION** (2015) Tourist Arrivals
  - Intra ASEAN: 46 million
- **700 MILLION** Population by 2030:
- **634 MILLION** Current Population

**ASEAN Dialogue Partners:**
- Australia
- Canada
- China
- India
- Japan
- Korea
- New Zealand
- EU
- Russia
- USA

**GDP:** US$ 2.55 trillion (2016)

**GDP Growth:** 4.8% (2016)

**Per capita:** US$ 4,021 (2016)

**Total Goods Exports:** US$ 1.1 trillion

**Intra ASEAN 24.7%**

**Total FDI:** US$ 96 billion (2016)

**Intra ASEAN:** US$24 billion (24.7%)

**Tourist Arrivals Intra ASEAN:** 46 million

**2030 target**
- Population by 2030: 634 MILLION
Global Scenario on Industry 4.0
Industrial Revolution - Industry 4.0

First Industrial revolution
- Based on mechanical production driven by water & steam power
  - Late 18th century

Second Industrial revolution
- Based on mass production enabled by electrical energy
  - Early 20th century

Third Industrial revolution
- Based on the use of computer & electronics to further enhance automation
  - Early 1970s

Fourth Industrial revolution
- Based on the use of cyber physical systems
  - Today/in the near future

Key technologies
- Autonomous robots
- Additive manufacturing
- Augmented reality
- Cyber security
- Big data and analytics
- Internet of Things
- Cloud computing
- System integration
- Simulation

Source: BCG
Global Industry 4.0 Initiatives

Many countries, Different Names, Similar Goals

Source: IDC, Frost & Sullivan
Vision of Industry 4.0 in Malaysia
Eleventh Malaysia Plan (2016-2020)

Smart Manufacturing

One of the focus areas for RMK-11 under the manufacturing thrusts. This thrust is further supported by additive manufacturing, robotics and also agile business models. Big Data Analysis (BDA) and Internet of Things (IOT) are the critical backbone that enables the vision of smart manufacturing.

Traditional Approach

Future of Manufacturing

RMK11: (Thrust 6) - Strategy B2:
Encompassing growth on people

RMK11 - Driving ICT in the Knowledge Economy

RMK11: (Thrust 6) - Strategy B2:
Enhancing productivity through automation supported by developmental and performance-based financial assistance and collaboration with industry;
Three (3) catalytic subsectors namely Chemical, E&E and M&E industries; and two (2) subsectors of high potential growth namely Aerospace and Medical Devices have been identified in the 11th MP to drive the growth of the manufacturing sector.
Malaysia’s Industry 4.0 Ecosystem

ViTrox
Honeywell
Inari Amertron Berhad
intel
GE
SONY
OMRON
infineon
KONICA MINOLTA
HITACHI
Nestle
Western Digital
WD
Delloyd Ventures Berhad
Jabil Circuit
First Solar
Pentamaster
B Braun
Agilent Technologies
Robopreneur.com
Malaysia’s Ecosystem – Training Institutes

Industry 4.0 Programmes to start in 3Q 2018
Malaysia’s Ecosystem – Universities

Asean Competency Centre at the Pahang Technology Park

Centre for Research in Industry 4.0 (CRI4.0)
Electronic Smart Manufacturing Ecosystem
–MIDA and CREST collaboration

Collaborators in Industry Proof-of-Concept projects, R&D Grant projects, talent programs:

Manufacturing Anchors

Technology Providers & Systems Integrator

Research Expertise & Knowledge

Source: Collaboration Research in Engineering, Science Technology (CREST)
Objectives
- To future proof Malaysian companies to ensure their competitiveness
- Providing a structured approach for participating companies in embarking on their digital transformation journey

Intended Outcome
- Increased productivity
- Reduce dependency on foreign labour
- New source of growth/business models

Partners
- Deloitte
- McKinsey
- Rainmaking
- Roland Berger
- BOSCH
The Role of Government

- National Industry 4.0 Policy Framework
- Study on Future of Manufacturing: Industry 3+2
- Industry 4.0 Taskforce
  - Infrastructure and Ecosystem
  - Funding and Incentives
  - Talent and Human Capital
  - Technology and Standards
  - SMEs
- Launching of National IoT Strategic Road Map
- Malaysia Digital Economy for year 2017:
  - To implement programme including e-commerce systems, digital maker movement including new location for Malaysia Digital Hubs.
- Establishment of Digital Free Zone to stimulate internet based innovation
- A blueprint created to address productivity challenges holistically in order to boost economic growth
- Building Analytics Capabilities: 20,000 data professionals and 2,000 data scientists by 2020
Draft National Industry 4.0 Policy Framework
THE OBJECTIVES OF THE INDUSTRY 4.0 POLICY ARE THREEFOLD – ACT:

A
Attract stakeholders to Industry 4.0 technologies & processes and further increase Malaysia’s attractiveness as a preferred manufacturing location
- Adoption of Industry 4.0
- SME Inclusion
- Preferred manufacturing location

C
Create the right ecosystem for Industry 4.0 to be adopted and align existing and future development initiatives
- Talent supply & skill levels
- Collaboration platforms
- Digital infrastructure
- Funding support
- Data availability & sharing
- Innovation capacity

T
Transform Malaysia’s industry capabilities in both a holistic and an accelerated manner
- Labour productivity
- Cost efficiency
- Share of high-skilled jobs
- Technology & Innovation capabilities
- Local technology development

Targeted outcomes
- Higher manufacturing sector contribution
- More high value-added products
- Continuing FDI

NATIONAL FRAMEWORK BY THE NUMBERS

Source: Draft National Industry 4.0 Policy Framework
National Goals & Targets

1. Productivity of the manufacturing industry per person (from RM106,647 in 2016 to increase by 30% by 2025)
   - To increase the level of productivity in the manufacturing sector

2. Contribution of manufacturing sector to national economy (from RM254 bill in 2016 to RM392 bill by 2025)
   - To elevate the contribution of the manufacturing sector to the economy

3. Global innovation index (from #35 in 2016 to top 30 nations by 2025)
   - To strengthen our innovation capacity and capability, reflected in the global innovation ranking

4. Number of skilled workers employed in the manufacturing sector (from 18% in 2016 to 30% by 2025)
   - To increase the number of high-skilled workers employed in the manufacturing industry
Malaysia Industry 4.0 Policy Framework

**Funding & Outcome-based Incentives**

**Strategy F1:** Provide outcome-based incentives, including tax incentives to encourage investments in and adoption of Industry 4.0 technologies & processes.

**Strategy F2:** Introduce dynamic and innovative financial products to encourage adoption of Industry 4.0 technologies & processes.

**Enabling Ecosystem & Efficient Digital Infrastructure**

**Strategy I1:** Strengthen the digital connectivity in and between industrial, education and training hubs to remove connectivity bottlenecks in adopting Industry 4.0 technologies.

**Strategy I2:** Enhance the digitalisation and integration of government processes and infrastructure along supply and manufacturing value chains.

**Strategy I3:** Involve service providers for Industry 4.0 and link them to manufacturing firms to help implement technologies, processes and skill development.

**Regulatory Framework & Industry Adoption**

**Strategy R1:** Increase awareness of the need, benefits and opportunities of Industry 4.0 technologies and business processes among manufacturing firms.

**Strategy R2:** Create a platform and mechanism to help manufacturing firms, especially SMEs, assess and develop their Industry 4.0 capabilities.

**Strategy R3:** Improve data integrity, standards, sharing security to facilitate seamless integration of value chains and support intra-ministerial analysis to chart effective Industry 4.0 programs.

**Upskilling Existing & Producing Future Talents**

**Strategy S1:** Enhance the capabilities of the existing workforce through national development programmes specially designed for specific manufacturing sectors and support re-skilling and re-deployment.

**Strategy S2:** Ensure the availability of future talent by equipping students with the necessary skillsets to work in the Industry 4.0 environment.

**Strategy S3:** Intensify Research, Innovation, Commercialisation and Entrepreneurship (RICE) programmes and activities in specific Industry 4.0 technologies and processes that support and advance priority sectors.

**Access to Smart Technologies & Standards**

**Strategy T1:** Establish digital/technology labs and collaborative platforms, especially public-private partnerships (PPP), to create awareness and understanding, foster the adoption of new technologies, and facilitate the transfer of knowledge.

**Strategy T2:** Establish and implement standards for systems interoperability for smart manufacturing and Industry 4.0 technologies.

**Strategy T3:** Intensify Research, Innovation, Commercialisation and Entrepreneurship (RICE) programmes and activities in specific Industry 4.0 technologies and processes that support and advance priority sectors.
Government Facilitations

- Domestic Investment Strategic Fund (DISF)
Domestic Investment Strategic Fund (DISF)

Objective of Fund

• To accelerate the shift of Malaysian-owned companies in targeted industries to high value-added, high technology, knowledge-intensive and innovation-based industries

• To enable domestic investors to develop new sources of competitive advantage and to become active participants in the global ecosystems of industries

• The fund is not a business start-up fund but it is applicable to local companies which have new/additional investments
The fund will provide matching grants (1:1) on reimbursable basis to cater for expenditures incurred for the following activities:

i. Training of Malaysians
ii. R&D activities carried out in Malaysia
iii. Licensing or purchase of new technology
iv. Obtaining International Standards/Certification
v. Modernization and upgrading of facilities and tools to undertake manufacturing or services activities for Multinational Corporations (MNCs) and Malaysian conglomerates (Outsourcing activities)
Domestic Investment Strategic Fund (DISF)

Eligibility

- Incorporated under the Companies Act, 1965 / Companies Act, 2016
- New companies in the manufacturing & services sectors with Malaysian equity ownership of at least 60%
- Existing companies in the manufacturing & services sectors with Malaysian equity ownership of at least 60% undertaking reinvestments (expansion / modernization / diversification)
Priority Sectors - Manufacturing

- Aerospace
- Medical Devices
- Pharmaceuticals
- Advanced Electronics
- Machinery & Equipment
- Other industries, on a case by case basis
Domestic Investment Strategic Fund (DISF)

Priority Sectors - Services

- Design and Development
- Research and Development
- Testing / Calibration
- Quality and Standard Certification
- Architectural / Engineering Services
- Technical and/or Skills Training
- Logistics Service Providers (3PL)
- ICT Solutions Providers related to Automation and Industry 4.0
- Integrated Green Technology Project
Government Facilitations

- Automation Capital Allowance
The Automation Capital Allowance was introduced in 2015 Budget. The main objectives are:

- To encourage manufacturing companies to engage in innovative and productive activities
- To encourage quick adoption of automation especially for industries heavily reliant on foreign labour
- To spur automation initiatives
Automation Capital Allowance

Categories

> For **high labour-intensive industries** (rubber products, plastics, wood, furniture and textiles), an **Automation CA of 200%** will be provided on the first RM4 million expenditure

> For **other industries**, an **Automation CA of 200%** will be provided on the first **RM2 million expenditure**
Automation Capital Allowance

Eligibility

• Incorporated under the Companies Act, 1965 / Companies Act, 2016 and resident in Malaysia

• Possesses a valid business license from local authority and manufacturing license from MITI (if applicable)

• Company has been in operation for at least 36 months

• The automation equipment is used directly in the manufacturing activities

Continued.....
The automation equipment should enhance the productivity such as reducing man hours, reducing workers and increasing volume of output and to be verified by SIRIM.

The automation equipment adopts technology that is more advanced than the technology currently used by the company and to be verified by SIRIM.
Automation Capital Allowance

Required Documents

- ML – Automation CA Form
- SIRIM report for productivity level
- Valid business licence
- Certification by the company’s external auditors confirming the following:
  - List of purchased and installed equipment/machines with purchase order/invoice and other documents of purchase as proof and functions of the equipment/machines
  - Proof of documents, that the company has already paid the entire cost of the equipment/machinery
Government Facilitations

➤ Others
Incentives related to Smart Manufacturing Products

i. Production of Robotics & Factory Automation Equipment
ii. Specialised Production M&E for Specific Industry

- Pioneer Status with tax exemption of up to 100% of statutory income for a period of up to 10 years; OR

- Investment Tax Allowance of up to 100% on qualifying capital expenditure incurred within a period of 5 years. This allowance can be offset against up to 100% of the statutory income for each year of assessment.
**Budget 2018 Highlights** (as announced on 27 Oct 2017)

1. **Tax Incentive for Transformation to Industry 4.0**

i) Matching grant of RM245 million under the Domestic Investment Strategic Fund (DISF) to upscale Smart Manufacturing facilities.*

ii) Accelerated Capital Allowance (ACA) of 200% on the first RM10 million qualifying capital expenditure incurred in the year of assessments (YA) 2018 to 2020 for manufacturing and manufacturing related services sectors. *

* The mechanism/procedures/guidelines/criteria for each incentive/grant mentioned above to be issued later.
2. Capital Allowance for ICT Equipment and Software

i) Expenditure incurred on the purchase of ICT equipment and computer software packages.**

ii) Expenditure incurred on the development of customized software comprising of consultation fee, licensing fee and incidental fee related to software development.**

** Claims should be submitted to IRB.