



# **MACHINERY AND EQUIPMENT INDUSTRY**





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## STRATEGIES AND POLICIES

### TARGETS

1.01 Malaysia has the potential to be a major regional producer and exporter of machinery and equipment. During the IMP3 period, 2006-2020, investments for the industry have been targeted at RM30.8 billion, while exports are targeted to grow at an average annual rate of 6.7 per cent to RM48.3 billion in 2020 (Table 1.1).

TABLE 1.1

### PROJECTIONS FOR THE MACHINERY AND EQUIPMENT INDUSTRY

	2006-2010	2011-2015	2016-2020	2006-2020	2006-2020
	<i>(RM billion)</i>				<i>Average Annual Growth (%)</i>
Investments	8.7	10.0	12.1	30.8	3.7
Investments per year	1.7	2.0	2.4	2.1	n.a. <sup>1</sup>
Exports (end period)	26.9	36.5	48.3	48.3	6.7

Note: <sup>1</sup> Not applicable

Source: Ministry of International Trade and Industry

### STRATEGIC THRUSTS

1.02 Six strategic thrusts have been set for the further development of the industry during the IMP3 period:

- (1) promoting Malaysia as a regional production, trading and distribution centre for machinery and equipment;
- (2) intensifying the development and promotion of selected specialised and high technology machinery and equipment;
- (3) strengthening the engineering support industries and support services;
- (4) developing Malaysian Standards for machinery and equipment;

- (5) developing a sufficient highly skilled workforce; and
- (6) strengthening the institutional support for the further development of the industry.

**(1) PROMOTING MALAYSIA AS A REGIONAL PRODUCTION, TRADING AND DISTRIBUTION CENTRE**

1.03 Malaysia will be developed as:

- regional production centre for selected high technology and specialised machinery and equipment; and
- regional trading and distribution centre for machinery and equipment.

1.04 Suitable areas, within the integrated reach of logistics for manufacture and distribution, will be identified and designated for machinery and equipment related activities. These areas will be developed as free commercial zones, complete with integrated facilities, covering:

- logistics support;
- warehousing and distribution;
- marketing and trading;
- training centres;
- R&D and technical support centres;
- testing and calibration; and
- business development and other related activities.

Major leasing companies will be encouraged to set up joint venture operations in Malaysia to assist in the promotion of the distribution activities.

**(2) DEVELOPING AND PROMOTING SPECIALISED AND HIGH TECHNOLOGY MACHINERY AND EQUIPMENT**

1.05 Development and promotion activities will be intensified, focusing on the following growth areas:

- metalworking machine tools;
- materials handling equipment
  - robotics and factory automation equipment; and
  - elevators and cranes;

- specialised machinery
  - machinery and equipment for the E&E industry;
  - printing and bookbinding equipment;
  - food processing machinery;
  - agriculture machinery;
  - plastics processing machinery; and
  - process equipment and plants for oil and gas;
- packaging machinery; and
- fuel cell power generators for stationary domestic applications.

### **(3) STRENGTHENING ENGINEERING SUPPORT INDUSTRIES AND SUPPORT SERVICES**

1.06 To complement the development of the industry, measures will be undertaken to strengthen the engineering support industries and support services:

- moulds and dies;
- iron and steel casting;
- heat treatment;
- machining;
- parts and components, modules and sub-assemblies;
- testing, calibration and certification;
- R&D, D&D and other technical support;
- repair, maintenance, reconditioning and upgrading of machinery and equipment; and
- total business solutions.

Special support programmes, in the form of business advisory services and other assistance, will be developed to nurture SMEs involved in the industry.

### **(4) DEVELOPING MALAYSIAN STANDARDS**

1.07 An international standard on safety and quality will be adopted to develop Malaysian Standards for machinery and equipment, including parts, components and materials. These standards will be modified to suit Malaysia's requirements. The Government will make it mandatory for all machinery and equipment, whether locally produced or imported, to comply with the Malaysian Standards on safety. Malaysia will also initiate mutual recognition agreements (MRAs)

on safety and quality standards for machinery and equipment, with its bilateral and regional partners, to safeguard domestic industries and facilitate exports to these countries.

## (5) DEVELOPING HIGHLY SKILLED WORKFORCE

1.08 With the support and coordination of various institutions of higher learning, research institutes and technical training centres, sufficient human resources with the relevant knowledge, competencies and skills will be produced. Emphasis will be given in the areas of engineering design, software development and programming, machine assembly and integration, servicing and maintenance, machining, welding and fabrication, and precision casting.

1.09 Productivity in the industry will be further enhanced through a higher contribution from its total factor productivity (TFP) growth. Initiatives on the TFP growth include:

- upgrading the quality of the workforce;
- increasing market access and acceptance of the machinery and equipment;
- enhancing the development in technology and encouraging the adoption of management systems and standards to meet international requirements; and
- encouraging collaborations between institutions of higher learning and the industry to promote the matching of skilled requirements, commercialisation of R&D and prototyping. These will assist the industry in expanding into new markets with higher value-added products.

## (6) STRENGTHENING THE INSTITUTIONAL SUPPORT

1.10 Initiatives to enhance domestic capacities and capabilities, in respect of R&D and technology, include:

- encouraging collaboration between Government research institutes and institutions of higher learning with the industry, to achieve more co-ordinated R&D on specific niche areas in machinery and equipment. Examples of such collaborations are:
  - MARDI and *Universiti Putra Malaysia* for food and agriculture machinery and equipment;
  - SIRIM Berhad, Technology Park Malaysia and *Universiti Malaya* for metalworking machine tools; and
  - MIMOS Berhad and *Universiti Sains Malaysia* for electrical and electronics machinery and equipment.

Universities will be encouraged to establish centres of excellence for specific fields in machinery and equipment; and

- strengthening existing research and technical centres which undertake R&D activities in machinery and equipment. Strengthening will be undertaken in terms of expertise and facilities in the related fields in machinery and equipment. Relevant research and technical centres include Rasah Machinery and Equipment Technology Centre, MARDI and MPOB.

1.11 The Government will consider the establishment of a dedicated technical institute to undertake R&D on technology innovations and applications for machinery and equipment, including business development and commercialisation. The institute will be equipped with testing, prototyping and incubation facilities. The institute will also offer technical consultancy services to SMEs involved in the industry.

1.12 Assistance will be considered to promote:

- activities within the designated regional production, trading and distribution centres, including relocation of manufacturing and services activities into these areas;
- development of the targeted high technology and specialised machinery and equipment;
- development of the engineering support industries and support services; and
- utilisation of locally manufactured machinery and equipment, including moulds and dies.