

Malaysia`s Aerospace Industry





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 Aerospace Industry Incentives



Strategically located at the heart of the wider Asia-Pacific region, Malaysia sits within the world's largest air travel market, and has world-class infrastructure such as the KLIA Aeropolis, Subang Aerotech Park, Senai Aerospace Park, Serendah High Value Manufacturing Park and Kulim Hi-Tech Park



KLIA Aeropolis



Kulim Hi-Tech Park



UMW Aerospace Park

Malaysia – Your Asia-Pacific Aerospace Hub A catalytic industry playing a major role

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The Malaysian Government considers the industry to be a catalytic high-value industry under its 11th Malaysia Plan (11MP) and beyond. MIDA emphasised the development of the aerospace industry, its supply chain, and its competency through industry-led research and technology (R&T). The Government has also put in place the Malaysian Aerospace Industry Blueprint 2030 (MAIB2030) to help drive the industry's growth.

Underscoring the Asia-Pacific region's air travel market growth, The Boeing Company predicts that demand for planes will pick up over the next decade, with the region needing almost 17,485 planes. The region will also account for 39 per cent of global deliveries of passenger and freight planes over the same period.

With 40 per cent of aerospace industry growth coming from Asia-Pacific alone, and a collective GDP of four ASEAN countries exceeding US\$1 trillion by 2030, the future of the industry is in Asia.

Given the robust industry growth outlook for the Asia-Pacific region, opportunities abound in:



The manufacture of parts and components



Aircraft/components maintenance, repair, and overhaul (MRO) activities



The manufacture/assembly base for light aircraft and corporate planes



Aircraft conversion and modification activities



Aerospace supply chain activities such as engineering, electronics, composite materials, as well as manufacturing and systems integration

Southeast Asia's Second-Largest Hub

The Malaysian aerospace industry has grown significantly to become the second-largest in Southeast Asia, providing more than 27,500 jobs mostly in the MRO and aero-manufacturing subsectors. In the industry's latest figures, MIDA has approved a total of 38 projects between 2017 and 2020, with a total investment value of RM3.69 billion that has created some 4,316 job opportunities.

In its early days, the Malaysian aerospace industry had a small base and catered primarily to the domestic market; now, the industry has more than 230 domestic and foreign companies invested, with RM16.2 billion in total revenue generated as of 2019. By 2030, the industry is projected to contribute revenue of RM20.4 billion for MRO, RM21.2 billion for aero-manufacturing, and RM13.6 billion for engineering and design services.

In MRO services, Malaysia ranks in the top three within the Asia-Pacific region and will continue to remain competitive due to the country's strategic location and access to the region, as well as its affordable costs and talent availability.



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The 2030 target

Under the MAIB2030, which runs from 2015 to 2030, Malaysia aims to become **Southeast Asia's top** aerospace nation by 2030 through becoming an integral part of the global aerospace supply chain. The blueprint targets a total revenue of **RM55.2 billion** and the creation of more than **32,000** high-income jobs.

MIDA's role under the blueprint is to promote aerospace investments through incentives and matching funds. The organisation also serves to help prospective investors from the planning stage until the project is realised.



MAIB2030 lays out Malaysia's aerospace industry focus on the following five areas, with R&T integral in supporting these areas:



MRO

To capture at least 5% of global market share



To be ranked **first** or aerospace pa

for aerospace parts and component sourcing by becoming a large sub-assembly, Tier-1, and Risk Sharing Partner



Systems integration

To become selfreliant (with at least

70%

local content) in integration and upgrading of strategic assets



Engineering and design services

To capture at least
3.5%
of global
market share

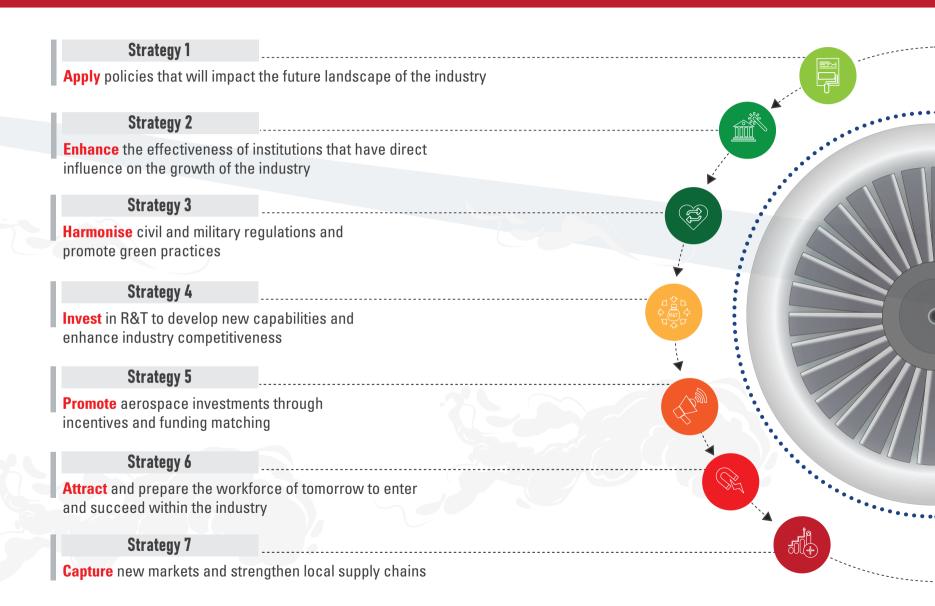


Education and training

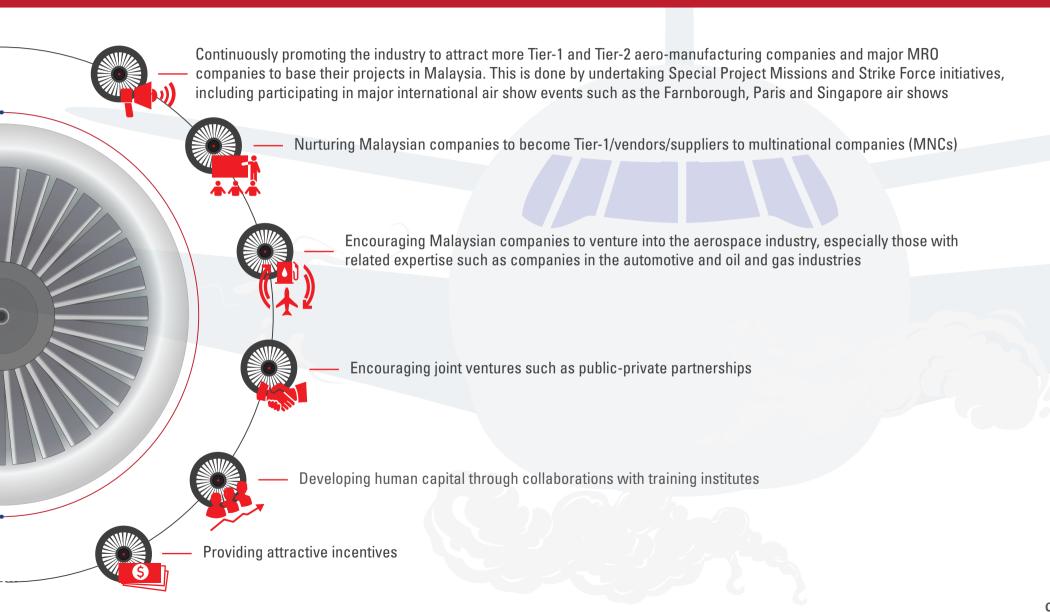
To be the

No.1
supplier of industry
talent within
Southeast Asia

MAIB2030 key initiatives:



To assist the industry to achieve these targets, MIDA has undertaken the following measures:



Five core areas

The aerospace industry in Malaysia is segmented into five key areas that cut across other industries within the manufacturing and services sectors:



2 🕸 MRO





Engineering and design capabilities





5



Aerospace manufacturing

Aerospace manufacturing is one of the fastest growing subsectors within the industry, both in the areas of metallic and composite details and assemblies. In Malaysia, aerospace manufacturing has overtaken all other subsectors in the industry as the main contributor to total revenue. There are efforts underway to further develop local supply chains and vendors (Tier 2 and below) to support demand. The subsector covers:

Engineering and design Aero-structure (composite and metallic)

Avionics; engines; and airframe equipment

Tier 1 setups such as UMW Holdings Berhad's plant (which manufactures Rolls-Royce fan cases) serve as a catalyst for lower tier industry growth. The company's new aerospace hard metal manufacturing park provides an excellent platform to nurture this subsector.

Leading aerostructure manufacturing firms with a presence in Malaysia include Spirit AeroSystems Malaysia Sdn Bhd, Composites Technology Research Malaysia Sdn Bhd, Asian Composites Manufacturing Sdn Bhd, SME Aerospace Sdn Bhd, Upeca Aerotech Sdn Bhd (part of Senior plc), Singapore Aerospace Manufacturing (SAM), and Honeywell.

MRO

MRO is considered a mature subsector in Malaysia – companies within this space already serve industry giants such as Airbus SE, GKN Aerospace, GE Engine Services Malaysia Sdn Bhd, Leonardo Helicopters, SR Tecnics Malaysia Sdn Bhd, Hamilton Sundstrand Malaysia, ExecuJet Malaysia as well as local companies such as Airod Sdn Bhd, Asia AeroTechnic Sdn Bhd and Sapura Technics. Malaysia is targeting to capture 50 per cent of the Southeast Asian MRO business and five per cent of the global market by 2030, which will position the country as Southeast Asia's top aerospace hub. Subang Aerotech Park, which offers a competitive cost base, is the largest MRO centre in the country with both local and global service providers.

In Malaysia, the MRO focus areas are:





Engines



Components



Modifications



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Engineering and design capabilities

Engineering and design services provide a full range of engineering solutions and support, providing analysis for any given piece of aerospace structure from the beginning stages to certification. It is expected that 35 per cent of the US\$352.5 billion in total value of the global aerospace market by 2030 will come from these services.

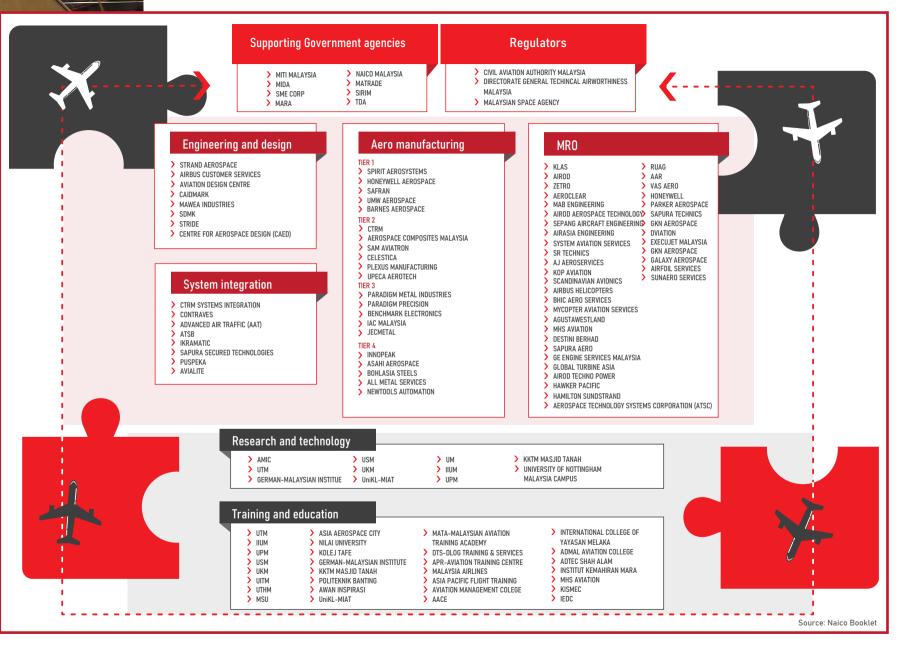
Also known as "pure play" engineering services, this is expected to be a game-changing subsector for the Malaysian aerospace industry and there are plans to generate up to RM3.5 billion in revenue and 11,500 jobs. Strand Aerospace Malaysia Sdn Bhd is one example of a local firm that serves the global original equipment manufacturers (OEMs) that execute primary structure work packages for Airbus and Boeing.

R&T

The industry-leading Aerospace Malaysia Innovation Centre (AMIC) was set up in 2010 to ensure Malaysia's aerospace industry maintains its competitive edge globally. Through its R&T centres and partnerships, AMIC develops innovative technology solutions for the industry to help it move up the value chain. The centre is among the first of its kind in Southeast Asia and is led by Airbus SE and Rolls-Royce.

Human capital

To continue realising the country's ambition to become Southeast Asia's aerospace hub, a steady flow of human capital is needed. Malaysia has invested in building this talent pipeline by working with leading institutions such as Majlis Amanah Rakyat (MARA), which supplies 30 per cent of the country's total human capital needs. Some 2,300 graduates and paraprofessionals out of 20,000 graduating engineers in 2018 came from an aerospace background.



The Malaysian Aerospace Ecosystem



Top Reasons to Locate in Malaysia

There are many reasons for companies to locate their aerospace activities here. Besides its topnotch infrastructure (both generally and industry-specific), Malaysia is committed to making the aerospace industry a key contributor to the manufacturing sector, in line with the nation's drive towards becoming a high-income economy based on innovation, creativity and high-value activities.

Malaysia is a growing market in Southeast Asia that is host to some of the biggest global aerospace companies. There is a complete ecosystem ranging from research and development, engineering and design, manufacturing, MRO, and human capital development. Malaysian companies are experienced with quickly adapting to evolving technologies and working in a borderless business world, which includes enabling OEMs to explore collaborations with any partner, from anywhere in the world.

Having a business-friendly Government, which has welcomed investors from across the globe over the decades, helps to ease the process of setting up operations. Malaysia's 12MP – which will run from 2021 to 2025 – will continue to support the growth of the industry, as the Government pushes for Malaysia to be a global aerospace centre in the Asia-Pacific region. The industry, which has grown substantially in the past 20 years, is integral to the country's industrialisation and technological development programmes.

A crucial point to note is that Malaysia aims to be the preferred global aerospace outsourcing centre through participation in 'design and build' activities in aircraft programmes. Besides that, the country is also aiming to secure a greater share of the aero manufacturing and MRO market as well as develop its capability in avionics and systems integration.

As costs escalate for global aerospace players, they will explore opportunities to relocate their operations to more cost-competitive locations such as Malaysia, a country which offers a dynamic business environment, technologically innovative firms, first-class infrastructure, political stability, as well as skilled manpower. These factors lead to an attractive proposition for companies within the region.

The Malaysian Government is also encouraging joint ventures between domestic and foreign companies, as it seeks to build up local capability as well as strengthen the industry ecosystem to better serve customers throughout the world.

As the strategic gateway to key markets leveraging Free Trade Area (FTAs), Malaysia has implemented 14 FTAs:

ASEAN

- ASEAN Free Trade Area (2002)
- ASEAN-China (2004)
- ASEAN-Korea (2006)
- ASEAN-Japan (2008)
- ASEAN-India (2009)
- ASEAN-Australia-New Zealand (2009)
- ASEAN-Hong Kong Free Trade Agreement (AHKFTA)

Bilateral



Japan (2005)



India (2011)



Pakistan (2007)



Australia (2012)



New Zealand (2009)



Turkey (2015)



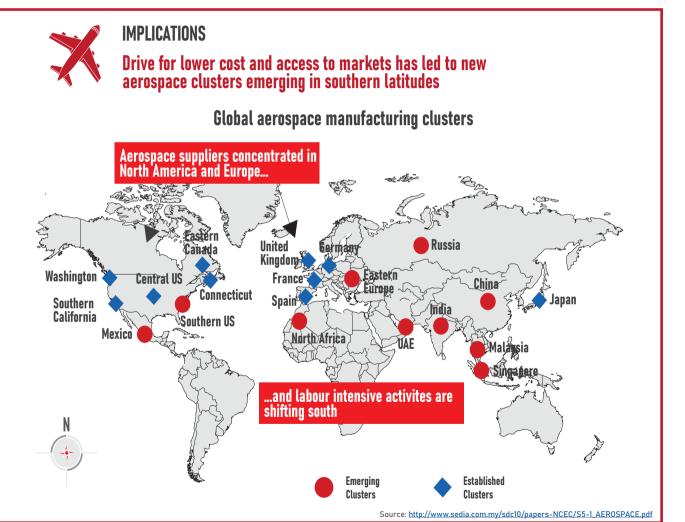
Chile (2010)

Multilateral*

Regional Comprehensive Economic Partnership (RCEP)
ASEAN + Australia, New Zealand, Korea, Japan and China

*Note: FTA signed but pending ratification and entry into force

Manufacturing Global Market Outlook



Malaysia continually aims to be the preferred global aerospace outsourcing centre with MIDA the lead agency attracting investments from OEM and Tier 1 companies. MIDA links these companies through its overseas missions, industry linkage and supplychain programmes to Malaysian companies to be part of the domestic supply-chain ecosystem



Success stories



GKN Aerospace

GKN Aerospace Services Ltd is a Tier 1 supplier of airframe and engine structures, landing gear, electrical interconnection systems and transparencies.

The UK-based company has set up its seventh Asian repair facility for aircraft engine components and its first engine systems business in the region at Nusajaya Techpark located on the southern tip of the Peninsular Malaysia.

This facility, which requires 150 – 300 workers, focuses on servicing engines with low-pressure compressor (LPC) components, while its research will be centred on the application of additive manufacturing (3D-printing) technology into engine parts repair. The facility's location was identified with the help of the Malaysian Government and the Malaysian Investment Development Authority (MIDA) and also serves as a state-of-the-art repair and research site for customers in Asia-Pacific.





UMW Aerospace Sdn. Bhd

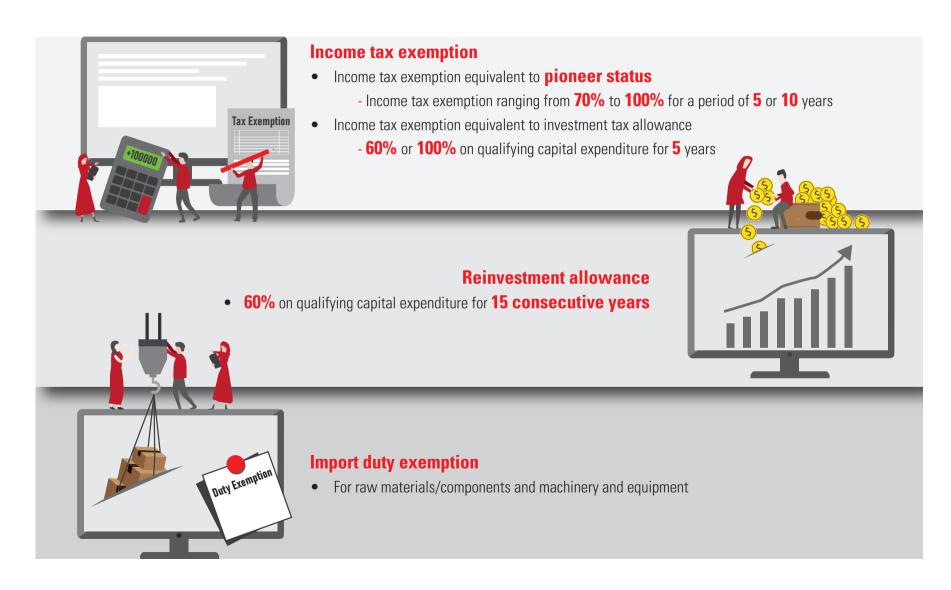
Among local companies in the aerospace ecosystem, UMW Aerospace Sdn. Bhd., a wholly-owned company of the UMW Group, stands out for being the first Malaysian Tier 1 aerospace engine component manufacturer. UMW Aerospace's skilled workforce located in its plant in Serendah, Malaysia, produces fan cases, one of the largest and most complex parts of the engine to manufacture, for Rolls-Royce aero engines.

The Serendah plant complements the Rolls-Royce assembly plant in Singapore and rolled out its maiden fan case for Rolls-Royce Trent 1000 engines in November 2017. UMW Aerospace has a 25 + 5-year contract with Rolls-Royce Plc and the production of these fan cases will also have spill-over effects for the aerospace ecosystem as it will further develop the supply chain.





Aerospace Industry Incentives





MIDA Headquarters

Malaysian Investment Development Authority, MIDA Sentral, No.5, Jalan Stesen Sentral 5,

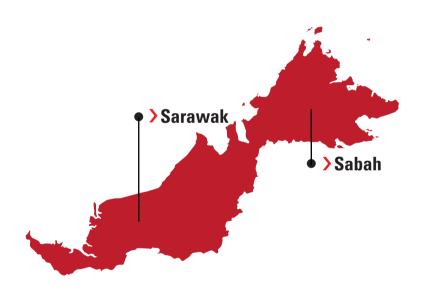
Kuala Lumpur Sentral, 50470 Kuala Lumpur, Malaysia Tel: (603) 2267 3633 Fax: (603) 2274 7970

Email: investmalaysia@mida.gov.my

Website: www.mida.gov.my

MIDA State Offices





Johor

Director

Malaysian Investment Development Authority
No. 5, Level 13, Menara Tabung Haji Jalan Ayer Molek

80000 Johor Bahru Johor Darul Takzim

Tel: (607) 224 5500 / 226 5057

Fax: (607) 224 2360

E-mail: johor@mida.gov.my

Kedah & Perlis

Director

Malaysian Investment Development Authority
4th Floor, East Wing, No. 88 Menara Bina Darulaman

Berhad Lebuhraya Darulaman

05100 Alor Setar Kedah Darul Aman Tel: (604) 731 3978 Fax: (604) 731 2439

E-mail: kedah@mida.gov.my

Melaka

Director

Malaysian Investment Development Authority 3rd Floor, Menara MITC Kompleks MITC, Jalan Konvensyen 75450 Ayer Keroh Melaka

Tel: (606) 232 2877 Fax: (606) 232 2875

E-mail: melaka@mida.gov.my

Negeri Sembilan

Director

Malaysian Investment Development Authority Suite 13.01 & 13.02, 13th Floor, Menara Zurich 70200 Seremban

Negeri Sembilan Darul Khusus

Tel: (606) 762 7921 Fax: (606) 762 7879

E-mail: nsembilan@mida.gov.my

Pahang

Director

Malaysian Investment Development Authority Suite 3, 11th Floor, Kompleks Teruntum

P.O. Box 178 25720 Kuantan

Pahang Darul Makmur Tel: (609) 513 7334 Fax: (609) 513 7333

E-mail: pahang@mida.gov.my

Perak

Director

Malaysian Investment Development Authority Level 4, Perak Techno Trade Centre (PTTC) Bandar Meru Raya, Off Jalan Jelapang

P.O.Box 210 30720 Ipoh Perak Darul Ridzuan Tel: (605) 5269 962/ 961 Fax: (605) 5279 960

E-mail: perak@mida.gov.my

Pulau Pinang

Director

Malaysian Investment Development Authority Unit 14.01, Level 14 Menara Boustead Penang 39, Jalan Sultan Ahmad Shah.

10050 Pulau Pinang Tel: (604) 228 0575 Fax: (604) 228 0327

E-mail: penang@mida.gov.my

Sabah

Director

Malaysian Investment Development Authority Lot D9.4 & D9.5, Tingkat 9 Block D, Bangunan KWSP, Karamunsing

88100 Kota Kinabalu Sabah Tel: (6088) 211 411/230 411 Fax: (6088) 211 412

E-mail: sabah@mida.gov.my

Sarawak

Director

Malaysian Investment Development Authority Room 404, 4th Floor, Bangunan Bank Negara

No. 147, Jalan Satok, P.O. Box 716

93714 Kuching Sarawak Tel: (6082) 254 251/237 484

Fax: (6082) 252 375

E-mail: sarawak@mida.gov.my

Selangor

Director

Malaysian Investment Development Authority 22nd Floor, Wisma MBSA Persiaran Perbandaran 40000 Shah Alam.

Selangor Malaysia Tel: (603) 5518 4260 Fax: (603) 5513 5392

E-mail: selangor@mida.gov.my

Kelantan

Director

Malaysian Investment Development Authority
Aras 5-C. Menara Peiabat Kelantan

Trade Centre.

Jalan Bayam,

15000 Kota Bharu, Kelantan Malaysia

Tel: (609) 748 3151 Fax: (609) 744 7294

E-mail : kelantan@mida.gov.my

Terengganu

Director

Malaysian Investment Development Authority 5th Floor, Menara Yayasan Islam Terengganu, Jalan Sultan Omar 20300 Kuala Terengganu,

Terengganu Malaysia Tel: (609) 622 7200 Fax: (609) 623 2260

E-mail: terengganu@mida.gov.my

MIDA Overseas Offices



The Malaysian Investment **Development Authority** (MIDA) is the Government's principal agency for the promotion of the manufacturing and services sectors in Malaysia. Today, MIDA is Malaysia's cutting-edge, dynamic and pioneering force in opening pathways to new frontiers around the globe





MIDA Overseas Offices Asia-Pacific Region

SINGAPORE

Consul (Investment)/Director
High Commission of Malaysia
Malaysian Investment Development Authority
No.7. Temasek Boulevard

26-01, Suntec Tower One, 038987 Singapore

Tel: (65) 6835 9326/ 9580/ 7069

Fax: (65) 6835 7926

E-mail: singapore@mida.gov.my

AUSTRALIA

Consul (Investment)/Director
Consulate of Malaysia (Investment Section)
Malaysian Investment Development Authority
Level 6, 16 Spring Street NSW 2000 Sydney

Australia

Tel: (6102) 9251 1933 Fax: (6102) 9251 4333 E-mail: sydney@mida.gov.my

SHANGHAI PEOPLE'S REPUBLIC OF CHINA

Director

Consulate General of Malaysia

(Investment Section)

Malaysian Investment Development Authority Unit 807-809, Level 8 Shanghai Kerry Centre

No.1515, Nanjing Road (West)

Shanghai 200040

People's Republic of China

Tel: (8621) 6289 4547 Fax: (8621) 6279 4009

E-mail: shanghai@mida.gov.my

GUANGZHOU PEOPLE'S REPUBLIC OF CHINA

Director

Malaysian Investment Development Authority Unit 1804B-05 CITIC, Plaza Office Tower 233 Tianhe Be Road, Guangzhou 510610

People's Republic of China Tel: (8620) 8752 0739

Fax: (8620) 8752 0753

E-mail: guangzhou@mida.gov.my

BEIJING PEOPLE'S REPUBLIC OF CHINA

Counselor (Investment)/Director Embassy of Malaysia (Investment Section) Malaysian Investment Development Authority Unit C, 12th Floor, Tower A, Gateway Plaza No. 18, Xiaguangli, East Third Ring North Road, Chaoyang District,100600 Beijing

People's Republic of China Tel: (8610) 8440 0071/ 0072 Fax: (8610) 8440 0076 Email: beijing@mida.gov.my

OSAKA JAPAN

Director

Malaysian Investment Development Authority Mainichi Intecio 18-F, 3-4-5, Umeda, Kita-ku Osaka 530-0001 Japan

Tel: (816) 6451 6661 Fax: (816) 6451 6626 E-mail: osaka@mida.gov.my

TOKYO JAPAN

Director

Malaysian Investment Development Authority

32F, Shiroyama Trust Tower 4-3-1, Toranomon, Minato-Ku Tokyo 105-6032 Japan

Tel: (813) 5777 8808 Fax: (813) 5777 8809 E-mail: tokyo@mida.gov.my

REPUBLIC OF KOREA

Counselor (Investment)/Director

Embassy of Malaysia

(Malaysian Trade and Investment Centre) Level 17, Standard Chartered Bank Korea Limited Building 47, Jongro, Jongro-gu

Seoul 110-702 Republic of Korea

Tel: (822) 733 6130 / 6131 Fax: (822) 733 6132

E-mail : seoul@mida.gov.my

TAIWAN

Director (Investment)

Malaysian Friendship & Trade Centre Malaysian Investment Development

Authority

12F, Suite A, Hung Kuo Building167, Tun Hua North Road Taipei 105

Taiwan

Tel: (8862) 2713 5020 / 2718 6094

Fax: (8862) 2514 7581 E-mail: taipei@mida.gov.my

INDIA

Consul (Investment)/Director Consulate General of Malaysia

(Investment Section)

Malaysian Investment Development Authority

81 & 87, 8th Floor

3rd North Avenue Maker Maxity Bandra Kurla Complex, Bandra (E)

Mumbai 400051 India

Tel: (9122) 2659 1155 / 1156 Fax: (9122) 2659 1154

E-mail: mumbai@mida.gov.my

UNITED ARAB EMIRATES

Consul (Investment)/Director

Consulate General of Malaysia

(Investment Section)

Malaysian Investment Development Authority

Unit 2205, 22nd Floor, Tower A

Business Central Tower, Dubai Media City

(P.O. Box 502876) Dubai United Arab Emirates

Tel: (9714) 4343 696/4343 697

Fax: (9714) 4343 698

E-mail: dubai@mida.gov.my

FRANCE

Director

Malaysian Investment Development Authority

42, Avenue Kleber 75116, Paris France

Tel: (331) 4727 6696/ 3689 Fax: (331) 4755 6375 E-mail: paris@mida.gov.mv

FRANKFURT GERMANY

Consul (Investment)/Director Consulate General of Malaysia

(Investment Section)

Malaysian Investment Development Authority Level 9, HAT 64, Bleichstrasse 64-66, 60313

Frankfurt Am Main Germany Tel: +49 (0)698700 679-0 Email: frankfurt@mida.gov.my

SAN JOSE

Director

Malaysian Investment Development Authority 226, Airport Parkway, Suite 480, San Jose, CA 95110

United States of America Tel: (1408) 392 0617/ 8 Fax: (1408) 392 0619

E-mail: sanjose@mida.gov.my

MIDA Overseas Offices Europe

MUNICH GERMANY

Director

Malaysian Investment Development Authority

Level 6, Bürkleinhaus Bürkleinstrasse 10

80538 Munich Germany
Tel: (4989) 2030 0430
Fax: (4989) 2030 0431-5
E-mail: munich@mida.gov.my

ITALY

Consul (Investment)/Director Consulate of Malaysia (Investment Section) Malaysian Investment Development Authority 2nd Floor, via Albricci 9, 20122 Milan (MI) Italy

Tel: (3902) 3046 5218909 3824 Fax: (3902) 3046 52428909 545 418

E-mail: milan@mida.gov.my

SWEDEN

Economic Counsellor

Malaysian Investment Development Authority

c/o Embassy of Malaysia

Karlavaegen 37 P.O. Box 26053, S-10041 Stockholm Sweden

Tel: (468) 440 8400/ (468) 440 8416

Fax: (468) 791 8761

E-mail: stockholm@mida.gov.my

UNITED KINGDOM

Counsellor for Investment/Director

High Commission of Malaysia

Malaysian Investment Development Authority

c/o Embassy of Malaysia

17, Curzon Street London W1J 5HR United Kingdom

Tel: (4420) 7493 0616 Fax: (4420) 7493 8804 E-mail: london@mida.gov.my

MIDA Oversea Offices North America

CHICAGO

Director

Malaysian Investment Development Authority

John Hancock Centre, Suite 1515

875, North Michigan Avenue, Chicago, IL 60611

United States of America Tel: (1312) 787 4532 Fax: (1312) 787 4769

E-mail: chicago@mida.gov.my

NEW YORK

Consul (Investment)/Director

Consulate General of Malaysia

(Investment Section)

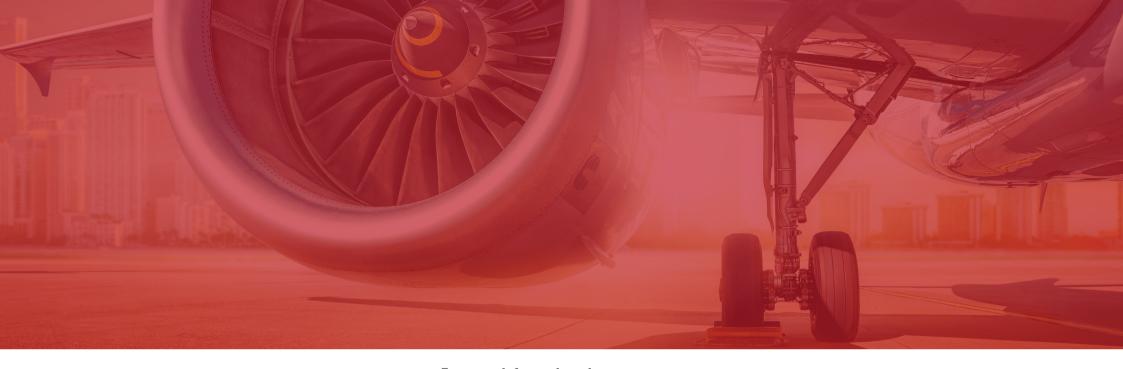
Malaysian Investment Development Authority

313 East, 43rd Street New York, NY 10017

United States of America Tel: (1212) 687 2491

Fax: (1212) 490 8450

E-mail: newyork@mida.gov.my



For more information please contact:



MIDA Sentral

No.5, Jalan Stesen Sentral 5, Kuala Lumpur Sentral, 50470 Kuala Lumpur, Malaysia Tel: 603 2267 3633 I Fax: 603 2274 7970 I Web: www.mida.gov.my I E-mail: investmalaysia@mida.gov.my