
MiGHT
Malaysian Industry-Government Group
for High Technology
We make it happen!
2013
ANNUAL
REPORT

Published by

Malaysian Industry Government Group for High Technology (320059-P)
MIGHT Building
3517, Jalan Teknorat 5
63000 Cyberjaya
Selangor
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MISSION

To serve the nation in advancing competency in high technology through partnerships towards sustainable development.

GOALS

- Setting a common direction for high technology industry development.
- Partnering for delivering impact.
- Nurturing techno-business innovation.
- Developing capability and competency for high technology industry.

CONTENTS

"I have instructed MIGHT through the Office of the Science Advisor to look into putting **"Science to Action"** or S2A Initiative in place. The S2A initiative is made up of three key components:

- For Science to Industry the focus is to establish an innovation culture of "Innovate or Perish" and accelerate our efforts to nurture and increase the number of new \ technology-based companies or "start-ups", especially among young scientists and entrepreneurs, from both genders.
- For Science to Well-being the aim is to upgrade the rakyat's standard of living through the usage and mastery of science, technology and innovation. This initiative now being implemented by the Ministry of Education also emphasizes excellence in the national education system especially in the field of STEM (Science, Technology, Engineering and Mathematics) by giving specific concentration to the young generation and youths.
- For Science to Governance, the thrust is to strengthen public and private service delivery systems in order to create a conducive environment and ecosystem that can become a catalyst to the development of science. This core initiative will be spurred through the Third National Science, Technology and Innovation Policy overseen by the Ministry of Science, Technology and Innovation that has been endorsed by the Cabinet last April."

YAB Dato' Sri Mohd Najib Bin Tun Haji Abdul Razak

Launching Ceremony for Science to Action (S2A)
in conjunction with MIGHT 20th Anniversary
(1 November 2013)

About MIGHT

MiGHT

Launched on 22 February 1993 by Tun Dr Mahathir Mohamad, Malaysian Industry-Government Group for High Technology (MIGHT) was designed to address the future of high technology in Malaysia. MIGHT's core purpose is addressing the country's needs in response to the effects of globalisation and trade liberalisation on future economic growth through the accelerated use of high technology.

As an independent and non-profitable organisation, MIGHT is driven by members drawn from both the public and private sectors. The combination of these two sectors forms the grounds for efforts in prospecting cutting-edge technological know-how to be leveraged into viable businesses for the nation.

Today, in developing high technology industries for Malaysia; MIGHT continues to be a consensus building think tank through a membership programme which remains as the main platform to build linkages with vital organisations and agencies. MIGHT alsotakes on the role of nurturing high technology industries via catalytic interventions programmes when the need arises.

Commonwealth Consultative Group on Technology Management (CCGTM)

Prior to the inception of MIGHT, the Commonwealth Heads of Government Meeting (CHOGM) created the Commonwealth Consultative Group on Technology Management (CCGTM) to foster and promote the transfer of technology through partnerships. Recognising the important role that the private sector plays in national development, CCGTM encouraged the participation of industry through its Private Sector Partnership Programme. In 1995, CCGTM was transformed into a private company – the Commonwealth Partnership for Technology Management or CPTM.

Consortium of Investors for Prospecting (CIP)

The Office of the Science Advisor proposed the formation of an entity that would carry out 'prospecting' activities to integrate the role of the private sector in national development and explore the idea of fostering partnerships between industry and government. Prospecting is defined as research and harnessing of technologies for the creation of business opportunities.

The proposition led to the founding of an entity named Consortium of Investors for Prospecting (CIP) which was backed by the Malaysian Business Council (MBC) and the National Council for Scientific Research and Development (NCSRD).

The formation of the CIP was a historic milestone and paved the way for industry and government to work together to promote business developments anchored by science and technology.

However, the CIP achieved limited success due to resource constraints and challenges arising from the informal structure of prioritising tasks and activities. It soon became apparent that a more formally structured organisation was required to act on the national imperative for industrialisation in high technology sectors.The proposition led to the founding of an entity named Consortium of Investors for Prospecting (CIP) which was backed by the Malaysian Business Council (MBC) and the National Council for Scientific Research and Development (NCSRD). The formation of the CIP was a historic milestone and paved the way for industry and government to work together to promote business developments anchored by science and technology.

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Malaysian Industry-Government Group for High Technology (MIGHT)

The Office of the Science Advisor led the way by proposing a more efficient, dynamic and flexible entity to undertake not only prospecting activities but also to act as a neutral and independent organisation promoting the use of science and technology within Malaysia. Under the purview of the Prime Minister's Department, MIGHT was officially registered as a company limited by guarantee under the Company's Act 1965 on 15 October 1994. It continued to be managed by the MIGHT Support Unit until 1998 when it underwent a restructuring that brought it into its current form.

In 2003, MIGHT was put under the purview of the Ministry of Science, Technology and Innovation (MOSTI) but was later repositioned under the Prime Minister's

Department in January 2011, reporting directly to the Science Advisor to the Prime Minister. Since its beginning, MIGHT has played a key role in accelerating progress for the utilisation of high technology elements by the industries in Malaysia, as evidenced in the mobility sectors, by encouraging ventures into new frontiers of high technology, to sparking initiatives by courageous pioneers of new industrial and market frontiers.

Moving Forward

MIGHT continues to champion the nation's high technology agenda and supports the Science Advisor to the Prime Minister in various endeavours. Over the next five years, MIGHT will be focusing on three major themes - energy, mobility and cross-cutting convergence technologies as identified by Foresight studies. This sectoral focus is based on thematic areas for future sustainability.

The focus for mobility is targeted at developing and enhancing the rail, maritime and aerospace sectors in the country. As for energy, the main idea is to leverage and expand on sectors such as biomass and solar within the nation. By assimilating cross cutting technologies in advanced materials, these five areas will create sustainable business models capable of driving Malaysia's future economy.

Programmes and activities will include building strategic partnerships and alliances, technology acquisition and nurturing, capacity building as well as strengthening the growth of these sectors through policy interventions and flagship programmes.

MIGHT will also continue to spur opportunities for Malaysia through Malaysian Foresight Institute and international linkages under MIGHT International, particularly the Global Science International Advisory Council (GSIAC). The GSIAC, initiated by the Prime Minister in 2010, is a part of an ongoing effort to transform Malaysia into a high-income economy through enhancing the country's capabilities in science and innovation. GSIAC is chaired by the Prime Minister and will guide the Science To Action (S2A) initiative recently launched in November 2013 - an effort that will enable Malaysia to sustain its growth beyond 2020. The S2A initiative aspiresto intensify the application of science and technology for industrial development, the people's well-being and improved governance of science, technology and innovation.

MESSAGES

Message from the Patron of MIGHT

YAB Dato' Sri Haji Mohd Najib Bin Tun Haji Abdul Razak
Prime Minister of Malaysia

Creating high income jobs where the people can benefit from a competitive economy and a better way of life are the raison d'être of the New Economic Model which I introduced in 2010. I want Malaysians, of all races and backgrounds, to benefit from a high-income economy through inclusiveness and sustainable activities that do not compromise our future generations.

Today, nations including Malaysia look towards science as a means of overcoming the challenges of the middle income trap. Scientific advances and technological innovation are important drivers of economic performance. The ability to create, distribute and exploit knowledge through science, technology and entrepreneurship has become a major source of competitive advantage, wealth creation and improvements in the quality of life.

This is why I instructed MIGHT through the Office of the Science Advisor to look into putting "Science to Action" or S2A Initiative in place. The S2A initiative is made up of three key components: Science to Industry, Science to Well-Being and Science to Governance. I strongly believe that the successful implementation of the many science, technology and industry programs will depend heavily on the close understanding and collaboration between the industry and the Government.

The S2A Initiative will be guided under the Global Science and Innovation Advisory Council (GSIAC) which I chair. GSIAC has been established to chart the country's future by engaging the best talents across the world from diverse fields such as government, industry, academia and the public, both local and international.

By 2020, I would like to see, through the implementation of the Science to Action Initiative, Malaysia being one

of the top ten countries in the Global Competitiveness Index and the Global Innovation Index respectively.

I would like to take this opportunity to congratulate MIGHT. Over the last 20 years, the organization has tirelessly advocates the advancement of high technology as a tool in nation building. In pursuing further technological development and economic growth, MIGHT has successfully benchmarked Malaysia with other countries that have exceled in science, technology and industry through the application of high technology and private-public partnership.

Together the Government and industry will strengthen its focus on promoting excellence in high technology and industrial development to bring about the desired results of becoming a stronger technological and industrialised nation.

As an initiative towards this objective, in 2013, Malaysia, through a joint effort between MIGHT and Malaysia Green Technology Corporation (MTGC) was commissioned to identify green technology applications for Malaysia the Green Technology Foresight 2030 (GTF2030).

YAB Dato' Sri Haji Mohd Najib Bin Tun Haji Abdul Razak
Prime Minister of Malaysia
Launching Ceremony for Science to Action (S2A)
in conjunction with MIGHT 20th Anniversary
(1 November 2013)

Message from the Chief Secretary to the Government of Malaysia

Tan Sri Dr Ali Bin Hamsa
Chief Secretary to the Government of Malaysia

As a nation, we are well underway on our journey towards becoming a high-income developed nation by the year 2020. As part of this journey, the Government has initiated a holistic transformation agenda, as outlined in the Government Transformation Programme 2.0 (GTP 2.0) and the Economic Transformation Programme (ETP). In order to achieve the Key Performance Indicator (KPI) under these programmes, the Government had also adopted and implemented the National Blue Ocean Strategy (NBOS). Through NBOS, we are implementing high impact, low cost initiatives that are rapidly executed through strategic collaboration in order to realise Vision 2020.

However, in our journey towards becoming a high-income developed nation by the year 2020, many challenges abound. In responding to these challenges, there is a need for the Government's delivery system to continuously improve and enhance its competitiveness. This can be achieved by leveraging on the application of various technologies, and with a public service that is continuously improving. In this regard, the public service is transforming to become more adaptable, responsive, proactive, accountable and efficient in implementing policies, and ultimately, meeting the rakyat's expectations.

In developing various technologies and instilling innovative cultures to keep up and remain competitive alongside other developed nations, MIGHT as the backbone of Malaysia's high technology development, have been tasked to implement the plans and initiatives outlined under the various transformation plans formulated by the Government. Realising the importance of science in the overall technology development and innovation has led to the launch of Science to Action (S2A), an initiative championed by MIGHT to further promote the profile of science to greater heights.

With the rapid change of technology and with every milestone achieved, the tasks ahead of us will be even more challenging and demanding. In preparing the nation for a bigger quest, both the public and private sectors need to empower each other to transform Malaysia to achieve Vision 2020, and beyond. I am confident that MIGHT's distinctive role as a consultative platform that brings together the Government and industry, as well as nurturing technologies for strategic industries, will result in the building of a resilient and high-income developed nation. God willing, our ambitions will be realised.

Tan Sri Dr Ali Hamsa
Chief Secretary to the Government of Malaysia

Message from the Joint Chairman (Government) of MIGHT

Prof Tan Sri Zakri Abdul Hamid
Science Advisor to the Prime Minister of Malaysia

The year 2013 marks 20 years since MIGHT has been established. Since then the high technology industry has very volatile. The world is in the midst of several epic transitions. Economic growth patterns, the geopolitical landscape, and our planet's ecosystem are all undergoing radical, simultaneous transformations, generating anxiety and, in many places, turmoil. The world is undergoing a new industrial revolution-w'the Knowledge Revolution' - fuelled by the pace of technological change. Research and Development (R&D) remains at the heart of scientific and technological progress to increase productivity, develop growth opportunities in emerging markets and create knowledge-driven competitive advantage.

Science is more than just a tool in advancing the cause of nations. Groundbreaking advances are harnessed to revitalise economy and to transform and improve the health and wellbeing of society. Immediate global challenges such as climate change as well as food, water, health and energy security which feature highly on the agenda need to be met by utilising science and identifying sustainable solutions.

Science will soon play an even more pivotal role in the world's knowledge-driven economies; with a highly increasing number of countries investing in the industry. The 'scientific superpowers' -- USA, Western Europe and Japan -- are finding their positions challenged by China, Brazil, India and South Korea, all of which are set to assert themselves even further, along with other emerging nations in the Middle East, Southeast Asia, North and South Africa, middle-ranking industrial countries such as Canada and Australia, and some smaller nations of Europe.

In order to achieve a developed nation status, Malaysia cannot afford to be left behind in science and technology and it is imperative to stimulate the country's science capabilities even further to meet its high income aspirations. Fresh ideas and game-changing strategies will subsequently create wealth and jobs for the nation. In 2013, Malaysia has made an allocation of RM600 million for R&D in research universities alone -- part of a total investment of 1.07 per cent of its GDP on R&D. The figure is still relatively lower by industrialised and developed countries standard but almost double the developing country average of less than one per cent.

Prime Minister Datuk Seri Najib Tun Razak is fully aware of the essential role science holds in fueling the nation's economy. He has directed the Office of the Science Advisor to undertake the Science to Action (S2A) initiative through MIGHT as the implementing agency. Prime Minister Najib strongly believes that the successful implementation of the science, technology and industry programmes will depend heavily on a close understanding and collaboration between industry and government.

S2A, an initiative to intensify the application of scence and technology for industry development,

peple's well-being as well as governance of science, technology and industry, is in alignment with the New Economic Model introduced in the year 2010. Putting our act together is the key success factor for S2A initiatives. This requires commitments of all parties, both the public and the private sectors, academia institutions and society at large. The global challenges and experiences in the past 20 years have given MIGHT the understanding on how Malaysia should develop in the area of high technology using our own strengths and competitiveness. In our quest to become a developed nation by the year 2020, members of MIGHT are urged to participate in the S2A initiative three key components namely: Science to Industry, Science to Well-Being and Science to Governance.

Ultimately, the outcome of the S2A Initiative will be proven through the creation of new jobs, greater wealth and a strengthening of Malaysia's competitiveness in the international markets, as measured by the Global Competitiveness and Global Innovation Indices. The Prime Minister's vision is for Malaysia to be ranked among the top 10 countries in both areas.

Moving ahead, MIGHT must continue to nurture the growth of new technology based companies, provide a favourable environment for entrepreneurs and corporations to venture and invest in high technology based undertakings, and build a capacity to meet local needs and creating opportunities for the export of products and services. On behalf of MIGHT members, Board of Directors and management of MIGHT, I also wish to take this opportunity opportunity to thank the Prime Minister for his guidance, wisdom and vast insights. In addition to that, I wish to thank the Government for its continued support and commitment. Our deep appreciation goes to the Prime Minister's Department, all the ministries and agencies, the Chief Secretary to the Government, YBhg Tan Sri Dr Ali bin Hamsa, my co-chairman, YBhg Tan Sri Datuk Dr Ahmad Tajuddin Ali, and to my fellow members of the Board.

Lastly, I place on record my appreciation to the management and staff of MIGHT for delivering another successful year.

Prof Tan Sri Zakri Abdul Hamid
Science Advisor to the Prime Minister of Malaysia

Message from the Joint Chairman (Industry) of MIGHT

Tan Sri Datuk Dr Ahmad Tajuddin Ali
Chairman, UEM Group Berhad

2013 commemorates the twentieth anniversary for MIGHT. This major milestone was celebrated in distinct fashion at a gala dinner graced by His Honorable Dato' Seri Idris Jusoh, the Minister of Education II, who was there to represent The Right Honorable Dato' Seri Najib Abdul Razak, the Prime Minister of Malaysia. The event was also attended by the leading figures from the government, captains of the industry and various other dignitaries, foreign and domestic. During the event that evening, highlights of MIGHT achievements were shown, drawing expressions of surprise and amazement from the attendees. For those of us who have been a part of MIGHT for so long, it feels that the many things done at MIGHT are just ordinary whereas to many others out there, they are obviously quite exceptional.

As this is my second tenure as Joint-Chairman of MIGHT representing the industry, I may be somewhat prejudiced, due to my long association with MIGHT, in my assessment of its achievements. Nevertheless, I just wish to put on record that over the years, MIGHT has in many ways delivered its mandate and has been effective as a platform for government-industry interaction.

My message in this annual report is not the precise setting to convey all the merits of MIGHT. I will just take this opportunity to highlight MIGHT's role as an industry facilitator, which in my view, is indeed a strategic responsibility. There are very few other agencies which are consultative and proactive in terms of serving the needs of its stakeholders and in particular, industry. MIGHT provides that added touch and takes that one step further – thus making a significant difference - in making things happen. MIGHT works with the various arms of government: ministries, departments and agencies, engaging all concerned parties, simplifying and bridging both parties to enable effective delivery of programs, projects and initiatives, ensuring a positive impact for the development of the nation.

Arising from the reaction received on MIGHT's achievements thus far, it is evident that there is a need for better communication on the part of MIGHT on its activities and achievements. In the legal circles it is often said that "justice must not only be done, it must also be seen to be done". Perhaps, in the case of MIGHT: The job must not only be done, it must be seen to be done and for that, it must be well communicated to all our stakeholders.

Therefore, MIGHT would need to display itself in a more proactive manner, to share with all its stakeholders, especially the industry, all the activities and benefits that MIGHT, as an organization, as an agency under the purview of the Prime Minister's Department, that it is able to deliver and has delivered. Indeed MIGHT needs to re-engineer its communications approach to not simply cover its work activities but to also advertise and publicize itself more effectively.

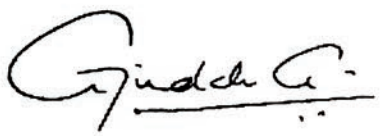
I believe what is communicated through this annual report must then be also be disseminated through various media channels and outlets. This need to reach out is to ensure MIGHT programmes and activities are well understood and be of benefit to as many stakeholders as possible.

Looking at the organization internally, I call on MIGHT to be vigilant and to build its resilience in facing the internal and external challenges. Serious effort must be made for the organization and its staff to develop innate competitiveness through capacity and capability enhancement.

As we progress towards Vision 2020, we have to acknowledge that the target year for the nation is just around the corner. With the New Economic Model in place and the National Transformation Programs in full bloom, MIGHT has its work cut-out. MIGHT must double its efforts and increase its undertakings to create more prospects as well as seize the opportunities presented with full confidence and conviction. MIGHT must do what it takes to deliver its mandate, synergize with all available development instruments whether public or private, so as to fulfill its role and do its part in ensuring the achievement of the National Vision.

To do all these, MIGHT relies on the support of its members, government and industry. Here, I would like to acknowledge the support we have receive from our members, especially our lead members: PETRONAS, SIME DARBY, TM BERHAD & BANK PEMBANGUNAN for their continued support of our programmes and activities. Their continued involvement has provided MIGHT with the required insights in setting the strategic direction for the development of high technology industries in Malaysia.

I would also like to thank my co-chair, YBhg Dato' Seri Dr. Zakri Abdul Hamid and the rest of the Board members of MIGHT as well as all management and staff of MIGHT for their whole hearted support and commitment to the national high technology agenda.



Tan Sri Datuk Dr Ahmad Tajuddin Ali
Chairman, UEM Group Berhad

Message from the President and Chief Executive Officer

Dr Mohd Yusoff Sulaiman
President and Chief Executive Officer

Greetings to all members, partners and employees of MIGHT. The year 2013 marked our 20th Anniversary and it has been a long road for all of us. We are indeed fortunate for the continued unwavering support, both financially and non-financially, from the Government as well as the private sector in driving MIGHT to become the preferred organisation to catalyse and facilitate the development of high technology in the country.

As the President and CEO of MIGHT, my role and responsibilities comprise the entire Group including MIGHT, its subsidiaries and associate companies. MIGHT, the holding company, acts as a think-tank and partnership organisation that brings all the stockholders together to strategise the nation's high technology industry development. In 2013, we have successfully identified and implemented selected technologies and developed new models for the growth of the high technology industry.

MIGHT Technology Nurturing (MTN), as our investment arm, is a platform to nurture new businesses in emerging technologies such as sensor technology and nano-technology. We build partnerships with start-up companies to provide financial and technical support and assistance, and cooperate with larger corporations in transforming national initiatives into businesses to reduce Government expenditure especially during the research and development phase.

I am pleased to report of our positive Group financial performance for 2013 with a surplus of RM2.5m. It is important to note that our 'true' Key Performance Indicators (KPIs) are not measured by the amount of surplus, but rather the impact we made in technological and industrial development. However, our finances must be managed in the most responsible and prudent manner, and to remain in the black is essential.

With it being an election year 2013 was particularly busy for us, but we still pursued to develop and carry out existing and new projects. The highlight for 2013 was the launching of the Science to Action (S2A) Initiative by our Prime Minister, who is also the Patron of MIGHT, on 1 November 2013. The S2A Initiative, led by the Science Advisor with MIGHT as the implementing agency, is seen as the ultimate platform for the diffusion of science, technology and industry into the daily lives of Malaysians which will spur the nation's development beyond 2020. It has gained much momentum and received full support from the Economic Council chaired by the Prime Minister. We now have a dedicated team in MIGHT to promote S2A and realise its implementation.

The other key event in 2013 was the 3rd Global Science and Innovation Advisory Council (GSIAC) meeting in San Francisco participated by the world's best of the best in science, technology and industry for a dialogue with our Prime Minister. A new session where successful technology-based companies shared their experiences and best practices was introduced during the

meeting. The Prime Minister and the delegation members from Malaysia have acknowledged that GSIAC, since its establishment has been a very productive and excellent platform for generating new thinking, getting the feel of the latest in business and technology trends, addressing sustainability issues, and most importantly, creating new business and personal networks.

Through MIGHT International, the search for new business opportunities for local high technology industry players continues beyond our borders. In partnership with PEMANDU, MIDA and MATRADE; we assessed the potential of marketing our companies and technology to Myanmar, Iran, Mauritius, Italy, Spain, France, Japan and South Korea, to name a few. We brought along our members and partners to leverage on the ability of MIGHT to open doors of opportunities at the most highest and appropriate level.

Our industry intelligence has been successful in developing strategies for the aerospace, rail and shipbuilding / ship repair sectors which proved to be useful in providing insights and data for our offset programmes implementation. We worked closely with various ministries and agencies in particular MITI, KETTHA, MoED, MOSTI, EPU and PEMANDU, in aligning the interest of the private sector with the aspirations of the Government. Our emerging technology activities focused on green energy including solar and biomass, advanced materials and automation and robotics. In 2013, we have produced numerous strategy and policy reports including the Malaysia Biomass Roadmap, Future Rail 2030, Solar Industry Report 2013/14 and the Green Technology Foresight. At our subsidiary level, we have created new and improved training and education programmes for our high technology companies, SMEs and entrepreneurs, through MIGHT-METEOR Advanced Manufacturing (MMAM). We have also strengthened our position as the preferred solution provider for industry players, e.g. Boustead and Shin Yang.

Government agencies and private companies have actively approached Senstech, our sensor technology company for their RFID solutions. We truly hope that these preliminary contacts will turn to actual business in 2014. In early 2014, Senstech supplied RFID tags for the Para-ASEAN Games in Myanmar and received wide publicity and endorsement. Meanwhile, our investment in biotechnology and nanotechnology, under A-Bio, is beginning to yield positive results as the investee companies move into full production and market their products.

Overall, 2013 has been an excellent year for MIGHT. I would like to thank all of you, our Patron, Honorary Advisor, Joint Chairmen and Directors, members and partners for your guidance and continuing support. To the management and employees of MIGHT, thank you for the teamwork, hard work and support. Together, we make it happen.

Dr Mohd Yusoff Sulaiman

President and Chief Executive Officer


MiGHT
Malaysian Industry-Government Group for High Technology
LAUNCHING CEREMONY FOR
SCIENCE TO ACTION (S2A) PROGRAMME
BY
YAB DATO' SRI MOHD NAJIB TUN HAJI ABDUL RAZAK
INDUSTRY INSIGHTS

CORPORATE INFORMATION

Corporate Information

REGISTERED OFFICE

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59200 Kuala Lumpur

PLACE OF BUSINESS

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62592 Putrajaya

COMPANY SECRETARY

AAJ Management Services Sdn Bhd
Suite C-5-4, Wisma Goshen Plaza Pantai
Jalan Pantai Baharu
59200 Kuala Lumpur

AUDITOR

BDO
12th Floor, Menara Uni-Asia
1008, Jalan Sultan Ismail
50250 Kuala Lumpur

Corporate Structure

Patron

YAB Dato' Sri Mohd Najib Bin Tun Haji Abdul Razak
Prime Minister

Honorary Advisor

Tan Sri Dr Ali Bin Hamsa
Chief Secretary to the Government of Malaysia

Joint Chairman

Prof Tan Sri Zakri Abdul Hamid
Science Advisor to the Prime Minister

Tan Sri Datuk Dr Ahmad Tajuddin Ali
Chairman, UEM Group Berhad

Board of Directors

Management of MIGHT

President and CEO

Dr Mohd Yusoff Sulaiman

Senior Vice President

Ms Norida Abdul Rahman

Emerging Technology | **Technology Nurturing**

MiGHT Technology Nurturing

Senior Vice President

Datuk Ir Kamarulzaman Hj Zainal

Industry Intelligence | **Offset Management**

TDA Technology Depository Agency

Senior Vice President

Dr Raslan Ahmad

MIGHT International | **GSIAC**

MiGHT INTERNATIONAL

Global Science and Innovation Advisory Council MALAYSIA

Senior Vice President

Mr Rushdi Abdul Rahim

Malaysian Foresight Institute | **Science To Action**

myForesight®

SCIENCE to ACTION

Board of Directors

MS SAROJINI DEVI MARUTHAMUTHU
Ministry of Finance (MOF)

DATO' N. VASUDEVAN
Ministry of International Trade and Industry (MITI)

DATO' SRI DR HALIM SHAFIE
Telekom Malaysia Berhad (TM)

TAN SRI DATO' SERI AHMAD RAMLI MOHD NOR
Boustead Heavy Industries Corporation Berhad

DATO' MOHD ZAFER MOHD HASHIM
Bank Pembangunan Malaysia Berhad

DATO' DR ROSLI BIN MOHAMED
Ministry of Science, Technology and Innovation (MOSTI)

DATO' DR MOHAMED ARIFFIN ATON
Core Competencies Sdn Bhd

PROF TAN SRI ZAKRI ABDUL HAMID
Joint Chairman of MIGHT (Government)

DATUK KHALILUR RAHMAN EBRAHIM
System Consultancy Services Sdn Bhd

MS AZIZAH BINTI HAMZAH
Economic Planning Unit (EPU), Prime Minister's Department

TAN SRI DATO' SERI MOHD BAKKE SALLEH
Sime Darby Berhad

MR MD ARIF MAHMOOD
Petroliam Nasional Berhad (PETRONAS)

TAN SRI DATUK TEE HOCK SENG
BinaPuri Holdings Berhad

DR MOHD YUSOFF SULAIMAN
Malaysian Industry-Government Group for High Technology

TAN SRI DATUK DR AHMAD TAJUDDIN ALI
Joint Chairman of MIGHT (Industry)

Alternate Directors

1 **MR SEE CHEE KEONG**
(Alternate Director to Dato' N. Vasudevan)

2 **MR MATTHEW TEE KAI WOON**
(Alternate Director to Tan Sri Datuk Tee Hock Seng)

3 **DR FARID MOHAMED SANI**
(Alternate Director to Dato' Sri Dr Halim Shafie)

4 **DATO' SERI ABD WAHAB MASKAN**
(Alternate Director to Tan Sri Dato' Seri Mohd Bakke Salleh)

5 **MS AFIDAH BINTI MOHD GHAZALI**
(Alternate Director to Dato' Zafer bin Mohd Hashim)

6 **DATO' DR MOHD AZHAR HJ YAHAYA**
(Alternate Director to Dato' Dr Rosli Mohamed)

Associates

1) DATIN PADUKA DR KHATIJAH YUSOFF

2) MR K. NAGULENDRAN

3) TUAN HAJI HABIBUR RAHMAN IBRAHIM

Board of Directors' Meetings 2013

- 17 January 2013

  59th Board of Directors' Meeting
- 27 May 2013

  60th Board of Directors' Meeting
- 6 September 2013

  61st Board of Directors' Meeting

Senior Management Team

Dr Mohd Yusoff Sulaiman
President and Chief Executive Officer

Ms Norida Abdul Rahman
Senior Vice President

Datuk Ir Kamarulzaman Hj Zainal
Senior Vice President

Dr Raslan Ahmad
Senior Vice President

Mr Mohd Zakwan Mohd Zabidi
Vice President

Mr Nik Ahmad Faizul Abdul Mallek
Vice President

Mr Rushdi Abdul Rahim
Senior Vice President

Major (R) Zailani Safari
Vice President

MIGHT's 18th Annual General Meeting

MIGHT's 18th Annual General Meeting (AGM) was convened on 27 June 2013 at Kuala Lumpur Golf & Country Club and chaired by Joint-Chairman of MIGHT, Tan Sri Zakri Abdul Hamid. The AGM was attended by 84 members' representatives comprising senior government, diplomatic and university officials as well as representatives of the private sector.

A briefing on MIGHT's activities was given by the President and Chief Executive Officer of the company following an event highlighting MIGHT's involvement in developing green technology , i.e. the launching of the National Green Technology Foresight 2030 (GTF2030) in a joint effort with Ministry of Energy, Green Technology and Water (KeTTHA) and its agency, Malaysian Green Technology Corporation (MGTC). GTF2030 covers nine sectors, i.e. Energy, Building, Transport, Manufacturing, ICT, Water, Waste, Agriculture and Forestry. The event was officiated by Datuk Loo Took Gee, the Secretary General of KeTTHA, and was witnessed by 191 guests. Among the VIPs presents during the launching were Prof. Datin Paduka Dr. Khatijah Mohd Yusoff, Deputy Secretary General of Ministry of Science, Technology and Innovation (MOSTI); Azhar Noraini from Economic Planning Unit (EPU) and Azrin Mohamed Ali from MCTC.

During the AGM, the Audited Accounts of the Company for the year ending 31 December 2012 together with the Reports of the Directors and Auditors thereon were received and endorsed by the members. The members had also re-appointed two representatives from MIGHT's lead members, Dato' Mohd Zafer Mohd Hashim of Bank Pembangunan Berhad and Tan Sri Ramli Mohd Nor of Boustead Holding Bhd who previously retired under Article 44 of the company's Articles of Association.

Similarly, Messrs. BDO Binder were re-appointed as the Auditors of the Company for the ensuing year until the next AGM.

MIGHT Membership

Malaysian Industry-Government Group for High Technology (MIGHT) is an independent, non-profit organisation supported by members of both the public and private sectors. MIGHT offers a collaboration platform between the public and private sectors in driving the nation's high technology industry. By providing a network of local and global linkages for members to capitalise on through synergistic partnerships, MIGHT is Malaysia's own unique organisation that undertakes strategic alliances and performs analysis on the high technology industry and related business opportunities.

MIGHT members consist of key government ministries and agencies, publicly listed companies as well as small and medium enterprises (SMEs), universities, research institutions, non-governmental organisation (NGOs) and multinational corporations (MNCs).

Strategic benefits of MIGHT membership:

- Global exposure to strategic technologies and businesses
- Participate in providing information to formulate national strategic plans for high technology industry sectors
- Opportunities for collaboration and partnership in technology and business
- Participate in business forums, consultations, seminars, dialogues and global missions
- Participate in collective technology efforts beyond the resources of individual organisations

Four categories of MIGHT Membership:

- Lead Members - Selected Malaysian key industry players
- Permanent Members - Government organisations or government controlled organisations, corporatised organisations, research institutes and universities
- Ordinary Members - Organisations from the industry that are composed of companies regitered in Malaysia and owned by Malaysian citizens
- Associate Members - Non-Malaysian or internationally controlled companies that are either registered in Malaysia or abroad

Statistics of MIGHT Members

Companies	Nos
Lead Members	4
Ordinary Members	56
Permanent Members	33
Associate Members	4
Total	97

List of Members

PERMANENT MEMBERS	
1	Economic Planning Unit (EPU)
2	Energy Commission
3	Forest Research Institute of Malaysia (FRIM)
4	Institute of Strategic and International Studies (ISIS)
5	Kulim Technology Park Corporation Sdn Bhd
6	Majlis Amanah Rakyat (MARA)
7	Malaysia External Trade Development Corporation (MATRADE)
8	Malaysian Administrative Modernisation and Management Planning Unit (MAMPU)
9	Malaysian Agricultural Research and Development Institute (MARDI)
10	Malaysian Industrial Development Authority (MIDA)
11	Malaysian Maritime Academy Sdn. Bhd. (MMA)
12	Malaysian Nuclear Agency (Nuclear Malaysia)
13	Malaysian Palm Oil Board (MPOB)
14	Malaysian Rubber Board (MRB)
15	Maritime Institute of Malaysia (MIMA)
16	MIMOS Berhad
17	Ministry of Agriculture and Agro-Based Industry
18	Ministry of Defence
19	Ministry of Finance
20	Ministry of Home Affairs
21	Ministry of International Trade and Industry (MITI)
22	Ministry of Science, Technology and Innovation (MOSTI)
23	SIRIM Berhad
24	Technology Park Malaysia Corporation Sdn Bhd
25	Universiti Kebangsaan Malaysia (UKM)
26	Universiti Malaya (UM)
27	Universiti Putra Malaysia (UPM)
28	Universiti Sains Malaysia (USM)
29	Universiti Teknikal Malaysia Melaka (UTeM)
30	Universiti Teknologi Malaysia (UTM)
31	Universiti Teknologi MARA (UiTM)
32	Universiti Utara Malaysia (UUM)

LEAD MEMBERS	
1	Bank Pembangunan Malaysia Berhad
2	Petroliam Nasional Berhad (PETRONAS)
3	Sime Darby Berhad
4	TM Berhad

Associate Members	
1	BAE Systems
2	Rolls-Royce International Limited
3	Thales Malaysia Sdn Bhd
4	The University of Sheffield

ORDINARY MEMBERS	
1	Advanced Air Traffic Systems (M) Sdn Bhd
2	AmBank Group
3	Aron Sdn Bhd
4	Asian Composites Manufacturing Sdn Bhd
5	Berjaya Group Berhad
6	Bina Puri Holdings Berhad
7	Boustead Heavy Industries Corporation Bhd (BHIC)
8	CCM Duopharma (M) Sdn Bhd

9	Celcom Axiata Berhad
10	Clara International Beauty Group
11	Composites Technology Research Malaysia Sdn Bhd (CTRM)
12	Core Competencies Sdn Bhd
13	Destini Prima Sdn Bhd
14	DOMINANT Semiconductors Sdn Bhd
15	DRB-HICOM Berhad
16	Edaran Otomobil Nasional Berhad (EON Berhad)
17	Gas Malaysia Sdn Bhd
18	Global Rail Sdn Bhd
19	HeiTech Padu Berhad
20	Kay Marine Sdn Bhd
21	Keretapi Tanah Melayu Berhad
22	Khazanah Nasional Berhad
23	Kuala Lumpur Kepong Berhad
24	Limkokwing Integrated Sdn Bhd
25	Malaysia Airlines
26	Malaysia Airports Holdings Berhad
27	Malaysia Debt Ventures Berhad
28	Malaysian Biotechnology Corporation Sdn Bhd
29	Malaysian Technology Development Corporation Sdn Bhd (MTDC)
30	Matrix Power Network Sdn Bhd
31	Maxis Communications Berhad
32	MMC Corporation Berhad
33	Muhibbah Engineering (M) Bhd
34	National Aerospace and Defence Industries Sdn Bhd
35	NCM Global Sdn Bhd
36	Perbadanan Usahawan Nasional Berhad (PUNB)
37	Pernec Corporation Berhad
39	Perusahaan Otomobil Kedua Sdn Bhd (PERO-DUA)
40	Perwaja Steel Sdn Bhd
41	Pesaka Astana (M) Sdn Bhd
42	Pharmaniaga Berhad
43	PNB Equity Resource Corporation Sdn Bhd
44	PROTON Holdings Berhad
45	Puncak Niaga (M) Sdn Bhd
46	Ranhill Utilities Sdn Bhd
47	RHB Bank Berhad
48	Ruag Aviation Malaysia Sdn Bhd
49	Sapura Group
50	Sarawak Energy Berhad (SEB)
51	Scomi Engineering Berhad
52	Silterra Malaysia Sdn Bhd
53	System Consultancy Services Sdn Bhd
54	Tenaga Nasional Berhad (TNB)
55	UEM Group Berhad
56	Zetro Aerospace Corporation Sdn Bhd


MiGHT
Malaysian Industry-Government Group
for High Technology
18th
AUDITOR

MAJOR ACTIVITIES


GREEN TECHNOLOGY
FORESIGHT 2030
27 June 2013
In Collaboration With


KeTTHA
KEMENTERIAN TENAGA, TEKNOLOGI HIJAU DAN AIR
GREEN TECHNOLOGY FORESIGHT 2030
27 June 2013
In Collaboration With
MiGHT
myForesight
Malaysian Foresight Institute
GreenTech


TECHNOLOGY FORESIGHT
27 June 2013


Emerging
Technology
& Technology
Nurturing

Emerging Technology

Green Technology

Green Technology has immense commercial potential and currently, there is tremendous interest worldwide to utilise it as a tool for economic growth, apart from considerations of sustainable development and environmental protection.

GREEN TECHNOLOGY FORESIGHT (GTF) 2030

Environmental and climate problems are widely acknowledged as serious problems facing the world today. In line with the above announcement on Malaysis's commitment to reduce its carbon footprint during COP15 , in 2013, MIGHT was commissioned by the Ministry of Energy, Green Technology and Water (KETTHA) to undertake the National GTF2030 as a joint effort with its agency, Malaysian Green Technology Corporation (MGTC).

The GTF2030 primarily aims to identify green technology applications as part of the endeavor to 'green' nine important sectors, namely energy, transportation, waste, water, manufacturing, building, information and communications technology (ICT), agriculture and forestry in efforts to reduce carbon emission and address environmental concerns.

The GTF2030 commenced in April 2013 and has recommended an overall green vision for the nation by drawing together green technology applications from

> *"Malaysia is adopting an indicator of a voluntary and conditional reduction of up to 40 per cent in terms of carbon dioxide emissions intensity of GDP (gross domestic product) by the year 2020 compared to 2005 levels."*
>
> *YAB Dato' Sri Mohd Najib Bin Tun Haji Abdul Razak*
> *United Nations Climate Change Conference (COP15), Copenhagen, Denmark*
> *(17 December, 2009)*

the nine sectors. Each sector plays an important role in addressing future issues and challenges with regard to the long term sustainability of the national economy, social well-being and environmental stability of the country.

The highlights of the exercise are as follows:

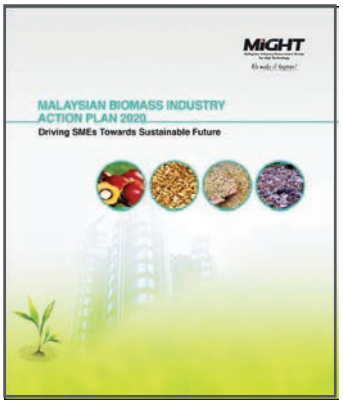
- The foresight exercise has been able to establish a national vision and goals for green technology in 2030, based on scenario building approach.
- Nine sectorial visions and long-term strategies were formulated towards achieving the national vision and goals.
- Nine sets of prioritised green technology

Sectors	Green Technology Application
Energy	• Mercury removal from coal • Methanation of CO2 • Co-generation • Tri-generation • Integrated Gasification Combined Cycle (IGCC) • Low head turbine for hyroelectricity • Biomass/waste-to-energy technology • Solar energy technology • (Photovoltaics (PV) and thermal) • Power plant supporting technology • Efficient transmission technology • Smart-grid • Storage Technology • Fuel Cell
Waste	• Integrated waste collection, treatment and disposal for organic waste, ensuring no organic waste ends up in landfills • Extended produce responsibility focusing of difficult and new waste streamsNational waste grid to promote the availability and viability of treatment systems

Sectors	Green Technology Application
Transport	• Transport-land use planning tools • Advanced Public Transport System • Open Road Tolling • Automated traffic enforcement e.g. Weigh-in-Motion System • Clean Vehicle (energy efficient, low emission)
Manufacturing	• Manufacturing • Additive Manufacturing • Automa;tion in Manufacturing Digital Manufacturing • Remanufacturing • Green Electronics • Green Photonics • Green Nanotechnology • Industrial Biotechnology • Green Composite Materials • Advanced Polymer Materials • Energy Scavenging • Combined Heat and Power • Waste to resources

Sectors	Green Technology Application
Water	• Flood mitigation • Catchment area protection and land management • Ecosystem balancing and biodiversity • Water resources availability forecasting • Water treatment related technology • Water storage and distribution related technology • Efficient usage of water for residential and big consumer • Municipal and industrial wastewater treatment • Cleaner production
Building	• Energy efficient appliances • Wider usage of green building rating tools • Insulation technology • Active and passive design • Green building material • RE integration • Facilities management

Biomass



As countries aim to increase their targets for renewable energy, biomass has been identified as one of the major resources to meet these growing 'green' aspirations. Non-energy use of biomass is also increasing in importance, primarily due to the economic potential of biomass for industrial production that generates higher income than the utilisation of biomass alone for energy.

Programme and the Malaysian Biomass Industry Confederation (MBIC), to promote higher utilisation of biomass by local industries especially SMEs.

In utilising the municipal waste, the National Solid Waste Management Department and MIGHT has developed a concept proposal on Integrated Urban Renewable

"The biomass industry in Malaysia is growing rapidly and has the potential to tap into local and regional biomass resources, attracting new investments, technologies and talents. Four sub-industries that are able to contribute significantly to wealth creation for the nation have been identified, namely; Bio-Energy, Green Chemical, Bio-Fertilizer and Bio-Composite/Material."

Biomass industry's potential of being 'green' also holds value. The country's mission to reduce carbon emission by 40% by 2020 is seemingly impossible unless there is future development in the biomass industry.

Viewing biomass as a lucrative potential and to ensure MIGHT's visibility in the industry, biomass is included as one of MIGHT's focus areas under Emerging Technology. MIGHT has produced the 'Malaysian Biomass Action Plan (MBAP) 2020' and the 'Biomass Economic Benchmarking Report on the Potential Value Creation and Resource Efficiency of Biomass', with the support of key sponsors/partners namely, the EU-Switch-Asia

Energy Plants (IUREP) that was approved for implementation by the Malaysian Green Technology and Climate Change Council (MGTCC), chaired by the Prime Minister.

Malaysian Biomass Industry Action Plan 2020 - Driving SMEs Towards a Sustainable Future

Malaysian Biomass Industry Action Plan 2020 (MBIAP) is an industry-wide initiative led by MIGHT to spearhead the nation's biomass industry towards high value creation and the adoption of sustainable production practices in Malaysia.

MBIAP 2020 is the culmination of four years' activities by MIGHT, undertaken jointly with the Biomass-SP (European Union-Malaysia Biomass Sustainable Production Initiative), a project funded by the EU SWITCH-Asia programme from March 2010 to October 2013. SWITCH-Asia is a regional environment programme aimed at promoting the adoption of Sustainable Consumption and Production (SCP) principles among SMEs and consumer groups in Asia.

The biomass industry in Malaysia is growing rapidly and has the potential to tap into local and regional biomass resources, attracting new investments, technologies and talents. Four sub-industries that are able to contribute significantly to wealth creation for the nation have been identified, namely; Bio-Energy, Green Chemical, Bio-Fertilizer and Bio-Composite/ Material.

MBIAP 2020 focuses on small and medium enterprises (SMEs) as the main stakeholders capitalising on the biomass industry as a new platform to venture into and grow as a business. Key strategies proposed in MBIAP 2020 include smart utilisation of biomass for high value production via commercialisation and scaling-up of local know-how and expertise and setting of market-focused Biomass Smart Hubs. Unlocking biomass feedstock for downstream utilisation via optimising the efficiencies of resource utilisation upstream at the plantation and milling stage will also serve the MBIAP 2020 objectives.

Malaysia will be positioned as the regional and international biomass hub via establishing the country as the focal point for internal and external biomass stakeholders in several aspects such as trading, logistics, technology, engineering, equipment, standards development, investments and finance.

Biomass Benchmarking Report – Potential Value Creation for Commercial Utilisation of Biomass in Malaysia

A biomass benchmarking study was conducted to complement the MBIAP 2020 and provide a quantitative perspective of the potential economic value that can be generated from various commercial utilisations of the different types of biomass available in Malaysia. The study provides additional data and information to the Malaysian government, policy makers and researchers to determine the optimal ways to utilise biomass, as well as to formulate the right and effective policies to promote it.

Further quantitative data derived from the study conducted is also vital in discovering the best methods of promoting competing uses for biomass, optimum proportions needed to divert for renewable power generation, feedstock for 'green' chemicals production; as well as for utilisation by small and medium enterprises, entrepreneurs and rural communities to produce innovative products from biomass material.

KEY ACTIVITIES:

MBIAP Stakeholders Engagement

MBIAP stakeholders' engagement was held on 24 June 2013 with participation from around fifty stakeholders ranging from biomass industry players, government entities and financial institutions. The objective of the engagement was to obtain feedback, opinions and suggestions from biomass stakeholders for MBIAP 2020. The outcome and recommendations from the workshop were of significant importance for MBIAP 2020's development.

Biomass Asia Conference 2013

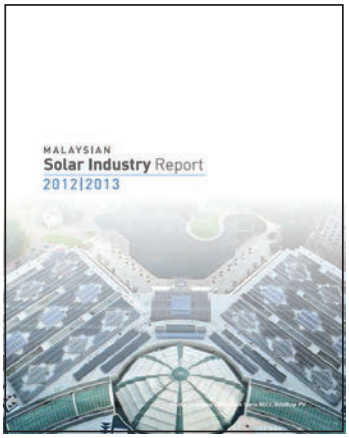
The Biomass Asia Conference was held on 20 May 2013 as an ongoing initiative between Biomass-SP and the Malaysian Biomass Industries Confederation (MBIC) to encourage knowledge sharing and exchange, as well as to promote innovation and sustainable production among stakeholders in the local and international biomass industry.

Biomass SME Recognition Programme & Knowledge Exchange Seminar

Successful biomass SMEs who participated in the EU-Malaysia Biomass Entrepreneurs Nurturing Programme (EUM-BENP), the flagship initiative of the project, shared their experience and best practices incorporating the sustainable production (SP) concept in their business operations as Green Entrepreneurs during the seminar that was held on 12 November 2013 at Impiana KLCC hotel, Kuala Lumpur.

MIGHT President & CEO presented the MBIAP 2020 to the MBIC as part of the industrial intelligence exchange and on-going consultations with SMEs and relevant stakeholders throughout the project life cycle.

SOLAR



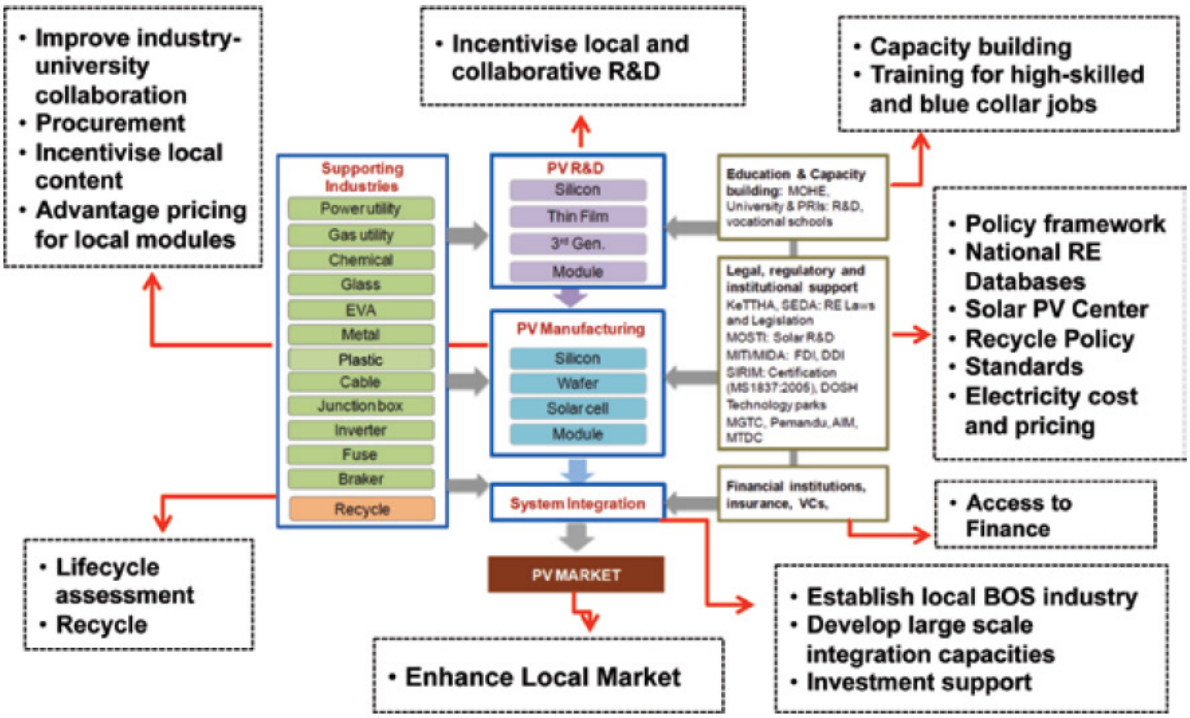
The Solar Photovoltaic (PV) industry in Malaysia has strong economic development potentials based on the presence of existing electronics industries and the solar industry's value chain. While the intense global competition has continued to pose challenges to somesegments of the industry, specific areas in the solar industry value chain are increasing steadily, spurred by strong policy support from the government. With a total investment of RM25.8 Billion (Source: MIDA), and jobs creation of about 12,000, coupled with an additional 6,000 to 8,000 indirect employment opportunities from supporting industry clusters, the solar industry is now becoming a key emerging industry in Malaysia.

"In 2013, MIGHT with the support of the Sustainable Energy Development Authority Malaysia (SEDA) and the Malaysian Investment Development Authority (MIDA), published the "Malaysian Solar Industry Report 2012/2013" that consolidated the solar PV industry ecosystem in Malaysia."

Based on this potential to reap greater economic benefits for the country, MIGHT has positioned Solar as a key high technology industry to be further developed with a strategic long term integrated approach, in line with its mandate to advance the development of the high technology industry agenda in Malaysia. The focus on the solar industry as a key emerging high technology area takes into consideration the high impact outcome of this sector with respect to contribution to foreign investments, GNI and job creations.

In 2013, MIGHT with the support of the Sustainable Energy Development Authority Malaysia (SEDA) and the Malaysian Investment Development Authority (MIDA), published the "Malaysian Solar Industry Report 2012/2013" that consolidated the solar PV industry ecosystem in Malaysia.

The Solar Industry Report also identified issues and challenges based on the input from both the government and industry stakeholders as depicted in the diagram below.



Source: MIGHT (MIGHT survey and analysis of Reports by KETTHA, MIDA, SEDA, MOSTI, EPU and Pemandu)

Dialogue with Malaysian Photovoltaic Manufacturer Association

Visit to First Solar Manufacturing Plant in Kulim High Technology Park

MIGHT, in a joint effort with relevant authorities and stakeholders including KETTHA, SEDA, MITI, MIDA, MOSTI, key industry associations namely the Malaysian PV Industry Association (MPIA), Malaysian PV Manufacturers Association (MPMA) and the AMCHAM-Malaysian Alternatives and Renewable Industry (MARI), is developing a 'Malaysia Solar Roadmap 2015-2030' that aims to provide short-to-long-term strategies and action plans for the advancement of the industry.

As preliminary input to the roadmap development, the Solar Industry Report has identified broad strategies to strengthen the solar industry ecosystem as follows:

(1) Stimulate and develop markets and applications for solar PV

(2) Localisation potential across the solar PV value chain and cluster

(3) Building industry capacity and capability

(4) Improve the supporting service system for the PV industry

(5) Human capital development and education

(6) Establish a solar industry roadmap to set industry direction and joint actions

ENERGY / POWER

"New areas of focus will entail new business models and market instruments such as solar farms, smart grids, integrated energy systems, clean coal and storage technologies."

MIGHT's involvement in energy/power is in line with the nation's aspiration to develop a high technology industry that would address long-term energy security issues and environmental concerns.

Started in 2013 through the Offset Program Management under the Technology Depository Agency, MIGHT will carry the role as domain experts and has also provided intervention through a few strategic studies under the Economic Planning Unit of the Prime Minister's Department (EPU) and KETTHA, namely the National Energy Policy 2050 and the GTF2030.

Moving forward, activities in catalysing future energy, renewables and green technology as well as advanced electronics will continue to be conducted through close collaboration with key government stakeholders, industry associations and academia. Focus will be on industry deepening, establishment of a comprehensive industry database, nurturing of local industry in niche segments, and fostering close collaboration between MNCs, local companies and universities/public research institutes. New areas of focus will entail new business models and market instruments such as solar farms, smart grids, integrated energy systems, clean coal and storage technologies.

Domain for Offset Management Programme

Manjung 5 Off-set Project-Track 3A-Development Of Hybrid & tual Simulator Distributed Control System (DCS)	MIGHT's offset contract is the procurement of a 'Distributed Control System (DCS)' simulator valued at RM10 million which will have two outcomes; i. Human Capital Development ii. Transfer of Technology Emerging Technology (ET) is involved in the study of the supporting industries.
Manjung 5 Off-set Project-Track 3B	Under Exploration Stage with Energy Commission & 1MDB
Clean Coal Energy Industry Development Plan	The Clean Coal Energy Industry Development Plan is to elucidate why the Clean Coal Energy Industry is an attractive industry in the ever-increasing complexity of coal utilisation owing to global warming and other environmental issues. It is also to encourage rapid progress in Clean Coal Energy Industry Development for Malaysia and the foundation of innovative clean coal utilisation systems.
Malaysia Energy Landscape	Focus on energy supporting industries.

Technology Nurturing

aBio

A-Bio Sdn Bhd (A-Bio) is a wholly - owned subsidiary of MIGHT Technology Nurturing Sdn Bhd and serves as the investment arm of MIGHT in Biotech and Green Industry-based companies.

The key objective of A-Bio is to assist eligible Bumiputera-owned companies during the stage of commercialisation, and ultimately increase the market share of Bumiputera-owned companies in the Biotech and Green Industry. Accordingly, a high income Bumiputera segment can be created out of the industry that can have a multiplier effect on the whole value chain. A-Bio targets not only local markets but covers regional and international ones as well.

The roles and initiatives undertaken by A-Bio include channeling of funds to eligible companies via participation in ordinary shares, redeemable preference shares and/or shareholders advances. A-Bio does not operate as a mere funder but also as a business partner that actively works with the Investees at the Board level through it's nominee Directors; and at Management level in business and financial planning. The close relationship with the Investees seeks to nurture entrepreneurs towards managing their businesses according to best practices in preparation of becoming strong industry players in the market.

A-Bio has invested in 5 companies which are biotechnology and high technology-based. The companies and their progress to date are:

One Point Health Lab Sdn Bhd

- Halal and Toyyiban testing of products and consumables
- Has wide array of halal verification services and halal test kits.

SNAA Medic Sdn Bhd

- Production and marketing of diagnostic and rapid test kits

Maerotech Sdn Bhd

- Production of raw aerogel from rice husk
- In the process of obtaining ISO certification for the manufacturing process and products manufactured

Bionic Ventures Sdn Bhd

- Production of high quality halal collagen which is locally manufactured
- Now at business matching stage with potential off-takers and industry partners

MYBiomass Sdn Bhd

- Production of green chemicals from Biomass
- Now at technology adaption stage

Marketing promotion activities, collaborations, active discussions with industry and training programmes were among the initiatives undertaken by A-Bio in 2013. A-Bio alongside MIGHT had participated in the 9th National Sheikh Bahai Technopreneurship Festival in Iran as part of its international outreach programme where some of A-Bio's Investees were able to showcase their products and services, resulting in positive response from potential international clients.

MyBiomass Sdn Bhd was invited and participated in a teach-in session in USA conducted only for selected technology companies. As MYBiomass is venturing into a highly specialized industry, collaboration with renowned technology providers in the relevant fields are actively pursued towards acquiring the right knowledge and technology for the successful implementation of green chemical biorefinery, expected by 2015.

At the local front, Maerotech Sdn Bhd hosted a visit from local and international experts in the field of Allied Fiber to Maerotech's manufacturing plant in Nilai in conjunction with the International Kenaf and Allied Fiber (ICKAF) 2013 event that was organised by Universiti Putra Malaysia. Additionally, as part of bringing up the product and manufacturing standards in the manufacturing of aerogel, SIRIM has been engaged to provide the necessary technical assessment to Maerotech Sdn Bhd.

Throughout 2013, many collaborations were also initiated towards joint partnerships with local universities and government agencies in commercialising new and innovative biotech-based products. One of the active areas undertaken was in the testing for food safety to promote awareness of halal and toyyiban elements in consumables undertaken by One Point Health Lab Sdn Bhd.

In the future, A-Bio will continue to join efforts with the Investees and Industry Stakeholders towards commercialisation and increasing the presence of Bumiputera-owned companies in the Biotech and Green Technology Industry.

MIGHT METEOR
ADVANCED MANUFACTURING SDN BHD

MMAM as the Human Capital Development (HCD) arm of MIGHT continues to support the Economic Transformation Program (ETP) in developing highly skilled local talent with the target of achieving high income nation status by year 2020. The activities and programmes conducted mainly aim to fulfill the national demands of High Technology Industry (HTI) talents for short,medium and long term periods. Technology Specialist in Specific Domain Expertise 2 (TeSSDE 2), National Talent Enhancement Program (NTEP) and XPERT Marine programmes were among the programmes successfully executed in 2013.

TeSSDE 2

Upon successful implementation of the TeSSDE programme in 2011-12, TeSSDE 2 was awarded by

Economic Planning Unit (EPU) via Talent Corporation Malaysia (TalentCorp) as its implementing agency specifically for both Electricals and Electronics (E&E) as well as Oil and Gas (O&G) sectors. The programme aims to enhance the knowledge and skill set of fresh engineering graduates from public universities to accomplish the Government's agenda.

TeSSDE 2 for E&E provides upskilling programmes for 180 graduates in four domain areas which are; LEDs industrial R&D, vision inspection, IC packaging as well as the assembly and test of optical communication devices.

Similarly, TeSSDE 2 for O&G provides upskilling programmes for 462 fresh graduates in the following sub-domains - Hook-up and Commissioning, Offshore Installation and Pipe Laying, Power Turbines, Instrumentation and Electricals, Engineering Design, Non-Destructive Testing, Plant Design and Automation, Operation and Maintenance as well as Process Control.

National Talent Enhancement Program (NTEP)

NTEP was launched by PEMANDU to accelerate the development of a skilled workforce in Malaysia targeted at boosting the employability of engineering graduates as well as technical and vocational certificate holders. MMAM has been given the mandate to conduct the programme in the Railway, Oil & Gas and ICT sectors. In total, 100 trainees have been successfully placed and trained in the above high technology sectors.

XPERT Marine

The XPERT Marine Programme was designed as one of the solutions to the challenges faced by the local maritime industry identified by the Malaysian Shipbuilding/Ship Repair Industry Strategic Plan 2020. The programme aims to assist young technicians to move from an academic environment to an industrial environment. MMAM has completed the training for 60

alumni of Community College for the marine industry blue collars in NDT, Welding Inspection and HVAC skills.

Through closer interaction with the stakeholders, MMAM is able to gain better understanding of the HTI landscape, requirements and nature of competency domains. Closer rapport with key industry HR personnel opens up more opportunities and it is apparent that the MMAM collaborative model known as Quintuple Helix is the solution to HTI talent requirements.

In addition, MMAM is also offering solutions in yard capacity planning and innovation of production planning systems to the local shipyard. Leveraging on MIGHT's SBSR and MYKOR initiatives the project will be used as a model for enhancing local yards' capacity in line with international standards.

"TeSSDE programme literally builds an engineer with quality and competitie ness and equips them with essential criteria to dee lop in the future. N w, I am more confident, matured, knowledgeabl

Nor Hafizah Binti Abdul Jalil • Engineer (E2) • ECHO Broadband

"The Programme has brought major benefits to participants' self-development and the training improves participants' engineering skills."

Abdullah Yusof Karim • Engineer Petra • Energy Berhad

"It is estimated that by 2020, Malaysia will need approximately 1,300 marine engineers and naval architects and more than 2,300 technicians and mechan

(Source: Malaysian Shipbuilding/ Ship repair Industry Strategic Plan 2020; Page 29)

SENSTECH SDN BHD

Senstech Sdn Bhd (Senstech) is mandated by MIGHT to commercially implement viable RFID applications and solutions that leverage on the features and strengths of MM Chips and other relevant sensor technologies. With a varied portfolio and a strong track record in implementing custom developed RFID systems and solutions across various industries, Senstech plans to focus on further enhancing its products and expertise; simultaneously increasing its competitiveness in the region.

Sponsorship Activities

One of the main highlights on Senstech's activities in 2013 was the signing of a Sponsorship Agreement between Senstech and the 7th ASEAN Para-Games Organising Committee (NAPGOC) on 26 September 2013. The agreement affords sponsorship rights to Senstech Sdn Bhd to provide RFID-based solutions during the Para-Games Competition in Myanmar in January 2014. This is part of Senstech's effort to establish itself as an RFID player in the ASEAN market.

The sponsorship has been successful in terms of providing an efficient and effective access system using RFID tags and readers/scanners during the game.

Business Activities

Senstech has identified and applied prospecting activities in projects including Document Digitisation for the Polis Di Raja Malaysia (PDRM), the Access Management System for the ASEAN Summit 2015 and the Library Management System for Universiti Sains Malaysia (USM). In 2014, Senstech is targeting to implement the following projects:

- PDRM Document Digitisation for Criminal Records
  A process of digitising all criminal records in PDRM's database, which will greatly assist the PDRM Criminal Investigation Department (CID)'s workflow.

- Pass Card Accreditation System for the ASEAN Summit 2015

  A web-based integrated system designed to manage all aspects of accreditation procedures and related services and facilities during the ASEAN Summit Meeting 2015, scheduled to be held in various locations in Malaysia between April and November 2015. In this project, Senstech Sdn Bhd will be collaborating with Techno Secure Print Sdn Bhd, while the main client of the project is the Chief Government Security Office of Malaysia.

- Library Management System
  On 18 February 2014, Senstech Sdn Bhd participated in a tender process for developing a Library Management System for Universiti Sains Malaysia (USM). The outcome of the tender will be announced in June 2014.


Industry
Intelligence &
Offset
Management
Services

Industry Intelligence

Industry Intelligence is one of the platforms utilised by MIGHT in its mission to advance competency levels in high technology and strategic industry through effective industry-government partnership and to bring the country towards achieving a high-income economy. Industry Intelligence serves to facilitate stakeholders in technology advice/input, prioritisation of technology, cross-sectoral convergence and bridging with industry players.

The Offset Management Services Division provides contractual TDA / Offset Management Unit services to the Government of Malaysia and GLCs. The current offset programme implementation in Malaysia is guided by several Malaysian macroeconomic models. In line with the latest Government Procurement Policy and Regulation, offsets have become a mandatory requirement for Government Agencies undertaking strategic and high value procurements.

AEROSPACE

Today, more than 150 local and international organisations are contributing actively to the growth of Malaysian aerospace businesses. With MIGHT holding the position of Secretariat to the Malaysian Aerospace Council (MAC), led by Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak as the Chairman and MIGHT's President/CEO serving as the Secretary, Malaysia is making phenomenal progress towards becoming a major aerospace player by 2015.

The Aerospace initiative will focus on four niche areas in which the country possesses strong foundations namely, Parts & Components Manufacturing, Maintainance Repair and Overhaul (MRO), Avionics & Systems Integration and Centre of Excellence for Aerospace Education &Training. Malaysia also aims to be the preferred global aerospace outsourcing centre through participation in 'design and build' activities in future aircraft programmes.

MIGHT has organised a series of workshops and events in 2013 to promote the growth of the aerospace industry in the nation.

Performance Based Contracting Seminar & Workshop

Performance Based Contracting (PBC) also known as Performance Based Logistics (PBL) is centered on a contract instrument that defines performance expectations in regards to outcomes or results for which the contractor is responsible to assure quality delivery. Payments to the contractor are determined based on the contractor's fulfilment in reference to the agreed contract scope and performance matrix.

The Ministry of Housing and Local Government (KPKT) adopted the PBC concept in 2011 with the assistance of MIGHT for the maintenance contract of Mi17 helicopters operated by the Fire and Rescue Department of Malaysia (FRDM).

Realising the huge benefits to the users FRDM has engaged MIGHT to conduct a 1-day High Level Seminar on 29 October 2013 and a 3-day Workshop from 30 October to 2 November 2013 for operation personnel to expand the knowledge of PBC to other units and departments within FRDM and KPKT. In order to maximise the benefits of the programme, invitations were also extended to other Government Ministries and Agencies. The programme provides an outstanding learning and networking platform for contracting and procurement project leaders and implementers.

EU-Malaysia Chamber of Commerce and Industry (EUMCCI) Aerospace Financial Dialogue

The dialogue addressed issues on financial support aimed at driving the aerospace industry forward. Key industry players including global players ALTRAN, GE, Boeing, RUAG Aviation, and local players MAS, SAPURA, STRAND and SME Aerospace exchanged inputs with public institutions including National Space Agency, MAHB, MITI, PEMANDU in finding the way forward in achieving this objective.

The EUMCCI Aerospace Committee provides a platform for its members to voice key issues relevant to the aerospace sector. It is also a channel to enhance MIGHT's cooperation with European authorities as well as their representatives. Through the Sectoral Committees leveraging the combined strength of 27 EU countries, EUMCCI's primary role is advocacy.

The dialogue enabled key stakeholders to better understand the vital factors inhibiting the growth of the aerospace industry in Malaysia. Several issues were highlighted during the dialogue in regards to strengthening the Avionics and composites areas in Malaysia. The country should not be viewed as a low cost centre for Aerospace Manufacturing and as having the need to have reputable MRO companies with which to partner. Financial obstacles will be resolved through aid by local banks and the public-private partnership model is to be strengthened. Malaysia will also focus more on the MRO sector with manufacturing elements while facing challenges effectively to ensure continued investment exists.

National Aerospace and Defence Contractors Accreditation Program (NADCAP) Seminar: Introduction to the Aerospace Quality

Following the MoU signed between MIGHT and the Performance Review Institute (PRI) in October 2012, the NADCAP Seminar was organised as a joint collaboration effort to promote cooperation in aerospace special process auditing, training and qualification of personnel in Malaysia. The seminar was the best platform for Malaysian aerospace suppliers and companies expanding into the aerospace business to understand the requirements in obtaining NADCAP accreditation.

42 participants from 19 companies attended the one-day event including, Aerospace Technology Systems Corp Technology Systems Corp Sdn Bhd, Jetline International Sdn Bhd, BHIC Aero Services Sdn Bhd and MEASAT Satellite Systems Sdn Bhd.

Currently, 16 local companies have been awarded with NADCAP accreditation in various field namely chemical processing, electronics, heat treating, non-destructive testing (NDT), non-metallic testing and shot peening. Administered by PRI, NADCAP is a leading worldwide cooperative programme that coordinates with aerospace accredited suppliers to develop industry-wide audit criteria for special processes and products. Through PRI, NADCAP provides independent certification of manufacturing processes for the industry.

107th Fédération Aéronautique Internationale (FAI) General Conference

The inaugural session of the 107th FAI General Conference was officiated on 3 October 2013, during a presentation ceremony for FAI Awards and FAI Breitling Awards and subsequently held in Royale Chulan Hotel in Kuala Lumpur, from 4-5 October 2013.

More than 150 delegates from 39 Active, 1 Associate, 1 Temporary Member Countries and 2 Affiliated Members were present, as well as FAI elected Officers, Presidents of Honour, Companions of Honour and delegates appointed by Presidents of Commissions and Observers.

The participants at the FAI General Conference voted in favour of the bid by Royal Netherlands Aeronautical Association (KNVvL) to host the 109th FAI General Conference in Rotterdam in 2015. The next FAI General Conference will take place on 17-18 October 2014 in Bangkok, Thailand.

Workshop on Developing Malaysia's Space Industry

The workshop on developing Malaysia's space industry was conducted in Pusat Angkasa Negara, ANGKASA Banting on 28 November 2013. The workshop aimed to provide exposure on the ecosystem development in the Malaysian aerospace industry to the participants. Around 45 recommendations were highlighted to position Malaysia as a technologically competent and competitive nation in manufacturing, systems, space, general aviation and commercial aviation.

Led by ANGKASA, the key speakers were from AWR Lloyd and Triangle Venture Capital Group. MIGHT presented the National Space Policy, Space Innovation, Open Sky Technologies Fund and the Development of Malaysia Aerospace Industry.

Aerospace Malaysia Innovation Centre (AMIC)

Aerospace Malaysia Innovation Centre (AMIC) was established as part of the Malaysian Aerospace Council initiative to catalyse Malaysia's competitiveness in the global aerospace arena. The main objective of AMIC is to foster a collaborative environment unifying both industry players and academia particularly in areas of Research and Technology (R&T).

Throughout 2013, AMIC focused on several research themes particularly 'Bio-jetfuel Innovate Pathways Assessment' and 'Innovative Composite Manufacturing'. In addition, AMIC also concentrated on strengthening its research networking and knowledge sharing through technical conferences and publications. A series of international technical discussions were also organised involving many research partners including Airbus Group Innovations (alternative energy), Airbus R&T Partnership, Technocampus Composites, University Nottingham Malaysia Campus, Co-operative Research Centre for Advanced Composites Structure and University of Southern Queensland.

Three sub-projects under the Bio-jetfuel Innovative Pathway Assessment were commenced in 2013. One of the sub-projects deals with the techno-economic analysis of the micro-algae pathway to jetfuel in Malaysia while the remaining two sub-projects will complement the findings by working on key influence parameters on overall economic efficiency. Various organisations including Airbus Group, MIGHT, Biotech Corp, UPM-CIRAD (French Agricultural Research Centre for International Development) and the Association of Asia Pacific Airlines (AAPA) were involved in these projects.

Through these partnerships, a Centre of Excellence (COE) was established in Universiti Putra Malaysia (UPM) to assess local solutions for sustainable bio-mass jetfuel production in Malaysia. The COE is expected to improve the understanding of aviation biofuel commercialisation in Malaysia, identify opportunities and challenges, and to evaluate the possibility of social, economic, market and technology change including costs and obstacles, if any.

In preparation for future R&T projects under the theme of 'Innovative Manufacturing of Composite Structure', AMIC has organised a technical workshop with the participation of international research partners namely Airbus, CTRM, CETIM, Spirit AeroSystems and Hexcel. The topic primarily discussed was the redesigning of single-aisle spoilers, taking into consideration current manufacturing process challenges.

Another manufacturing project being undertaken was 'Tools Design for Complex Composites Parts". The project aims to develop a methodology based on simulation to allow anticipation of Springback. The methodology developed will allow the reduction of lead time development of stringers/ribs typed structures and allow the use of cheaper tooling materials. Research partners for this project include CTRM, IIUM and UTeM.

Moving forward, AMIC aims to launch several major research projects related to Bio-Jetfuel, Virtual Reality for aerospace training, composites manufacturing and advanced bio-sourced materials.

ADVANCED MATERIAL

The Advanced Material initiative is one of the strategic industries promoted by MIGHT to further accelerate the development of the composites industry; particularly advanced composites for aerospace applications. Following the successful development of aero composites activities, MIGHT had established the MIGHT Industrial Consultative Group (MIG) for the composites industry in order to promote the development of maritime, defence, automotive, infrastructure and green materials. To address the labour shortage of highly skilled workers for the future in this industry, MIGHT with Persatuan Industri Komposit (PIK) are working together in contributing to the Advanced Green Composites Training Programme which aims to produce a developed and comprehensive workforce equipped with the requisite understanding of new technologies in the advanced green composites industry. The Advanced Green Composites (AGC) programme is open to graduates from IPTA/IPTS.

Advanced Green Composites (AGC) Convocation

The AGC convocation ceremony, jointly organised by MIGHT, CTRM, Skills Development Department (JPK) and Malacca Industrial Skills Development Centre (MISDEC), was conducted on 21 September 2013 at Dewan Auditorium Seri Negeri, Ayer Keroh, Malacca. The 'Certificate of Competency - Advanced Green Composites Training Programme' was awarded to fifty students by the Chief Minister of Melaka, YAB Datuk Wira Ir Hj Idris bin Hj Haron. Three students were nominated with the best student award. These fresh engineers have been certified as competent in soft skills and technical matters similar to engineers with a 3-year experience.

International Conference on Kenaf and Allied Fibres 2013 (ICKAF)

The International Conference on Kenaf and Allied Fibres 2013 (ICKAF) was organised by the Institute of Tropical Forestry and Forest Products (INTROP) on 3 to 5 December 2013 at Hotel Bangi, Putrajaya. Themed 'Innovating Biofibres for Sustainable Future', ICKAF provided a platform for sharing new technologies and knowledge in the development of natural fibres. The four bodies that hold far-reaching responsibilities in ICKAF include MTIB through the Fibre and Biocomposite Development Centre (FIDEC), the National Kenaf and Tobacco Board (NKTB), the Malaysian Palm Oil Board (MPOB) and MIGHT. MIGHT links researchers and industries through various programmes particularly in composite sectors.

MARITIME

Malaysia has historically been one of the great maritime nations of the world with its strategic location along the Straits of Malacca and a globally connected shipbuilding business in Borneo. With strong support form the government, MIGHT has recognised the vital importance of this sector to the Malaysian economy. The Honourable Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak is confident that the Maritime industry would thrust Malaysia as a nation that has the capabilities not only in the petroleum automotive industry but also in the venture of building high technology ships.

Heavy industries like shipbuilding and ship repair provide substantial high-income job opportunities for workers in the future development of technology systems. The maritime sector is expected to achieve up to RM19 billion profit and provide over 55,000 jobs in 2020 with manufacturing processes for maritime industries as a key part of Malaysia high technology landscape.

MIGHT has tapped the inputs from industry partners, regulators, Government organisations and a host of other industry stakeholders to provide the country with the National Shipbuilding / Ship Repair Strategic Industry Plan. This document, launched by the Prime Minister in 2011, acts as a guide to provide strategic direction for the industry and promote broader cooperation between stakeholders. It is the first step towards providing the maritime industry with improved national support at the Industry-Government level.

Developing Malaysia as Shipbuilding/Ship Repair (SBSR) Hub' under the Entry Point Project 6 (EPP 6)

This initiative is under the purview of Performance Management and Delivery Unit (PEMANDU), led by MIGHT and jointly undertaken by Boustead Heavy Industries Corporation Berhad (BHIC) together with Shin Yang Shipping Corporation Berhad (Shin Yang). The aim is to accelerate the development of SBSR in the country. Apart from contribution to the nation's GNI, more opportunities for high income jobs can be created. Several projects under this initiative have been underway and key updates of projects include:-

Development of local Offshore Support Vessel (OSV) Design

The local Offshore Support Vessel (OSV) Design has been developed to push Malaysia forward as one of the global players in the shipbuilding industry, for sophisticated and niche products as well as support services for the Oil & Gas (O&G) sector. The OSV Design would create new opportunities to local design houses, minimizing our dependency on foreign designers and maximizing incorporation of local content while enhancing competitiveness.

BHIC and Universiti Teknologi Malaysia, as lead designers, presented the revised designs and specifications to both PETRONAS and its production sharing contractors (PSCs), and had received positive feedbacks. The final design is targeted to be complete by the second quarter of 2014. Currently, UTM is working on the Computational Fluid Dynamic Hull Analysis. Several tank testing processes will be carried out and construction phase is targeted to be complete by 2016.

Deepening of river and development of SBSR industry in Kuala Baram, Miri

Due to siltation mainly at the river mouth, this project focuses on the study of the current and anticipated condition of Kuala Beram, Miri. Jointly undertaken by PEMANDU, Ministry of Infrastructure Development and Communications of Sarawak (MIDCOM), Shin Yang and MIGHT, the project also includes an impact study on projection of revenue from the new expansion of existing facilities built to capture potential markets from the Oil & Gas (O&G) sector. A third-party consultant was appointed by the Ministry of Transport (MOT) to conduct the study.

MIGHT Interest Group (MIG) for Maritime

MIG is a platform where stakeholders in the maritime industry can discuss in order to resolve specific industry issues. As part of consensus building activities, a series of meetings organised by MIG were held as follows :

Maritime Roundtable Meeting

Chaired by YBhg Tan Sri Datuk Dr Ahmad Tajuddin Ali, the meeting was held on 25 January 2013. Three main industry associations, namely Association of Marine Industries of Malaysia (AMIM), Malaysia Shipowners' Association (MASA) and Malaysia OSV Owners' Association (OSV Malaysia), were present in the meeting to discuss issues and the way forward for the SBSR industry.

High Level Meeting of the National Shipping Industry

Following a memorandum sent by MASA to the Prime Minister, a discussion session chaired by the President and CEO of MIGHT, Dr Mohd Yusoff Sulaiman, was held on 2 May 2013. The main agenda of the discussion was to obtain the real picture of Malaysia's shipping industry. Issue of the implementation of 30% corporate tax to shipping companies starting 2014 was also discussed. Partly due to MIGHT's intervention, the industry succeeded in convincing the Ministry of Finance (MOF) to delay the implementation for another two years.

Competitiveness in Shipping Industry

Chairman of MIGHT Industry Consultative Group (MIG), Ir Hj Othman Abdul Kadir, chaired the meeting that was held on 26 September 2013. The issue raised in the meeting was regarding the 30% loading factor in local charter rate as claimed by charterers. The meeting identified that the rates offered by local shipping companies are of standard market rate and normally would not go beyond 10% higher compared to the global market. In consensus, stakeholders agreed that in order to encourage local ship owners to have domestically built vessels and reduce the charter rates, banks should be required to reduce their interest rates on financing which would ultimately reduce the cost of buying a vessel and more importantly reduce operational costs.

Strategic Papers

MIGHT has created three proposals to address some of the issues highlighted in the Malaysian Shipbuilding / Ship Repair Industry Strategic Plan 2020 (SBSR 2020).

Incentive package for SBSR industry

- A proposal on the incentive package for the SBSR industry was presented to the Tax Analysis Division, MOF on 19 July 2013 in the presence of government agencies such as MITI, MIDA, LHDN and representatives from the Association of Marine Industries of Malaysia (AMIM). The preliminary proposal was positively received and accepted for consideration. Certain areas of the proposal have been revised and justified based on requests made by MOF. The final decision on the implementation by MOF is expected to be made by 2014.

Establishment of the Malaysian Maritime Council (MMC)

- The establishment of the Malaysian Maritime Coucil is a merger between the current National Maritime Council and the National Shipping Council. MIGHT has proposed the technical secretariat role to coordinate and create workable solutions through consensus building with stakeholders. The proposal is targeted to be presented to MOT by the first quarter of 2014.

Domestic Shipping License (DSL) to Promote The Growth of Maritime Industry

- The objective of the proposal is to promote locally built vessels and repair as well as MRO activities by imposing additional conditions on DSL applications. This proposal also aims to capitalise on the local oil and gas market segment since local yards have the capability to build certain types of OSVs measuring 120m and below while protecting the lucrative local OSV market from being dominated by foreign players.

- With these new conditions, operations by foreign vessels in Malaysian waters will be restricted while the local shipbuilding and ship repair industry can be stimulated to grow rapidly.

Human Capital Development

MIGHT champions human capital development training in high technology for the maritime industry via programmes managed under its human capital development arm, MIGHT-Meteor Sdn Bhd. For maritime, two programmes have been launched under this initiative, namely:

HCD Programme

- Technology Specialist in Specific Domain Expertise (TeSSDE) is a specialised programme designed for universities graduates to earn extra qualification and expertise before entering the employment market. Through MIGHT-Meteor, 70 fresh graduates from various engineering fields have been selected to undergo marine engineers and naval architects program. 50 of them have graduated and already being absorbed into the industry

***XPERT* Marine**

- EXPERT Marine was designed for the alumni of Community College (Malaysia), Polytechnics, and experienced blue-collar workers, who want to upgrade their technical capabilities. The programme was launched on 24 June 2013 and has successfully produced seventy skilled workers who have been immediately absorbed by the industry.

Events

Langkawi International Maritime & Aerospace Exhibition (LIMA) 2013

The Maritime Unit continues to take part in LIMA which entered its 12th edition in 2013, between 26-30 March 2013. MIGHT garnered the interest of various local and international parties to be part of Malaysia's SBSR industry development through interaction with stakeholders. During the event, Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak launched the first edition of 'Malaysian Shipbuilding / Ship Repair Industry Report' and 'Malaysian Shipbuilding / Ship Repair Industry Portal'.

MIGHT once again organised an open forum for the maritime industry after the great success during LIMA 2011. With the theme 'Emerging Malaysia as Shipbuilding / Ship Repair Hub', the forum attracted ninety participants from local and overseas players including government agencies and higher learning institutions.

Strategic Marketing Mission (SMM) to the Middle East

The Strategic Marketing Mission (SMM) to the Middle East was a six day mission from 7 to 12 December 2013. Organised by Malaysia External Trade Development Corporation (MATRADE), and led by MIGHT to Kuwait and Qatar, the mission's objective was to create business opportunities especially in shipbuilding in regards to the expansion plan of Kuwait and Qatar port and the demand of OSV by the vibrant Oil and Gas (O&G) sector in the region.

Delegation members leveraged on the prospects by increasing awareness of Malaysia's maritime industry's strength and capabilities as well as enhancing linkages between Malaysian and Middle Eastern business communities.

Awareness Programme

MIGHT participated in several programmes held in the country as part of its continuous initiative to update and promote the SBSR industry including:

- Malaysia-France Industry Seminar, Kuala Lumpur
- Trade and Industrial Seminar, Miri
- Human Capital Skills & Training for Marine Industry, Sibu
- Industry Briefing to Lead Member, Bank Pembangunan, Kuala Lumpur
- Malaysian-German Chamber Roundtable Meeting, Kuala Lumpur

RAIL

Overview

In light of the Government's transformation efforts to increase and enhance public transport, major global players have dubbed Malaysia as the 'hotspot' for rail related activities. The investment for rail projects is expected to reach RM160million until 2020, thus providing ample opportunities in terms of business activities, employment and technological advancement.

Realizing the potential of this industry, MIGHT has published Malaysian Rail Supporting Industry Roadmap 2030 as a guideline to transform the local rail industry into a strong and sustainable business, capable of satisfying the demand of national rail transportation and turning Malaysia into a competitive global player that optimizes the use of indigenous resources and technologies within the next 15 years. The roadmap is the final outcome of the contribution from various stakeholders comprising of government agencies, industry players, academia, and industry experts.

Activities & Achievement

1. **Memorandum of Understanding (MoU) between MIGHT and Thales; Human Capital Development (HCD) on Rail Signalling & Communication on 29 July 2013**

One of the key strategies in Malaysian Rail Supporting Industry Roadmap 2030 is to generate highly skilled and qualified personnel through the development of specific programs for blue and white collar workers. This MoU is the first in a series of initiatives planned by MIGHT for the government; to support the rail industry development.

2. **Business Mission to Spain; from 16 to 21 June 2013**

MIGHT together with the Commercial Office of Spain conducted the Business Mission to Spain as part of the initiative to explore and develop both capability & capacity of local rail industry. The mission include the involvement of seventeen (17) representatives from various organisation comprised from the government, academia and local industry players.

Some of the activities undertaken during the business mission are:

- Participation in MAFEX International Rail Convention – Session on Malaysia
- Series of industrial visit and;
- Tailored meetings with Spanish rail stakeholders

The outcome from the business mission include the strategic MOU signing between the Spanish Railway Foundation (FFE) and MIGHT for local rail HCD; and towards several other collaboration/partnerships between Malaysian and Spanish rail organisations.

The team has also incorporated the 'lessons learned' from Spanish rail restructuring experience in the roadmap with expectations to help reinvigorate local Rail industry and provide adapted strategies; to move them to the next level through Spanish success stories.

3. **MIGHT and Spanish Railway Foundation (FFE) Sign Memorandum of Understanding (MoU) on Human Capital Development (HCD) for Malaysia's Rail Industry on 12 December 2013**

One of the purpose for the mission is to address the manpower issues currently faced by the local rail industry. Hence, the proposal to have a MOU between MIGHT and FFE have undertaken beginning with series of discussions with FFE, universities, institutes and the proposed project implementer to formulate a working structure for the arrangement.

In December, MIGHT and FFE signed the MOU; to work together to initiate the development of courseware content for our local universities, setting-up of training facilities, and provide our universities & institutes with training expertise.

The arrangement in the near future will include collaboration with MMAM and MARA for execution of the plan. Through benchmarking visits, the team has identified ADIF's Training and R&D center as the blueprint of what MyRA (Malaysian Rail Academy), KTM should become. The information have been channeled to MyRA and MMAM for their reference.

4. Unveiling of the Roadmap through presentation to Stakeholders in 17 April 2013; followed by Soft-Launching on 1 November 2013

In promoting the industry to potential investors and international rail players, the content of the roadmap has been presented during Rail Solution Asia 2013, MAFEX International Convention (Bilbao, Spain), UK Rail Trade Mission (MIGHT, Cyberjaya) and Spanish Business Delegation (MIGHT, Cyberjaya). The roadmap has also been presented to various organisation such as CIDB, British High Commission, SCNF, MARA and other rail stakeholders to obtain new inputs and to gain support from all parties concerned to materialise the agenda.

On 1 November 2013, the roadmap has been soft launched in conjunction with MIGHT 20th Anniversary and the launching of the new program; Science to Action (S2A).

5. Rail Industry Portal

A portal on rail industry has been developed as a reference point and information provider for business entities, government agencies, and investors; to promote the fostering of links, collaborations, and business relationships.

The portal contain information such as updates on Malaysian rail news, industrial facts & figures and related publications. The portal also include the directory on locally established rail companies, as part of the initiatives under the MRT Corp's Klang Valley Mass Rapid Transit (KVMRT) Offset Program. The main purpose of the directory is to promote and highlight the capabilities for both local and foreign industry players established in Malaysia.

6. Briefing to Universities and Training Institution on Rail Human Capital Development

In early February 2013, series of briefing to universities and training institution has been conducted to gather input on Malaysian current capabilities, to ascertain future planning for rail human capital development, and the requirements needed by the trainers such as courseware and training aids. The information gathered has been used in identifying the gaps in rail education and provide the Offset team with wish lists on Rail HCD.

7. Development of Rail Human Capital Development with MARA

Proposal in developing blue and white collar worker for rail industry have been presented to MARA to be considered. The proposed agenda also includes converting and adapting of an IKM and/or KKTM to generate the rail workforce for blue collar and towards an establishment of MARA satellite campus in MyRA, Batu Gajah. Positive outcome includes the expected introduction of rail as an elective course under Bachelor of Engineering Technology in Electromechanical Systems by UniKL MFI and setting up of MIRET.

OFFSET MANAGEMENT SERVICES (OMS)

The offset programme for national procurements has been developed with the strategic intent of leveraging on the procurement as a support for national development needs. A 'positive net revenue' from investments made through Government procurement would be developed through offset programmes in the 6 areas of national interest areas identified below:

MIGHT has been entrusted by the Government of Malaysia to operationalise the Technology Depository Agency (TDA) in overseeing all offset programme implementations in Malaysia. Based on the mandate, OMS is now overseeing offset secured services contracts worth RM 32.65 million.

Fact & Figures

Current Offset Programs by OMS

Offset Management Services Contract Secured: RM 32.65 million

Number of Programmes managed: 18

Number of Projects managed: 111

Total Obligors: 37 Multinational Companies

Total Recipient: 70 local companies

Total Value: RM 10.77 billion

MIGHT is working closely with other government organisations such as Ministry of International Trade and Industry (MITI), SME Corp, Ministry of Defense and Global Offset and Countertrade Association (GOCA) to promote offset programmes as a tool to support national economic growth.

HIGHLIGHTS OF OFFSET PROGRAMMES 2013/14

Klang Valley MRT Offset Programme (KVMRT) MRT Corp has appointed MIGHT as the Offset Management Unit (OMU) on December 2011 to provide Offset Management Services for the next 5 years, for the implementation of Project Mass Rapid Transit Lembah Kelang: Jajaran Sungai Buloh – Kajang. Projects developed for the KVMRT offset programmes are strategised to support the rail industry development in Malaysia. Among the areas to be included in the offset programme are Design and Development, Parts and Component Manufacturing / Assembly, Maintenance Repair and Overhaul (MRO), Human Capital Development (HCD) and Training as well as Transfer of Technology (ToT).

Fact & Figures

MRT Offset Programme

Targeted industry: Local Rail Industry players

Obligors: 6 multinational companies

Recipients: 49 (34 local co, 11 Gov & 4 Univ)

Value: RM3.5 billion

Jobs Creation: 800

The offset programme is also viewed as a unique endeavour designed to boost local industrial and technological development, and at the same time provide jobs to local companies with the right skills and expertise.

Project Highlights

- "Transfer of know-how to build an international standard rail assembly plant including design, engineering, commissioning and training phase."
- The assembly plant will produce 144 car sets per year with 160 new job creations.
- Siemens and SMH Rail collaborated in establishing the assembly plant to deliver the KVMRT Electric Train package.
- Siemens is transferring its competency and technology through developing the capabilities of Malaysian Local contractors (SMH Rail) in sub-assembly works, manufacturing, installation, testing and commissioning works.

8x8 Armoured Wheeled Vehicle Offset Programme

The 8x8 AWV programme is one of the major procurements by Ministry of Defence (MINDEF), to equip the Malaysian Armed Forces with prime mover capabilities for mobilisation of army personnel and to increase the battalion's strength. Currently, the Defence Industry Division (DID) in MINDEF is managing the offset programme procurement and its primary role is to work with end users in defining requirements and developing direct offset projects. MIGHT has been requested to assist DID in managing indirect offset programmes focusing on technology development, market access, foreign direct investment and contract works.

Fact & Figures	8x8 AWV Indirect Offset Programme *Targeted industry: Automotive, Agriculture, Aerospace, Defence, Halal.* *Obligors: 6 multinational companies* *Recipients: ~ 9 companies* *Value: RM1.3 billion*

MINDEF is procuring 257 units of 8x8 vehicles worth approximately RM8 billion. Six out of fourteen OEMs involved in supplying the subcomponents of 8x8s are eligible for offset programmes making the total value of offset obligations to be delivered by OEMs to the local industry to be estimated at RM 4.3 billion. The 8x8 offset programme shall comprise of 70% direct offset projects managed by Ministry of Defence and 30% indirect offset projects managed by MIGHT, as agreed in a meeting carried out by the Project Management Team chaired by DID. Based on the ratio, MIGHT is responsible to create opportunities in the form of business development, technology transfer and R&D&C collaborations that carry a weightage of RM 1.3 billion worth of offset credit.

A Letter of Award (LOA) was issued to Defence Technology Sdn Bhd (DEFTECH) as the prime contractor by MINDEF on the supply of 257 units of 8X8 AWV. The major Offset Obligors of defence equipment for the 8x8 AWVs are from Turkey, Germany, France, South Africa, Poland and Norway.

South African Offsets For Malaysia

A series of indirect offset projects have been agreed between South African and Malaysian companies, with three MoUs signed and another five under negotiations as part of the indirect offsets programme provided by South Africa in return for Malaysia's order for armoured vehicle turrets from Denel Land Systems (DLS). The value of the offset benefits total about RM3b and it is

estimated that these projects will further create business opportunities worth as much as RM 3 billion. The partnerships were brokered by the Malaysian Industry Government Group for High Technology (MIGHT).

Promoting Collaborations in Halal Sector Under 8x8 Indirect Offset Programme

- The Halal initiative is one of the focus sectors that Malaysia can benefit from as part of its continous relationship with South Africa.

- February 2014 - MIGHT was introduced to the Halal Authority bodies and industry players in South Africa as follows:

    - Montagu Dried Fruit Limited
    - Western Cape Fine Food Initiatives (WCFFI)
    - South African National Halaal Authority (SANHA)
    - National Independent Halaal Trust (NIHT)
    - The Department of Trade & Industry (the dti)

- Moving forward, MIGHT with support from SMECORP (representative of MITI) will focus on the development of a localised Halal Hub through Special Economic Zone (SEZ) within provinces which will serve both as a local and global market.

- Proposed Halal Hub, SEZ in South Africa can be modelled after the Halal Park Malaysia to promote further bilateral trade between the two countries.

Prasarana Rail and Bus Offset Programme

Syarikat Prasarana Negara Berhad has appointed MIGHT as the Offset Management Unit (OMU) on 15 May 2013 to manage the offset programmes implementation for Rail and Bus projects. The Offset Management Services appointments are for five years on rail procurements, four years on Integrated Control Centre and three years on bus procurement. The offset programmes have been kicked-off by quarter four 2013.

The projects under Prasarana Rail and Bus Offset Programmes are as follows:

- Mid Life Refurbishment and Coupling of the Existing 2- Car Trains for Kelana Jaya Line
- Procurement of New 14 sets of 4-Car Trains for Kelana Jaya Line
- Procurement of New 30 units of 6-Car Trains for Ampang Line
- Procurement of 300 new Diesel Buses for RapidKL
- Design, Manufacture and Installation of Integrated Control Center

The offset strategies for all the five procurements mentioned above are mainly to satisfy the national needs identified under the national rail roadmap, automotive as well as Information and Communication Technology (ICT) sectors. The following areas have been identified to be included in the offset programme:

- Design and Development
- Parts and Components Manufacturing
- Maintenance, Repair and Overhaul (MRO)
- Human Capital Development (HCD)
- Transfer of Technology (ToT)
- Foreign Direct Investment (FDI)

Procurement of 300 Diesel Buses

- **Institut Kemahiran Belia Negara** (IKBN) Kuala Perlis was selected as one the recipient for this programme and a Memorandum of Understanding (MoU) between Scania (Malaysia) Sdn Bhd and IKBN was signed for a train the trainer project,

- A training centre called the 'Scania Room' was created in order to accommodate all the tools and equipment provided by Scania.

Procurement of 300 Diesel Buses

The Advanced Mechanic Training was held at Scania Academy in Sweden for two weeks. Specifically conducted for Rapid Bus mechanics by qualified technical trainers, the training involved both classroom learning and practical training. Advanced Mechanic Training is expected to benefit Rapid Bus to carry out crucial maintenance independently and was completed by November 2013.

Mid Life Refurbishment and Coupling of the Existing 2 - Car Trains for Kelana Jaya Line

The scope of this procurement is to replace the existing 35 x 2-car Trains which require refurbishment and upgrade of various systems in order to continue being in service. The offset programme was initiated in 2012, with four (4) offset projects being proposed and presented to the committee, which currently are still under negotiation process. BHC has an obligation worth RM140 million towards the Government of Malaysia.

New 14 sets of 4-Car Trains for Kelana Jaya Line

Prasarana procured 14 sets of 4-Car trains to cater for the increase of passengers at the Kelana Jaya line. The offset program was initiated in 2013 and is currently in the early stages of identifying strategic offset projects. BHC has an obligation worth RM578 million towards the Government of Malaysia.

Integrated Control Centre (ICC)

ICC is required to cater to a wide range of applications for all planning phases in Rail operations; strategic, long-term planning, daily operation and Key Performance Indicators. The ICC gives seamless control of operations across the entire rail operations through graphical interfaces with modules for planning, disposition, timetable construction, control, recording, statistics, rolling stock, traffic and slot management and information distribution. The offset programme was initiated in late 2013. Indra, a leading consulting and technology multinational in Spain and latin America, has an obligation worth of RM152 million towards the Government of Malaysia.

New 30 units of 6-Car Train for Ampang Line

CSR Zhuzhou Electric Locomotive Co Ltd has been appointed as the Original Equipment Manufacturer (OEM) for this procurement involving contracts summing up to RM 627 million. The offset programme was initiated December 2013.

NEW PROGRAMMES

Electric Train Sets Offset Programme

The NKRA has set outcomes to improve urban public transport and domestic connectivity (Improving Urban Public Transport). As such, the Ministry of Transport (MOT) has procured an additional 10 6-Car Electric Train Sets (ETS) for Keretapi Tanah Melayu Berhad (KTMB). The contract worth RM506 million was awarded to the premier Chinese train maker CSR Zhuzhou Electric Locomotive Co Ltd (CSR ZELC).

Fact & Figures	ETS Offset Programme
	Targeted industry: Local Rail Industry
	Obligor: CSR ZELC Co. Ltd., China
	Recipients: To be identified (Target: 8)
	Value: RM506 million

MIGHT was appointed to assist the Offset Management Unit (OMU) in procurement operations on 5 February 2013. Five offset projects were identified for the duration of thirty months; CSR Rolling Stock Centre (Malaysia) (CRM) Sdn Bhd, Localisation for ETS, MRO JV, Long Term Rail Education and New Green Technology.

The ETS Offset programme seeks to develop local industry capabilities on rail components fabrication and manufacturing while closing the identified gaps in the overall rail industry development. It also aims to create business opportunities for local rail companies through joint venture setups or gaining technical assistance from CSR ZELC and their local suppliers.

The setting-up of a CRM Rolling Stock Manufacturing Plant in Batu Gajah, Perak, which will be completed in September 2014, marks a new era of rail industry development in the region that is targeted to assemble and manufacture 100 sets/year of CSR rolling stock contracts with the government of Malaysia. CSR also will conduct 150 sets/year of MRO activities with local joint venture partners.

This offset programme is expected to bring various impacts to Malaysia such as the creation of more than 1200 job opportunities in the rail industry, income generation through localisation programmes for local suppliers and opportunities to participate in the global supply chain.

Pilatus MKII Procurement

The Ministry of Defence has initiated procurement of five additional PC-7 MKII Turbo Trainer Aircrafts for the Royal Malaysian Air Force (RMAF) training centre to produce more pilots in order to cope with the current national demand. This procurement has initiated an offset programme and PILATUS as the OEM is obliged and committed to the requirements by the Government of Malaysia.

Fact & Figures	Pilatus PC7 MKII Offset Programme
	Targeted industry: Local Aerospace Industry
	Obligors: 1 multinational company
	Potential Recipients: 5 local companies
	Value: RM 140 million

MIGHT in collaboration with the Defense Industry Division have strategised the offset programme to focus on Pilatus proprietary know-how transfer, development of MRO capacity to ensure life support capabilities on the aircraft fleet, assistance in market assessment and industrial participation as well as human capital development.

Littoral Combatant Ship (LCS) Offset Programme

6 units of vessel were procured from Boustead Naval Shipyard (BNS) for the Royal Malaysian Navy. The construction of all six vessels is scheduled to be completed in phases by the year 2019. The first LCS vessel is expected to be delivered to the Royal Malaysian Navy by June 2015.

Fact & Figures	LCS Offset Programme
	Targeted industry: Maritime Industry
	Obligors: 20 multinational companies
	Recipients to date: 4 local companies
	Potential Recipients: 28 local companies
	Value: RM 9 billion (Direct and Indirect Offsets)

Among strategies outlined for the indirect offset programme is to develop local capability in ship design, development of a Cyber Security programme, R & D and commercialisation of Nanomaterial and development of the armament industry in Malaysia. Several potential recipients of technology transfer from OEMs have been identified with several more currently under evaluation. MIGHT is in collaboration with the Defence Industry Division to finalise the rest of the remaining offsets with all the OEMs involved in the LCS project.

Energy Offset For Clean Coal Power Plant Project

The Energy offset project is based on the development of new clean-coal fired power plants to meet the energy requirements of the nation up to the year 2019. The Energy commission had issued tender bids to IPPs under PPA for the following:

- Construction of Project 3A – 1000 MW Clean coal Power Plant
- Construction of Project 3B – 2 x 1000 MW Clean coal Power Plant

For 3A and 3B the offset programmes are in the form of the provision of power plant simulators whilst project 4 is yet to be determined. In all of the bids above, Energy Commission has instructed the preferred bidder to appoint MIGHT to manage the offset projects and monitor its implementation.

Fact & Figures

Clean Coal Power Plant 3A Offset Programme

Targeted industry: Energy Industry
Obligors: 1 multinational company
Recipients to date: 1 local company
1 local university
Value: RM 10 million (Nominal Value)

The recipients for the Clean Coal Power Plant 3A offsets are MMCSB, a local company geared to take up the technology transfer from the OEM for the development of a clean coal supercritical power plant simulator and UNITEN, a local university to develop learning programmes for human capacity development in power plant simulators.


MIGHT International

MIGHT International

MIGHT International was established to bring together thought leadership from from various international scientific research, technology and innovation policy communities around the world. It oversees the overall management and operation of Global Science and Innovation Advisory Council (GSIAC) and engages stakeholders in Science Diplomacy on behalf of Malaysia. MIGHT's initiatives through this division are committed to lowering the barriers to international knowledge sharing besides increasing Malaysia's visibility on the global level.

SCIENCE DIPLOMACY

In order to further strengthen bilateral and multilateral engagements in 2013, MIGHT International have delivered the following:-

Myanmar Preparation Workshop and Working Visit

MIGHT has organised a workshop and working visit to strengthen the engagement between Malaysia and Myanmar.

The Myanmar Preparation Workshop was held on 10 January as a follow-up to MIGHT's Special Mission in November 2012 to Yangon, Myanmar. Thirteen Malaysian stakeholders attended the workshop with the purpose of identifying opportunities and gauging interest in participating in Myanmar based projects. Several focus areas have been identified including construction & utilities, power & energy and human capacity building.

A working visit to Yangon, Myanmar, was organised by MIGHT and CIDB from 18 - 22 January 2013 to attend the Myanmar Conference on Promotion of Construction Industry in Housing Delivery 2013 as well as to touch-base with local stakeholders. Several joint initiatives were agreed by both Malaysia and Myanmar participants following the visit:

- Ministry of Foreign Affairs Malaysia to spearhead Government-to-Government initiatives
- Construction Industry Development Board would drive projects relating to infrastructure - building and utilities
- MIGHT Technology Nurturing (MTN)'s would be involved in technology-related projects
- MIGHT-METEOR Advanced Manufacturing Sdn Bhd was identified as the primary contact for technology related projects

Working Visit to India in conjunction with The Delhi Sustainable Summit 2013

MIGHT International organised a working visit to New Delhi, India from 31 January to 2 February 2013 to attend the Delhi Sustainable Development Summit 2013, organised annually since 2001 by The Energy Research Institute (TERI).

Themed 'The Global Challenge of Resource-Efficient Growth and Development', the event connected MIGHT with the Director General of The Energy Research Institute (TERI), Dr Rajendra Pachauri and Prof. Jeffrey D. Sachs from Columbia University, and secure their attendance for the 3rd GSIAC Meeting and High Level Forum on Green Futures and Green Energy held in May 2013.

The objective of the summit was to seek and facilitate discussions to strengthen and further the resolutions adopted in the Rio+20 Outcome Document. Various ways for individuals and countries to collaborate on countering the challenges of resource-efficient growth and development and towards shaping a better future were explored in the summit.

Korea-ASEAN Research & Development Network Cooperation Forum 2013

The forum was jointly organised by MIGHT and Korea Institute for Advancement of Technology (KIAT), supported by Malaysia Korea Technology Centre (MyKOR), on 16 April 2013 at Hotel Istana, Kuala Lumpur.

The program targeted to intensify networks in research and development (R&D) across ASEAN countries through the promotion and establishment of strategic alliances and cooperation in the areas of technology transfer, commercialisation and investment between Korea and ASEAN countries beginning with Malaysia, Vietnam and Indonesia.

Eighty three companies with a total of 169 participants from Malaysia, Korea, Vietnam and Indonesia participated in the forum. The companies who were from various industries, academia and government agencies in Malaysia shared best practices of relevant topics presented by various Korean R&D Institutes including the Korean Evaluation Institute of Industrial Technology, Korean Institute of Energy Technology Evaluation and Planning and Korean Research Council for Industrial Science and Technology.

Following the forum, 18 companies have expressed interests in the technology partnering sessions and the identified potential collaborations in the areas of biomedical, renewable energy, telecommunication, biotech, green technology as well as engineering involving mechanical, electrical, electronic and mechanical.

9th National Sheikh Bahai Technopreneurship Festival 2013 in Iran

MIGHT was invited by Isfahan Science & Technology Town (ISTT) to participate in the 9th National Sheikh Bahai Technopreneurship Festival on 7 to 11 May 2013 to foster the culture of creativity, innovation and technopreneurship.

MIGHT participated in the International Working Workshop, the Technomart (Business-to-Business Network Meeting) and exhibitions. A total of 40 companies and over 200 representatives from 8 countries participated in the festival.

Dialogue on Smart Grid Initiatives With EU-Malaysia Chamber Of Commerce And Industry (EUMCCI)

On 14 May 2013, MIGHT organised a dialogue session with a consortium of EU companies under the EUMCCI umbrella. The consortium is made up of thirteen industry players involved in the energy sectors. The dialogue revolved around the current Smart Grid initiative in Malaysia and was attended by 30 participants from various sectors. MIGHT had also invited key government stakeholders from the Ministry of International Trade and Investment(MITI), Energy Commission, Tenaga Nasional (TNB), Universiti Tenaga Nasional (UNITEN) and other related organisations involved in the energy sectors. The dialogue ended successfully with an agreement for EUMCCI and local stakeholders to further deliberate on the Smart Grid initiative.

Malaysia – Organisation for Economic Co-operation and Development (OECD) Roundtable Discussion on Technology, Innovation and Industry 2013

As part of a continuous effort with the OECD, MIGHT with the co-operation of the International Science, Technology and Innovation Centre for South-South Cooperation (ISTIC) and OECD, organised a Malaysia-OECD Roundtable Discussion on Technology, Innovation and Industry at Palace of Golden Horses, Kuala Lumpur.

The strategic intent of the roundtable discussion was to review the recent developments of Malaysian economy with special reference to technology and innovation, and to discuss how both Malaysia and OECD could cooperate closely in promoting technology and innovation as one of the drivers for Malaysia's future economic growth.

41st Meeting Of The OECD Working Group On Innovation And Technology Policy (TIP)

MIGHT delegation led by MIGHT CEO and President, Dr Mohd Yusoff Sulaiman, and Chairman of ISTIC, Dato' Lee Yee Cheong (Chairman of ISTIC) attended the 41st Meeting of Working Party on Innovation and Technology Policy (TIP) under the OECD. Leveraging this platform, MIGHT worked closely with the OECD secretariat for Malaysia to obtain 'observer' nation status for Malaysia in the TIP. The 3-day meeting covered topics under System Innovation, Open Science, Innovation Policy Platform (IPP), and Strategic Public Private Partnership in Science Technology and Innovation (STI).

Global International Smart Partnership Dialogue 2013

MIGHT attended the Global International Smart Partnership Dialogue 2013 held in Dar Es Salaam, Tanzania, from 28 June to 1 July 2013, hosted by H.E Jakaya Mrisho Kikwete, the President of the United Republic of Tanzania. Themed 'Leveraging Technology for Africa's Socio-economic Transformation: The Smart Partnership Way', the dialogue focused on technology inclusiveness, policy frameworks and approaches for using innovation to foster sustainable development in Africa locally and globally.

Through MIGHT's participation, the smart partnership dialogue has engaged potential partners and experts for potential collaborative programmes and projects in the areas of high technology for country transformation. Besides the development of strategic content for the 3rd GSIAC meeting and Inter-Sessional Meeting 2013/14, strategic input for the next smart partnership dialogue to be hosted by the Government of Malaysia in 2015 were also discussed together with the list of possible delegates/experts/partners for MIGHT/GSIAC programmes and events.

Mauritius-Malaysia Collaboration

MIGHT delegation was in Mauritius from 3 to 8 July 2013 in response to the Government of Mauritius's invitation for a follow-up discussion with the Prime Minister of Mauritius and other ministers om the setting up of the proposed MIGHT Malaysia-Mauritius Cooperation Centre.

The MIGHT delegation was also invited to participate in the Indian Ocean Rim Association for Regional Cooperation Economic & Business Conference 2013. Discussions were held with Mauritian government representatives on a cooperation proposal where MIGHT would, through a Memorandum of Understanding (MoU), establish a regional office in Mauritius ('MIGHT–Mauritius Centre') subject to the Government's approval.

A MIGHT delegation also paid courtesy calls to several dignitaries in the Mauritian government facilitated by HE Mr Premduth Doongoor, High Commissioner of Mauritius to Malaysia. Among the key outcomes of the visit and meetings are as follows:

- The Prime Minister of Mauritius welcome the idea to established cooperation through the establishment of MIGHT Malaysia-Mauritius Cooperation Centre; the
- centre would be a testimony of the good relationship between two countries in the broad domain of Science & Technology and industrial development for mutual benefits;
- Consultations between Malaysia and Mauritius parties would continue to affect the Memorandum of
- Understanding (MoU) and the setup of a Joint Steering Committee which would meet in six months; with each
- side setting up its own committee comprising representatives from the private sector;
- Each relevant Mauritian ministry would submit to the Ministry of Foreign Affairs, Regional Integration & International Trade (the focal point for Mauritius until the proposed Joint Steering Committee is operationalised) action plans on projects that could be considered by MIGHT;
- Each relevant Mauritius Line-Ministries would have to integrate in its respective Programme Based Budgeting (PBB) plans to undertake cooperation with MIGHT

Based on the series of discussion with the respective ministries, the potential areas of sectorial development collaboration identified are:

- **The recycling of asphalt** which requires only 20 percent new funding as 80 percent of the cost represents the asphalt to be recycled;
- **Shipping, building and repairs, maintenance** and dry docking facilities: The Government is incurring expensive costs for ship maintenance in Durban and Singapore. There is need for capacity building in these areas;
- **Development of the port (de-bunkering and management of port issues)** in line with the strategy of the government to develop Port Louis as an accessible and competitive port as well as a trans-shipment hub for the region;
- **Traffic Management:** The lack of knowledge of the general frame and the details of traffic management in Mauritius can be assessed with Malaysian expertise;
- **Involvement of the CIDB:** The Minister invited MIGHT to instigate contacts, with the possibility of a visit at the earliest possible moment with the Construction Industry Development Board of Malaysia; and
- Other **major infrastructural planning and project implementations** including the successful management of drainage systems in cases of floods by Malaysian institutions.

Launching of Sustainable Development Solutions Network (SDSN) Malaysia Chapter

The Malaysian Chapter of the Sustainable Development Solutions Network (SDSN) organised by the Office of the Science Advisor, Prime Minister's Office and MIGHT with support from the United Nations Sustainable Development Solutions Network (UNSDSN), was launched by YB P. Kamalanathan, Deputy Minister of Education II at Universiti Teknologi Malaysia Kuala Lumpur on 10 October 2013. A total of 220 participants from various organisations attended this event.

Two panel discussions – 'Best Practices of Sustainable Development in Malaysia' and 'Towards Know edge-based Solutions for Sustainable Development Challenges" - were organised in conjunction with the launch of SDSN Malaysia Chapter. These themes provide the framework for the strategies and activities of the newly launched SDSN Malaysia Chapter. The Malaysian Chapter was proposed to be organised as a networked organisation with all the key stakeholders as equal partners.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Throughout the discussions leading to establishment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), capacity building has been recognised as being vital to the platform's success. The establishment of IPBES would:

- prioritise key capacity-building needs to improve the science-policy interface at appropriate levels
- provide and call for financial and other support for the highest priority needs related directly to its activities (as decided by the Plenary)
- catalyse financing for such capacity-building activities by providing a forum with conventional and potential sources of funding

IPBES Asia Pacific Regional Consultation

In conjunction with the High Level Forum on Biodiversity and Development Post 2015, a side meeting titled IPBES Asia Pacific Regional Consultation was held on 3 November 2013. The meeting was held to provide an opportunity to discuss and consider regional perspectives for the IPBES in preparation for IPBES-2 to be held in Turkey on 9 to 14 December 2013.

High Level Forum on Biodiversity and Development Post 2015 & Informal Consultation on IPBES and Capacity Building

The High Level Forum on Biodiversity and Development Post 2015 was officiated and launched by Dato' Sri Mohd Najib bin Tun Haji Abdul Razak, Prime Minister of Malaysia, on 4 November 2013 at The Royale Chulan, Kuala Lumpur. The forum was jointly organised by MIGHT, OSA and IPBES with support from the Government of Malaysia, and UNEP-WCMC. A total of 344 delegates from 72 countries across 5 continents (Asia, America, Europe, Africa and Australia) from various industries, academics, scientists and government agencies attended the forum.

The engagement focused on ways to advance the efforts of halting biodiversity loss as well as highlighting key goals and targets. The subsequent Informal Consultation on IPBES and Capacity Building was aimed to build further understanding on how capacity building could and should be addressed in the context of IPBES.

The key outcome of the forum is a revised list of capacity building needs and potential mechanisms for addressing the issue. Suggestions of criteria and processes for

prioritising capacity building needs were proposed besides recommendations on potential value of regular self-assesment on needs.

The high level forum on Biodiversity and Development Post 2015 also discussed the need for:

- Integrating biodiversity into the broader and overarching development goals in linking biodiversity to human-well-being and sustainable development.
- Providing the transformative changes required for an action oriented agenda on goals related to biodiversity
- Emphasizing the role of science policy interface for the SDGs be strengthened, and how can IPBES contribute in this respect, both in process and in substance
- Importance of addressing the means of implementation, including finance, technology transfer, debt relief, intellectual property rights, trade reform, and capacity building and facilitate technical and scientific cooperation

The Regional Workshop on Sustainable Development Goals (SDGs)

Following the 2012 Rio+20 United Nations Conference on SDGs promoting an economically, socially and environmentally sustainable future for our planet for present and future generations.

The SDGs will come into effect in 2016 and build on the Millennium Development Goals. The UN General Assembly's 30-member Open Working Group (OWG) on Sustainable Development Goals is responsible to prepare a proposal on the SDGs for consideration by the Assembly in September 2014.

Regional Workshop on Sustainable Development Goals: Priorities and Solutions

The Regional Workshop on Sustainable Development Goals was held on November 2013 in Kuala Lumpur, Malaysia. The workshop was a joint initiative of the SDSN Malaysia Centre, the SDSN Australia/Pacific Regional Centre (hosted by Monash University, Australia), MIGHT and the Office of the Science Advisor to the Prime Minister, Malaysia. It was supported by the Harold Mitchell Foundation and the Australian Government.

About 100 delegates across government, business, civil society and academia attended this workshop. This workshop explored how the UN's Sustainable Development Goals (SDGs) might be defined and implemented by countries across the Southeast Asia region and discussed the need to create a compelling regional vision of a sustainable future through various mechanisms for a sustainable development.

Key achievements:

- Established a regional network of experts and key stakeholders in various fields relevant to sustainable development from Southeast Asia and Australia.
- High level of enthusiasm throughout the region to engage in the SDGs process.
- Agreed to ongoing collaboration between the SDSN national and regional centres: Southeast Asia, Indonesia, Malaysia and Australia.
- Agreed to a workshop in Indonesia in 2014.
- Discussion and broad consensus on a number of key themes and processes that should be considered as part of the development of the SDGs.

12. Italy – Malaysia Collaboration

The Government of Italy seeks to strengthen relations and enhance collaboration between Italy and Malaysia based on the visit made by Dr Mohd Yusoff Sulaiman to the Italian Ambassador to Malaysia, Mario Sammartino. It was agreed for Malaysia to host the 1st Italy-Malaysia High Technology Roundtable Discussion in the country with an Italian Subject Matter Expert as the speaker.

Italy-Malaysia High Technology Forum 2013

The Italy-Malaysia High Technology Forum, jointly organised by MIGHT and the Italian Trade Commission Office in Kuala Lumpur, was held on 3 December 2013 in Kuala Lumpur. The forum was attended by more than 40 participants from the Malaysian biotechnology industry and government ministries/agencies representative.

The forum aims to obtain a better understanding on the development of biotechnology industry in Italy. The main purpose of inviting an Italian speaker to present during the forum was for knowledge transfer and to highlight the direction of Italian biotechnology industry. The forum also serves as a platform to share Italian biotechnology best practices with Malaysian industry players.

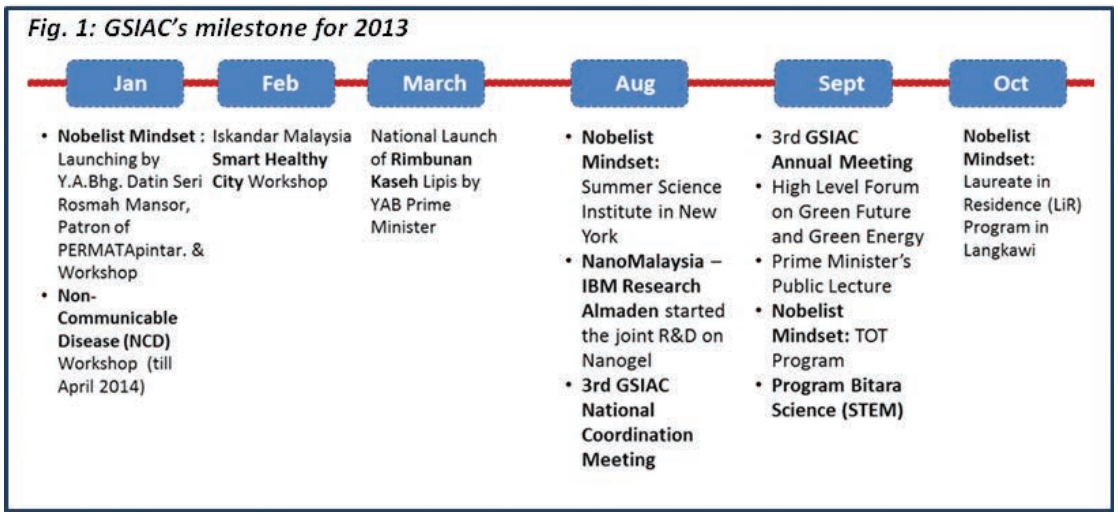
GLOBAL SCIENCE INNOVATION ADVISORY COUNCIL (GSIAC)

Since its beginning in 2011, GSIAC has managed to gather more than 35 scientists and prominent industry leaders worldwide through its series of annual meetings and collaborative programme implementations. These individuals outreach, contributions and input are critical towards shaping Malaysia's scientific and innovation agenda, which further proves that GSIAC has been accepted globally as a strategic platform.

For GSIAC, the year 2013 (Fig. 1) has been a further continuation of initiatives commenced in 2012 under the following key programmes:

- Malaysian Biomass Initiative (MBI)
- Smart Communities Initiative
- Human Capital Development

Fig. 1: GSIAC's milestone for 2013



The success of initiatives rolled-out under the GSIAC platform is substantial and can be measured according to the following indicators:

- Number of collaborations and joint programmes/ research/spin-offs
- Number of business opportunities that are made available
- Skills upgrades and enhancement
- Value-additions to Malaysia's national initiatives such as the Science, Technology, Engineering and Mathematics (STEM) and Non Communicable Diseases (NCD)

KEY HIGHLIGHTS OF 2013

Nobelist Mindset Programme

The Nobel Laureate Award has been rewarded to some 835 individuals and 21 organisations, between the year 1901 and 2012. None of the recipients were from South East Asia and only two recipients from Islamic countries - Pakistan and Egypt. However, these Islamic scholars did their research abroad in the west and not in their homelands.

Malaysia aspires to be among these global thinkers who have made a positive impact in the world. Hence, it is important for the Nobelist Mindset Programme to be well designed with suitable criteria and properties to overcome future challenges. The younger Malaysian generation talents need to be nurtured in originating and connecting ideas creatively and holistically.

UKM in collaboration with MIGHT, the Ministry of Education (MOE) and The New York Academy of Sciences (NYAS) organised the first Nobelist Mindset Workshop at Pusat PERMATApintar Negara, UKM, Bangi from 27 to 31 January 2013. 11 facilitators from the New York Academy of Sciences, 80 students and 20 teachers from various schools, and 20 young scientists from local research universities were involved in the workshop. This first workshop was officiated by Datin Seri Rosmah Mansor, Patron of PERMATA pintar.

The objective of the pilot programme was to provide exposure and training to students, teachers, and young scientist on the requisite mindset to become a Nobel Laureate. While Laureates are naturally a gifted group of scientists, much of what drives their vocation is a specific mindset with common characteristics in three main areas: persistence in the face of skepticism, seeing connections between ideas that are unrecognisable by others, and creativity.

The programme is targeted to three groups mainly students, teachers and young scientists with the following main goals:

- Career Pathways & Leadership
- Communications & Innovative Thinking
- The 21st Century Scientist & Project Management
- Networking & Collaboration

The Nobelist Mindset Programme had also organised two other workshops, the Summer Institute Programme in August and the Nobelist Mindset Programme 2 in September 2013. The Summer Institute Programme was held in New York City. In December, the Laureate-in-Residence (LiR) Programme was held on the 28 Sept – 4 October 2013 in Langkawi.

My Body is Fit and Fabulous (MyBFF) Programme with Ministry of Health and Ministry of Education

In continuation of the collaboration between the Ministry of Health (MOH) and The Sackler Institute on Nutritional Science, which was mooted by the Malaysian Prime Minister during the 2nd GSIAC Annual Meeting, the Council has endorsed a programme to combat Non-Communicable Disease (NCD) in

November 2012. The outcome of this programme is a series of workshop conducted by MIGHT and MOH to formulate frameworks and projects on 'Behavior Change Interventions in Combating Obesity among Malaysian Pre- and Primary School Children'. The workshop was held from January to April 2013 involving 60 experts in Nutrition Science.

A three-pronged segment to combat obesity has been outlined via this framework and they are targeted at primary school children, adolescent, and adults. This complete framework and programme which involves several ministries and international affiliations has been presented to the National Science and Research Council on 4 April 2013 and has been endorsed.

The result of these workshops is in the form of My BFF (My Body is Fit and Fabulous) Programme which is targeted at School, Home and Work. The MyBFF Intervention Programme is scheduled to start from January until June 2014.

Iskandar Malaysia Smart Healthy City Workshop

In pursuant to its Smart City initiative, Iskandar Malaysia has conducted a workshop from 21 to 22 February 2013 in Johor Bahru. The workshop was held to identify focus areas and fortify the health sector in Iskandar Malaysia, in line with its aspiration to position this economic corridor as a model project in Smart City development in Malaysia. Smart Healthy City will be the next main initiative for Iskandar Malaysia to focus on.

This programme was a follow up to the 2nd GSIAC Inter Sessional Meeting in November 2012 where Smart Healthy City will be among the next main initiative for Iskandar Malaysia. to focus on.

National Launch of Rimbunan Kaseh Lipis

During the first Inter-Sessional GSIAC Meeting in San Jose, California held in July 2012, Dato' Tan Say Jim of IRIS Corporation presented the Rimbunan Kaseh smart village project framework. The project was launched by Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak on 23 March 2013 in FELDA Lipis, Pahang. Rimbunan Kaseh is in line with Malaysia's Government Transformation Plan (GTP) to improve basic rural infrastructure and to raise the living standards of Lower Income Households (LIH).

Utilising the concept of sustainability, the 12-hectare 'Smart Village' is located in Pahang, Malaysia and includes a four-level aquaculture system where water cascades through a series of tanks based on the type of fish and its sensitivity level to water quality. Among the type of aquatic life available are tilapia, guppies and algae; with the latter two used to feed the larger fishes.

The Rimbunan Kaseh community offers education, training and recreational facilities, as well as 100 affordable post-consumer material built homes. Prices of these energy-saving homes range from RM50,000 to RM60,000.

Bitara STEM (STEM Festival) Programme

UKM's Bitara STEM Programme is considered as one of the high-impact programmes under the Human Capacity Building and Cradle to Career (C2C) initiative in GSIAC. To realise the C2C agenda, an MoA was signed between UKM with NYAS and NYUP oly to conduct the Bitara STEM programmes in September 2013.

The Bitara STEM Programme is an adaptation of the STEM education concept created by the National Science Foundation (NSF) in collaboration with the American Association for the Advancement of Science (AAAS) in order to develop STEM in the United States. This concept highlights the interrelationship of the three main entities and its benefits:

- Institutions of Higher Education (Institution of Higher Learning);
- Graduate fellows (graduate Students);
- Teachers, students and parents.

The first phase of Bitara STEM Programme covers the Energy Unit and was conducted from 26 to 30 September 2013. A total of 34 UKM graduate students from five UKM faculties, 89 school students between 13 to 14 years old and four practicing teachers were involved. These newly trained STEM educators then worked with 90 school students over a period of 3 days; to instruct the modules, conduct activities and experiments and create a student-led STEM exposition of the work on UKM's campus.

3rd GSIAC Annual Meeting (23 September 2013, San Francisco)

In preparation for the 3rd GSIAC Annual Meeting in San Francisco, a National Coordination Meeting was conducted on 22 August 2013. This session serves to brief the National GSIAC Council members on GSIAC progress updates and details of the annual meeting.

Two other key events were also held on the same day as the 3rd GSIAC Annual Meeting, on 23 September 2013. The theme of the GSIAC meeting, High Level Forum on Green Future and Green Energy and Prime Minister's Public Lecture are in line with the global direction of innovation, sustainability and green futures.

Table 1: Events and Meeting Agenda on the 23 September 2013

TIME	AGENDA
AM	**HIGH LEVEL FORUM 2013** Scene Setting: Enabling Ecosystem for Green Growth and Sustainable Development Panel Session 1 : Green Financing and Entrepreneurship Panel Session 2 : Capacity Building Panel Session 3 : Green Technology Applications
NOON	Keynote Address and Officiating of High Level Forum by The Prime Minister of Malaysia **Exchange of MoUs and Head of Documents:** • MIGHT & Asian Energy Investments Pte Ltd (AEI) • MIGHT & Cleantech Open (CTO US) • GE & GreenTech Malaysia (MGTC) • IBM Research – Almaden, USA & NanoMalaysia Bhd

TIME	AGENDA
PM	**3rd GSIAC ANNUAL MEETING** **GSIAC Progress Updates** • STEM Education by the 2nd Minister of Education, Dato' Sri Idris Jusoh • CISCO / NYAS Presentation on Global STEM Alliance • Nutrition Science Research Collaboration • Public Research Assets Study
	CEO SESSION: STI Strategies of Innovation Driven Companies **Green Sustainable Futures**
	• Prime Minister's Public Lecture organised by The Commonwealth Club of California

The key highlight of the High Level Forum 2013, which was attended by some 122 local and international participants, was the collaborations sealed through the exchange of documents under the realm of sustainable development and green futures. The collaborations are depicted in Table 2.

These collaborations would further enhance green entrepreneurship participation and competitiveness through the setting up of the JV Fund and the Clean Tech Competition Programme. It also widens the global linkage of Malaysia's research community as demonstrated via the joint research and development sealed between NanoMalaysia Bhd and IBM.

The 3rd GSIAC Annual Meeting was attended by 43 international and national council members. Apart from the progress updates on the existing programmes and initiatives, there was also a presentation by Gordon Feller of CISCO on the Global STEM Alliance Initiative.

The CEO Session was participated by some of the eminent industry leaders from reputable global companies such as Burril & CO., Genentech and Microsoft. There was a sharing session by these leaders on the STI Strategies of Innovation Driven Companies and Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak gave a public lecture on The Rise of Asia hosted by the Commonwealth Club California. More than 200 attendees were present.

Table 2: MoUs and Document Exchange during High Level Forum 2013

Nos.	Partners	Background/Objective
Green Financing & Entrepreneurship		
1	MIGHT and Asian Energy Investments Pte Ltd (AEI)	• Setup a Joint Venture Fund amounting to USD100 million in Malaysia. • The objective of the fund is for investment into efficient and renewable energy assets and business in Southeast Asia, to be done through this JV company
Capacity Building Towards a Green Future		
2	MIGHT and the Cleantech Open (CTO US)	▪ Explore mutual cooperation to foster the growth of the green technology industry. ▪ Showcase Malaysian Chapter on Cleantech Competition (CTC) with CTO US & the United Nations Industrial Development Organization (UNIDO) and the Global Environment Facility (GEF) as the key partners.
3	IBM Malaysia and NanoMalaysia Berhad	▪ NanoMalaysia and IBM signed a Memorandum of Understanding (MoU) on the 1 November 2012. ▪ On the 8 June 2013, a Joint Development Agreement (JDA) had been signed to further work on the areas out lined in the MoU. Ministry of Education Malaysia is funding the first phase of this programme. ▪ NanoMalaysia's business interest in connection with this potential relationship are initially focused in research, exploration, design, and develop Nanotechnology particularly in the following areas:- o Nanogel Star Polymer Anti-Microbial Research o Nanogel Star Polymers Nutraceutical Delivery Research

Nos.	Partners	Background/Objective
Green Technology Towards a Sustainable Future		
4	General Electric and Green Tech Malaysia	▪ The MoU is an extension of an agreement signed in 2011, between GE and Malaysian Green Technology Corporation to collaborate on green initiatives of strategic national interest, and is aligned with GE's commitment to support sustainable growth in Malaysia. ▪ Under the MoU, supported by Tenaga Nasional Berhad, GE and Malaysian Green Technology Corporation will collaborate to support the development of Smart Grid initiatives towards a more efficient and sustainable distribution of electricity across Malaysia.


Foresight &
Science To Action
(S2A)

Foresight

myForesight® Malaysian Foresight Institute

ForesightClub

myForesight®'s journey reached its second year in 2013. Activities and engagement were continuously conducted to mainstream Foresight and Futures Thinking, through Knowledge Sharing, dialogues platforms and contribution from and to international futures. myForesight® activities were undertaken with the following objectives in mind:

- Building national capacity in foresight & futures
- Exploration of future possibilities for better planning and decision making

Building national capacity in foresight and futures

Specific targeted programmes and events were developed to enable myForesight® to meet its objectives in building national capacity and maximise the potential of knowledge distribution, inculcating foresight and adoption of futures thinking for youth as well as public services. The following programmes were conducted for the benefit of the selected targeted groups:-

Since its establishment, myForesight® highly recognised the role of the younger generation in shaping the future. Interactive sessions with students from secondary schools to higher learning institutions is a consistent and effective outreach platform for nurturing the talented youths and forward looking leaders of tomorrow.

20 selected students from the Faculty of Technology Management and Business, UTHM underwent foresight training for a year to enable them to apply their understanding of foresight methodologies in their Bachelor Degree's Project I & II. The students were co-supervised by representatives of myForesight® as well as UTHM professors.

Three main research topics - Future of Works, Future of Families and Future of Green Technology were given to the students and their research skills were put to test in terms of creativity and forward looking initiatives, efforts and sources for data collection, analysis and other soft skills.

- **Young Lecturers Session**

Knowing the importance of Foresight and its applications, 22 lecturers of the Faculty of Technology Management and Business, UTHM attended a 2-day Workshop on 'Scenario Planning and Writing' to understand Foresight methodology through a case study on 'The Future of Faculty of Technology Management and Business'. The Knowledge Sharing workshop enabled the lecturers

to better understand Foresight practises in order to proliferate its importance to their student. This initiatives are part of the continuous efforts between myForesight® and UTHM to mainstream Foresight.

Iskandar Learning Festival

In support of the Iskandar Learning Festival (ILF) 2013, an interactive workshop was organised, attended by strategic planners from various organisations in Johor. A series of discussions galvanised participant's thought process into the future and the process of preparing Iskandar as a Mega City by 2025. Collective insights and information were gathered and shared throughout the workshop, allotting positive impressions on the importance of using Foresight methodology and practise in their strategic and future planning.

Futures Thinking in Public Services

In conjunction with The Public Services Department's Human Resource Development and Planning Workshop, myForesight® was invited to give a talk on 'Futures Thinking and Human Resources Planning'. The importance of incorporating future planning and thinking was highlighted to Government officials in order for Malaysia to achieve its objective in becoming a developed and high income country in the future. The session concluded on the importance of continuous improvement of services.

Exploration of future possibilities for better decision making

To undertake this objective, collaborative works were being done with various parties and organisations which involve multiple stakeholders' consultations. Amongst the activities undertaken were:-

- **Green Technology Foresight**
  In support of the realisation of sustainable future, the Green Technology Foresight 2030 (GTF2030) initiative was launched on 27 June 2013. Jointly undertaken by the Ministry of Energy, Green Technology and Water (KeTTHA), and MIGHT, supported by the Malaysian Green Technology Corporation (MGTC) and myForesight® (Malaysian Foresight Institute); GTF 2030 aims to identify the list of priority green technologies from nine sectors namely; Energy, Transportation, Buildings, Manufacturing, Waste, Water, ICT, Agriculture and Forestry to fulfil the National Green Technology Policy's mission and objectives.

  GTF2030 successfully involved the systematic development and assessment of plausible scenarios regarding Green Technology development and its impact on the 9 identified sectors that are important to Malaysia, up to year 2030.

- **Future of Public Services**

myForesight® had the opportunity to work with the Public Services Department on the topic of the Future of Public Services. The session highlighted future challenges and changing expectations of public services as well as exploring future possibilities on how public services will look like in the next 10 years. To date, we are currently working on having Futures Thinking and Scenario Planning modules to be embedded into Public Services personnel training.

- **Malaysia 2030 – National Unity**

The significance of national unity has triggered myForesight® to organise a Scenario Planning Workshop on National Unity – Future of Malaysia 2030 in December 2013. The objective of the workshop is to collect and collate input and insights from the participants. A series of workshops were held with various stakeholders to gauge their insights for building a scenario, which will be later be concluded in a report. The stakeholders for this initiative are not limited to Governing officials but also include the youth, NGOs and Opposition parties.

myForesight® also leverages its strong linkages with reputable foresight centres to share methodology expertise and foresight projects experiences. myForesight® actively engages and participates in pre-selected notable forums and workshops where the views of myForesight ®/ MIGHT/Malaysia would have an impact in policy reviews and agent of change, both nationally and internationally.

In 2013, myForesight® was invited to participate and contribute in two international Foresight and Futures events, which were the International RAHS Symposium (IRAHSS) in Singapore and The School of International Futures' (SOIF) residential retreat in Wilton Park, United Kingdom. Both events obtained contributions and support from strategic foresight and global trend experts and practitioners, sharing their experience and expertise in looking at the future. myForesight® took the opportunity to meet with Foresight enthusiasts from different countries, across governments, NGOs, consultancies, and multinational organisations and businesses, which have put the theories into practice. The realisation of myForesight®'s vision 'to be a renowned foresight centre in the region' is carried out through these continuous activities and programmes.

Science To Action (S2A)

Science To Action: Ensuring Sustainable Growth Beyond 2020

The Prime Minister of Malaysia proposed the concept of creating a comprehensive platform to mainstream Science, Technology and Industry as the catalyst for the nation's future growth during the Global Science and

Innovation Advisory Council (GSIAC) Annual Meeting in 2013.

This was followed by a series of engagements with stakeholders on Science, Technology and Industry (STI) that culminated with MIGHT Consultation 2013; where the idea of Science to Action (S2A) was further enhanced and fine-tuned. Subsequently, the idea and framework was presented to Prime Minister Dato' Sri Mohd Najib bin Tun Haji Abdul Razak; who acknowledged S2A as an agenda for the development of the nation beyond 2020.

Recognising that the country's future will be greatly influenced by an increasingly accelerated pace of science-based development, the Prime Minister launched the S2A initiative on 1 November 2013 during the 20th Anniversary Dinner celebration of MIGHT.

The S2A outlined that Malaysia needs to stop relying on natural resources due to the volatility of prices and progressively limited supply of resources in order to ensure sustainable growth beyond 2020. Focus is shifted more on knowledge intensive sectors where opportunities are self-generated providing multiplying effects. This latest initiative aims to intensify the application of science and technology for industry development, wellbeing of the people, and redress the governance of STI; to enable proper alignment with the New Economic Model (NEM). The S2A working framework will be based on three thrusts:

SCIENCE to ACTION

- **Science for Governance**

Improve public and private service delivery systems in order to create a condusive environment and ecosystem to catalyse the development of STI.

- Science for Well-Being

Focus on upgrading the nation's standard of living through usage and mastery of STI. This thrust emphasizes excellence in the national education system, especially in the field of STEM (Science, Technology, Engineering and Mathematics) by giving specific focus on the next generation of youths. It also covers the conservation of biodiversity and sustainable management of the environment.

- **Science for Industry**

The effort is to estalish an innovative culture and strengthen the capabilities of the industry to generate new wealth, including efforts to inculcate the Silicon Valley culture of 'Innovate or Perish'. One of the key elements is to encourage Government- Linked Companies (GLCs) and Small and Medium Enterprises (SMEs) to venture into new potential growth areas where returns on investments are multifold.

In a nutshell, S2A is an effort that will enable Malaysia to sustain its growth beyond 2020. It is a complementary initiative; innately supporting the various existing efforts

that have already been undertaken by the government, yet required to ensure the nation maximises its potential by realising the use of Science and Technology to generate new vibrant programmes. The S2A initiative is currently being vigorously attended to by the Office of the Science Advisor and is supported by MIGHT.

"Science to Action (S2A) is a National initiative that seeks to intensify and raise the profile of Science and Technology to support our nation's development. As we race towards 2020, and achieve our vision, we must also remember that it will take continued focus and investment in science and technology if we hope to have sustainable growth beyond 2020 and stay ahead of our economic competitors."

Prof Tan Sri Zakri Abdul Hamid
Science Advisor to the Prime Minister of Malaysia

EVENT HIGHLIGHTS

Event Highlights

22 January 2013
UAV Siswa Challenge

29 January
Nobelist Mindset Program

26 – 30 March 2013
Langkawi International Maritime & Aerospace Exhibition (LIMA2013)

16 April 2013
Korea-ASEAN R &D Forum 2013
Hotel Istana, Kuala Lumpur

16 April 2013
UK Trade Mission to Malaysia, MIGHT

14 May 2013
EUMCCI-MIGHT Dialogie on Smart Grid Initiatives

27 May 2013
60th Board of Directors' Meeting

25 May 2013
Malaysia-OECD Roundtable Discussion on Technology Innovation & Industry

13 June 2013
EU Roundtable Discussion MIGHT-European Union (EU) Delegation on 'High Tech Industry Opportunities'

23 June 201
MIGHT Annual Golf Tournament

27 June 2013
Launching of Green Technology Foresight 2030

29 July 2013
MoU Signing Ceremony between MIGHT & Thales on Rail Centre of Excellence

Event Highlights

12 July 2013
Visit by Charles Stunt University

4 September 2013
MoU Signing Ceremony between MIGHT-FELDA & Sime Darby

9 October 2013
EUMCCI Aerospace Financial Dialogue

10 October 2013
Launching of Sustainable Development Solutions Network (SDSN) Malaysian Chapter

26 August 2013
South Africa-Malaysia Networking & Business Seminar

10 October 2013
Interview with Jeffrey D. Sachs on SDSN Malaysia Chapter

11 October 2013
Launching of Malaysia Cleantech at 4th Global Entrepreneurship Summit 2013

28 October 2013
MIGHT Consultation 2013

6 February 2013
Combating Obesity Among Malaysian Primary Children

18 April 2013
Courtesy Visit by Embassy of Iran

7 November 2013
Sustainable Development Goals Workshop

12 November 2013
Biomass SMEs Recognition Programme & Final Knowledge Exchange Seminar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GREEN TECHNOLOGY FORESIGHT 2030

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