## 2014 ANNUAL REPORT



We make it happen!







# Together we make it happen

At MIGHT, we serve the nation together, hand-in-hand to achieve our visions and missions.

Our milestones are achieved by an excellent bond of teamwork, deeply conjoined to push us forward in advancing competency of high technology through partnerships towards sustainable development.

2014 ANNUAL REPORT

**MiGHT** 

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3517, Jalan Teknokrat 5
63000 Cyberjaya
Selangor Darul Ehsan
www.might.org.my

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Science 2 Action (S2A) & myForesight® Emerging Technology & Technology Nurturing Industry Intelligence & Offset Management Services MIGHT International



### **BACKGROUND**

Launched on 22<sup>nd</sup> February 1993 by Tun Dr Mahathir Mohamad, MIGHT was created to strengthen the country's future economic growth through the use of high technology.

MIGHT is driven by members drawn from both the public and private sectors, comprising key government ministries and agencies, public listed companies as well as small and medium enterprises (SMEs), universities, research institutions and multinational corporations (MNCs).





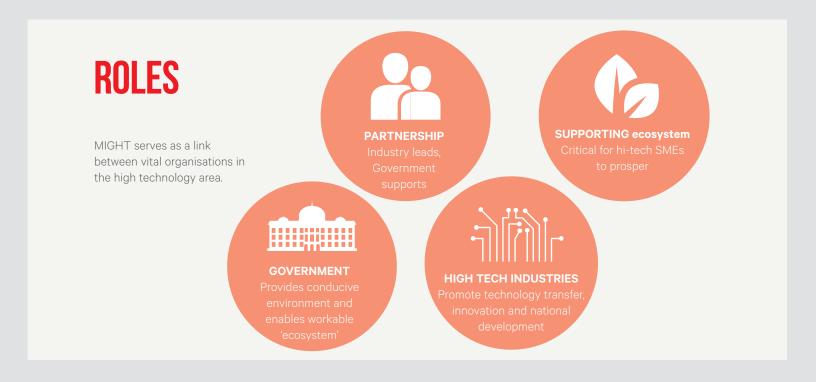
#### **ESTABLISHED IN 1993 BY THE GOVERNMENT**

- As a Not-For-Profit company limited by Guarantee
- Based on partnership between Public & Private sectors
- An organisation under the Prime Minister's Department

#### **CORE BUSINESS**

- Consensus building think-tank-do to harness technology for business and business for technology
- Consultative platform building linkages through membership and strategic partnership programmes
- Nurturing high-tech industries via necessary interventions



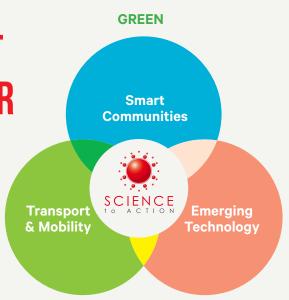


## **BENEFITS FOR STAKEHOLDERS**





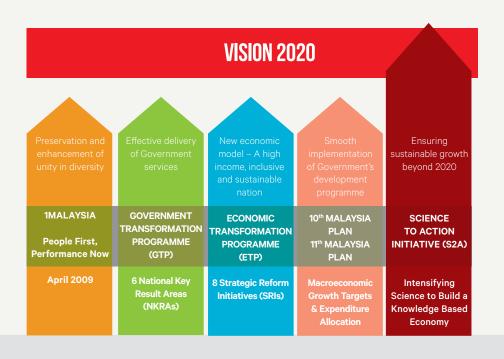
BASED ON OUR FORESIGHT ANALYSES, THESE ARE OUR FOCUS AREAS:



SECURITY & SUSTAINABLE DEVELOPMENT

All of MIGHT's efforts are encapsulated under the S2A intiative targets to raise the profile of science, technology and innovation in achieving national development goals. The S2A was mooted by the Prime Minister and launched in 2013 with MIGHT being the implementing agency.

VISION
Ensuring
sustainable growth
beyond 2020
MISSION
S&T supporting
Nation Building to
Raise the profile
of S&T in national
development

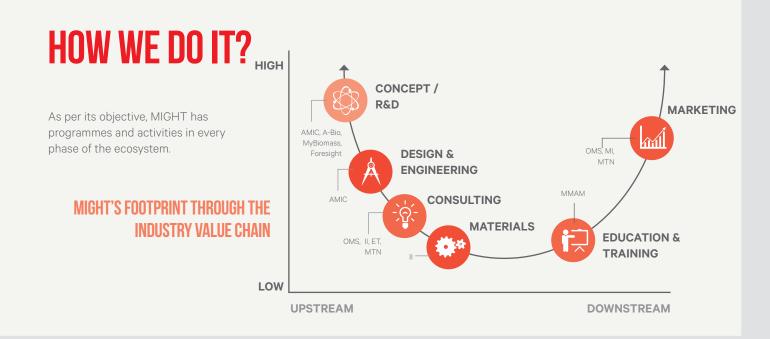




### **DEVELOPMENT OF INDUSTRY VALUE CHAIN**

MIGHT is focused on developing the industry value chain through three ways – charting the way for the industry through development of roadmaps and blueprints, developing industry models and methodologies, and focusing on the other areas such as human capital, technology readiness and developing design capability.





## STRATEGIES AND ACTION PLANS 2015

MIGHT Group's delivery mechanism will be strengthened at both parent and subsidiaries level.

#### Improve visibility Refocusing of **MIGHT** of MIGHT and its MIGHT's programmes/ initiatives towards activities delivering the national LEVEL agenda 0302 Improve services GSIAC - extending and for Lead and other expanding our linkages

## SBUS & INVESTEE COMPANIES

Expansion of MMAM and A-Bio in tandem with increased number of projects and greater in-sourcing

Focusing on Malaysia's niche industries including Agriculture-based and Manufacturing

members

## **HIGHLIGHTS OF ACHIEVEMENT**

#### POLICY DOCUMENTS (1993-2014)

and networking

#### 1993

- Business and R & D Opportunities in Applications of Nanotechnology
- National Technology Map on Telecommunications
- Malaysia Herbal Industry Outlook
- National Biotechnology Policy
- National Biotechnology Policy
- National Tech Mapping 1 & 2
- Maritime Blueprint

- National Aerospace Blueprint 2015
- Malaysian Pharmaceuticals
   Industry Action Plan
- Roadmap 2030 (expected)
- Malaysia Solar Roadmap 2030 (expected)
- Malaysian Biomass Industry Action
  Plan 2020
- Master Plan for Agro-Based Industry Park

- National Technology Foresight
- Future of Malaysian Public Services
- National Aerospace Blueprint 2030 (expected)
- Green Technology Scenarios 2030
- Alternative Scenarios for Malaysian Universities
- Future Rail 2030
- National R&D Prioritisation Report



## MIGHT & S2A





### **SCIENCE FOR INDUSTRY**



A collaborative effort between GOM and California Institute for Quantitative Biosciences to develop the biotechnology ecosystem in Malaysia, particularly in drug discovery



Technology development through a collaborative R&T model with global aviation leaders



A 360° approach in new STI business venture led by GLCs involved in Green Chemical Industry



An initiative jointly organised by United Nations Industrial Development Organization (UNIDO) and MIGHT, and supported by Global Environment Facilities (GEF)



### **SCIENCE FOR WELLBEING**

KL ENGINEERING SCIENCE FAIR (KLESF)

A multi-organisational collaborative programme conducted with the aim to promote STEM NEWTON-UNGKU Omar

Establishment of the NEWTON-UNGKU OMAR Fund

CRADLE TO CAREER (C2C)

Building innovative human capital through education. Addressing the need for STEM education including the nobelist mindset programme. RIMBUNAN KASEH

S&T driven community development project. Improving lives via application and use of S&T. NON COMMUNICABLE DISEASES (NCD)

Building collaborative programme to address the rise of NCD in Malaysia

## **SCIENCE FOR GOVERNANCE**

Advocating & promoting Malaysian sustainable development model globally SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK (SDSN) A review of the current STI undertakings in Malaysia done in collaboration with OECD

OECD COUNTRY REVIEW -Malaysia



# MIGHT FOR THE NATION — OBB TARGETS

Under the Outcome Based Budgeting, an integrated approach to public sector performance management in Malaysia, MIGHT's role would be to increase development of high technology industry through policy advisory, ecosystem, infrastructure development and human capital development. MIGHT has exceeded all the targets for 2014.

MIGHT has achieved and exceeded all the targets for 2014 within the nation building agenda based on four indicators – employment opportunities, total investments, penetration into global market and capability and capacity initiatives.



### **KEY PERFORMANCE INDICATORS**



## Corporate Values



**SMART** - We are insightful and forward-looking in pursuit of new technologies and new techno-business opportunities



**UNITY** - We mobilise collective efforts for partnership in optimising delivery impact, harmonise views and opinions to provide impartial propositions and resolutions to stakeholder and create benefits to society



**AGILE** - We are able to adapt and adopt. We are versatile and have an ability to promptly respond and master the challenges



**VIGILANT** - We are alert to opportunities through constant intelligence and monitoring of our environment



**ENTERPRISING** - We facilitate the commercialisation process and nurture innovation, technopreneurship and business for wealth creation.

## Mission

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

## Objectives

- Setting common direction for high technology industry development
- Partnering for delivering impact
- Nurturing techno-business innovation
- Developing capability and competency for high technology industry
- Securing a financial foundation for growth and sustainability

## Messages

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### The Patron of MIGHT



We are heading in the right direction but we need to speed up. We have to realise some of our challenges and shortcomings; and do some tweaking, whatever is necessary to improve further of our accomplishments.

 $4^{\rm th}$  Global Science and Innovation Advisory Council (GSIAC) Meeting 24 September 2014

#### YAB DATO' SRI MOHD NAJIB TUN ABDUL RAZAK

Prime Minister of Malaysia



Under the Science for Industry component under the S2A initiative, the focus is to establish an innovation culture and strengthen the capabilities of the industry to generate new wealth. These include the effort to inculcate the "Innovate or Perish". I believe that the key to this must be to encourage the Government-Linked Companies (GLCs) and Small and Medium Enterprises (SMEs) to venture into the new potential growth areas where returns on investments are multi-folds.

Launching Of Science 2 Action (S2A) Initiative Kuala Lumpur 1 November 2013

"Over the years, the GSIAC council has been gaining in strength and momentum with the remarkable collective wisdom of the council members. This GSIAC has been able to provide the lightning input and viewpoints as the role of science in charting the growth of the country through various programmes and initiatives."

4<sup>th</sup> Global Science and Innovation Advisory Council (GSIAC) Meeting 24 September 2014

"In many ways, Malaysia is a test case for the future energy economy. Too often, the climate and energy debate is presented as a problem. The new energy economy presents a huge opportunity... Countries like ours – fast-developing nations in favour of ambitious action on climate change – are living proof that economy and environment can prosper together. And we have structural advantages that will allow us to capitalize on the changes to come."

International New York Times 'Energy for Tomorrow' conference, Kuala Lumpur,
19 November 2014

"We believe we are on the right track in terms of the GDP increase. Generally speaking, we grow at 5-6% and at the first half of this year we have a 6.3% growth, which makes Malaysia the best performing Asean economy for the first half of 2014. But we also realise that GDP or GNI is not the only story, because it has two components. It has the capital economy and the people. If you consider wages and salary - and we have to take them into account - that is also another aspect of achieving high income nation."

4<sup>th</sup> Global Science and Innovation Advisory Council (GSIAC) Meeting 24 September 2014

# The Minister in Charge of MIGHT from Prime Minister's Department



Malaysia is progressing to become a developed country. Agendas such as Science to Action or S2A will help us build a stronger and developed nation in the eyes of the world.

YB DATO' MAH SIEW KEONG

High technology has been the essence in many developed countries around the world to drive their economic growth. Finding ways to improve high technology will require the synergy between knowledge and innovations. 22 years ago, MIGHT was launched to accelerate the future growth of high technology in Malaysia in the government-industries platform. This is the way forward for us to be competitive in this era of globalisation.

Being the Minister in charge of MIGHT, I can comprehend the challenge in materialising their vision and targets. However, I can see the continuous effort the members have put in to assure that Malaysia being ahead in terms of competitiveness in the high technology industry. Drawn by the members from the public and private sector has put MIGHT in a good position to understand the nature of the industry and also the policy being engineered by the government.

Presently, Malaysia is progressing to become a developed country. Challenges of the middle-income trap have become more prevalent. As a result, it is crucially important for us to increase productivity. This will then diversify our country's income, thus making us more dynamically robust to global challenges. Agendas such as Science to Action or S2A will then help us build a stronger and developed nation in the eyes of the world.

S2A is the agenda that paves the way for science, technology and industry. It is specially engineered in a way that it will tackle the areas of industry, human development (wellbeing) and governance. Therefore, it will not only enrich us with greater job opportunities, but also equip us with technological knowhow, which would then mark us as a leader in this region.

Other than that, I can also see MIGHT's involvement in developing strategies for the ship-building/ ship repair, aerospace, rail and energy sectors. These are the sectors that would strategically increase our GDP. The ship-building/ ship repair industry itself has the spin-off effect to other key industrial sectors such as iron and steel, electrical and electronics, and machineries. On the other hand, the launching of the Malaysian Aerospace Blueprint 2030 will mark one of MIGHT's efforts in continuously aligning the aerospace industry. Therefore, MIGHT's roles in these industries are significant to assure our steady and sustainable growth.

I can see all these efforts as significant as they would sustain what the Economic Transformation Programme (ETP) has and will achieve. Being a member of the Global Science and Innovation Advisory (GSIAC) I can see how this will chart our country's future in propelling into economic sustainability and competitiveness. Therefore, I encourage MIGHT to keep up this noble determination so that we can finally see the rakyat prosper in this rich land we live in. I will always be supportive in whatever is good for the future of our country.

There have been so many great works being done and this report transpires the achievements of MIGHT throughout 2014. I hope this report will not only reflect MIGHT's annual achievements, but also be an inspiration to those involved with MIGHT —and therefore motivate each and everyone of them to work towards Malaysia's dreams.

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# The Chief Secretary to The Government of Malaysia



To be a knowledge driven country is no longer an option, but a necessity. MIGHT's key mandates in developing the high technology capacity and capability of the nation is critical and must be strengthened.

TAN SRI DR ALI HAMSA

The use of science, technology and innovation as the accelerator for our path towards becoming an advanced nation with a sustainable future has been embraced by our nation through the launch of Science to Action (S2A) in 2013. New platforms involving emerging and converging technologies, from building smart communities in urban and rural areas, to open data that we have only started to embrace in order to keep up with the pace of a digitally-driven global economy, are becoming increasingly important. It is fundamental in our endeavour to manage our natural resources, and in addressing challenges related to energy, water supply and natural disasters, as well as security and health concerns.

As we learn from the economic and security challenges that confronted the nation in 2014, we realise the tasks ahead of us to become ever resilient will be even more challenging and demanding. To be a knowledge-driven country is no longer an option, but a necessity. I believe MIGHT's key mandates in developing the high technology capacity and capability of the nation is critical in this context and must be strengthened.

I also believe the collaborative framework by MIGHT in engaging the public and private sectors will further help to enhance our public service delivery and improve Malaysia's business environment. The success of public-private sector collaboration is reflected in Malaysia's positive performance in the World Bank

Doing Business 2015 report, where Malaysia is placed at a commendable 18th position among 189 economies in the ease of doing business.

As we strive towards our goal to create a niche for ourselves in the global tech-based value-chain, the measure of success is the enhancement of the quality of life for the rakyat.

# The Joint Chairman (Government)



During crises and disasters, public trust in both science and policymaking is very crucial. Science advice to governments has emerged as a discipline in its own right —which is both art and science.

PROFESSOR TAN SRI ZAKRI ABDUL HAMID
Science Advisor to the Prime Minister of Malaysia

2014 has been a challenging year for Malaysia and has been one of the most difficult years in Malaysia's history. The disappearance of flight MH370 in March, whose search is now the longest in the history of modern aviation; and the July downing of MH17 in Ukraine were very disheartening. Malaysia was then tested with another disaster at the end of the year. The east coast floods left our nation devastated.

Despite all these challenges and tragedies, we have seen Malaysians coming together in a magnificent display of solidarity and unity. It goes to show how tragedies could unite rather than divide, reinforcing the impulse to co-operate rather than confront.

Science could also play a crucial role in times of crisis and offer key solutions to improve preparedness and response. The New Economic Model framework and the National Science to Action (S2A) initiative championed by Prime Minister Dato' Sri Najib Razak aim to invigorate the science sector to generate gamechanging ideas and strategies to create wealth and opportunities. The S2A nurtures networking among researchers, academics, government agencies and the private sector —collaborations that could play a crucial role in securing our national wellbeing.

As part of the S2A initiative, the Asia-Pacific Climate Change Adaptation Forum was held in Kuala Lumpur last October. With over 150 speakers and 30 sessions, the Forum was among the biggest climate change adaptation events in the region, attended by more than 500 climate change adaptation practitioners together with public and private sector officials and top experts. The forum highlighted a variety of practical reduction and climate change adaptation measures in the region. Examples include the broad-based sharing of risks of projected flood losses and damage, as well as wetland restoration and ecosystem based measures to strengthen existing human-engineered protection.

During crises and disasters, public trust in both science and policymaking is very crucial. Science advice to governments has emerged as a discipline in its own right —which is both art and science. This is what delegates to the world's first summit of science advice shared in Auckland last August. Convened by the International Council for Science (ICSU) and hosted by New Zealand's Chief Science Advisor, Sir Peter Gluckman, the historic summit marked a turning point in the global awareness that robust and credible science has an important place in public policymaking. In conjunction with the summit, the Second APEC Economies' Chief Science Advisors and Equivalents Meetings were also held. The main objective of the meetings was to provide the opportunity for Chief Science Advisors to discuss issues of particular importance to the region, and to share best practices in order to enhance the role of science for wealth creation and societal benefits.

On top of that, international collaboration is increasingly important, providing opportunities to work with the best in the world, gain access to large-scale international facilities and endemic research sites. It encourages new ideas, fostering new opportunities for innovation in support of growth and to tackle global challenges. As part of the S2A initiative, the Newton-Ungku Omar Fund was established. It is a joint initiative between the Malaysian and British governments. The fund allocates RM41.6 million (£8 million) for the first of its five-year duration to strengthen research and innovation partnerships between both countries. The fund's goal, among others, is to make a substantial impact to the problems presented by climate change as well as sustainability.

Moving forward to 2015, Malaysia will be playing a much bigger role in world affairs since it would be chairing ASEAN as well as holding a non-permanent seat in the United Nations Security Council. Both the appointments bear testimony to Malaysia's long-standing reputation as a responsible member of the international community, particularly in the context of international peace and security. These appointments also present Malaysia with a golden opportunity to make meaningful contributions to regional and international communities in the area of science diplomacy.

On behalf of the Board of Directors, management and members of MIGHT, I wish to take this opportunity to pay tribute to MIGHT's Patron, Malaysia's Prime Minister Dato' Sri Najib Razak for his guidance, wisdom and vast insights.

On this note, 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, and my co-chairman, YBhg Tan Sri Datuk Dr Ahmad Tajuddin Ali, as well as 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.

# The Joint Chairman (Industry)



Looking at most of today's global indicators, we are on the right path and have become a model country of a developing nation. However, we live in a rapidly changing world and cannot afford to be complacent or we risk being left behind.

#### TAN SRI DATUK DR. AHMAD TAJUDDIN ALI

Chairman, UEM Group Berhad

It is my pleasure again to pen a few words to present the MIGHT Annual Report 2014.

Throughout the ensuing pages, you will find snapshots and descriptions of activities conducted by MIGHT during the past twelve months. This report is segmented into MIGHT's divisional operational activities; foresight, international engagement, industry intelligence, smart communities, etc. However, regardless of the labelling, the programmes and activities were created and conducted with our stakeholders in mind.

When Prime Minister Dato' Sri Najib Razak announces the Science to Action (S2A) agenda, it is to encourage more science and technology based activities towards nation building. One of the main thrusts of S2A is Science for Industry where the goals are to promote the use of science & technology to improve and strengthen industry as well as to create new sources of economic growth through exploitation of science & technology.

These goals have always been the tenets of MIGHT and these were achieved through industry consultations and strategic collaborations with our partners. On this front, I as co-chair of MIGHT, have continuously challenged the management and staff to be relevant to our stakeholders with the above mentioned goals in mind.

How do we keep ourselves relevant?

This is done by continuously scanning the industrial and technology landscape and engaging our stakeholders, understanding issues at hand as well as having the foresight to anticipate some of the emerging trends, risks and opportunities that the country will face. For this purpose, MIGHT continues to create platforms and programmes which, more often than not, would be bringing together representatives from the government, industry and the academia.

Therefore, listening is an important attribute, which is preached here at MIGHT. Since we have neither the statutory power to act as a regulator nor do we have the financial resources for industry development specifically allocated to us, our ingenuity to build consensus and partners to deliver impactful programmes and initiatives is something I am proud of

These are challenging times ahead for our country as we strive to become a fully developed nation. To date our development has been based by our ability to leverage on the following factors; visionary leadership, political stability, sound planning mechanisms as well as an abundance of natural resources.

Looking at most of today's global indicators, we are on the right path and have become a model country

of a developing nation. However, we live in a rapidly changing world and cannot afford to be complacent or we risk being left behind. Therefore moving forward, our mastery of science and technology is required to propel the country further and ensure sustainable growth beyond 2020.

To date, our firms' technology readiness is not at par with those of developed nations. Our statistics for students in science, technology, engineering and mathematics (STEM) make for grim reading. This surely doesn't augur well for the future as we try to promote technology uptake for business. Addressing these matters will be amongst the main agenda of MIGHT's programmes and activities.

I am glad to note that some of the programmes undertaken by MIGHT have generated quite an interest and now requested to be operated or transferred under different entity within the government. I see this as a positive development because MIGHT, since its inception has acted like a surrogate mother, nurturing national programmes to an extent where it is mature enough to be carried out without problems. There have been quite a number of examples of this throughout the years and I believe there will continue to be more for the foreseeable future. This is also a demonstration of relevance, so by this time next year some of these programmes will no longer be managed by MIGHT but will be undertaken by some other entities.

At MIGHT, we will move on. There are emerging technology sectors that need identifying, opportunities worth exploring, trends to be analysed and issues to be addressed.

As the lyrics of the Hollies song goes, *The road is long with many a winding turn that leads to who knows where*. Therefore, we at MIGHT will continue to anticipate where the road leads, anticipate and avoid pitfalls and strengthen the platforms towards nation building.

On this note, I wish to thank our stakeholders —for their continued support and commitment in ensuring programmes and activities undertaken by us continue to be relevant and well received.

I would like to conclude by thanking my co-chair, The Science Advisor to the Prime Minister, Professor Tan Sri Dr Zakri Abdul Hamid and the rest of the Board members of MIGHT for their drive and commitment to the nation's high technology agenda.

## The President & Chief Executive Officer



2015 will be an equally challenging year. We will continue to be brave and dynamic in pushing the industry's agenda for implementation and adapt to change faster as the situation demands. I have no doubt that MIGHT and our collaborators will rise to the challenge, and deliver.

DATUK DR MOHD YUSOFF SULAIMAN

In 2014, MIGHT successfully consolidated and integrated our technology and industry development efforts under 3 key thematic areas: green and sustainable development, transportation and mobility, and EMERGING TECHNOLOGIES. We also provided advisory and consultancy services to our members and clients, and facilitated the implementation of key programmes such as Foresight, Global Science & Innovation Advisory Council (GSIAC), Global Cleantech Innovation Programme (GCIP) and Newton - Ungku Omar Fund, among others.

Being an agency under the Prime Minister's Department, we sought and were given mandates by the Government on strategic programmes and areas of interest. The latest and most significant mandate is the SCIENCE TO ACTION or S2A Initiative. S2A—which is equivalent to a national science, technology and industry (STI) transformation programme— was launched in November 2013 by YAB Prime Minister Dato' Sri Mohd Najib Tun Abdul Razak. Subsequently in April 2014, the Economic Council approved MIGHT as the implementing agency for S2A, and a separate funding was given to MIGHT to undertake its activities and programmes. Through the S2A Initiative, MIGHT

is working in partnership with all our collaborators to transform the nation's science future landscape through systematic governance, enhancing our rakyat's wellbeing and strengthening our industry's competitiveness.

We continue to aspire to be the nation's leading referral centre for high technology policy-making and strategic implementation. From the continuous visits by ministers and leaders from the public and private sectors, local and international, I believe we have already become the preferred centre. MIGHT has become a strong and credible source for technology FORESIGHT and horizon scanning, developer and implementer of workable models for Industry's Centres of Excellence such as AMIC that leverage on university-industry-OEMs collaboration, and thus ensuring a conducive and knowledge-friendly ecosystem for high technology development and innovation.

On international networking, we established and implemented collaborative programmes with several of United Nation's bodies such as UNCTAD, UNESCO, UNDP and UNIDO. We paved the way for Malaysia's participation in OECD's Technology and Innovation

Partnership programme that allows us to share and learn the latest development in technology and innovation, and expand our network with the brightest brains from OECD member countries. We always have our SMEs in our mind and heart. Through our collaboration with UNIDO through GCIP for cleantech SMEs, we have successfully identified and nurtured potential entrepreneurs in cleantech. The winner of the GCIP 2014 represented Malaysia at the Silicon Valley pitching exercise and was voted the best amongst the participating countries.

Through GSIAC, chaired by YAB Prime Minister, we advanced the SMART COMMUNITIES programme in Malaysia and worked closely with the Melaka State Government to help implement its Green City Action Plan. We helped to create new business opportunities for local companies in greentech. In the education sphere, MIGHT International worked closely with the New York Academy of Science (NYAS) to promote the STEM Global Alliance. We also organised the 1st Kuala Lumpur Engineering & Science Fair (KLESF 2014) with our partners UTAR, ASM, PSN and IEM, which attracted 50,000 students, teachers and parents. The MIGHT, Sime Darby and FGV's joint-venture in our waste to wealth programme, Mybiomass, is getting closer towards the realisation of the first 2<sup>nd</sup> Generation biomass refinery in Asia.

The continued support of our industry members and players is both critical and essential in delivering the mandates that have been given to us. We welcome First Solar, Safran and SMH Rail as new members of MIGHT. Through our INDUSTRY INTELLIGENCE, we strengthen the bond and linkages with the practitioners, industrialists and technologists so that we will continue to be their spokesperson in channelling their thoughts and ideas to the Government. In this way, MIGHT will remain relevant as a neutral and multi-disciplinary facilitator and promoter for Government-Industry partnership that are aligned and mutually supportive for the benefit of the nation.

2015 will be an equally challenging year. But as the lyrics of a popular 70's song goes, when the going gets tough, the tough get going, we will strive to give our best and conduct our affairs in-line with our Corporate

values that is SUAVE - Smart, United, Agile, Vigilant and Enterprising. We will continue to be brave and dynamic in pushing the industry's agenda for implementation and adapt to change faster as the situation demands. I have no doubt that MIGHT and our collaborators will rise to the challenge, and deliver.

On behalf of the management of MIGHT, I would like to extend my utmost appreciation for the achievements of 2014 to all Board members and I look forward to your continued support and contribution in 2015. The management has largely benefitted from the wisdom and guidance of our Board under the joint-chairmanship of Professor Tan Sri Zakri Hamid and Tan Sri Tajuddin Ali. My special thanks to MIGHT's retired directors Dato' Dr Rosli Mohamed & Dato Dr Azhar Yahaya (MOSTI), Dato' Vasudevan a/I Natchimuthu & Mr See Chee Kong (MITI), Dato' Sri Halim Shafie & Dr Farid Mohamed Sani (TM Berhad) and Dato' Mohd Zafer Mohd Hashim & Puan Afidah Mohd Ghazali (Bank Pembangunan) for their excellent contributions and support.

The recent appointment of YB Dato' Mah Siew Keong as the Minister-in-charge of MIGHT is a big boost to us and has provided MIGHT with a new source of inspiration and excellent communication platform with the top leadership of the country, parliamentarians and the public on science, technology and industry.

As the curtain is raised for 2015, I would like to express my deepest appreciation and gratitude to all of you in Malaysia and beyond, and look forward to your continued cooperation and support that have enabled MIGHT to provide the leadership in the nation's technology and industrial development. Rain or shine, we will make it happen, together!



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CORPORATE INFORMATION

## Corporate Information

#### **Registered Office**

Suite C-5-4, Wisma Goshen Plaza Pantai, Jalan Pantai Baharu 59200 Kuala Lumpur

#### Place of Business

MIGHT Building 3517, Jalan Teknokrat 5 63000 Cyberjaya Selangor

#### **Principal Banker**

CIMB Bank Berhad Putrajaya Branch 2M11-A, Kompleks Kementerian Kewangan No. 5 Persiaran Perdana Presint 2 62592 Putrajaya Company Secretary

#### **Company Secretary**

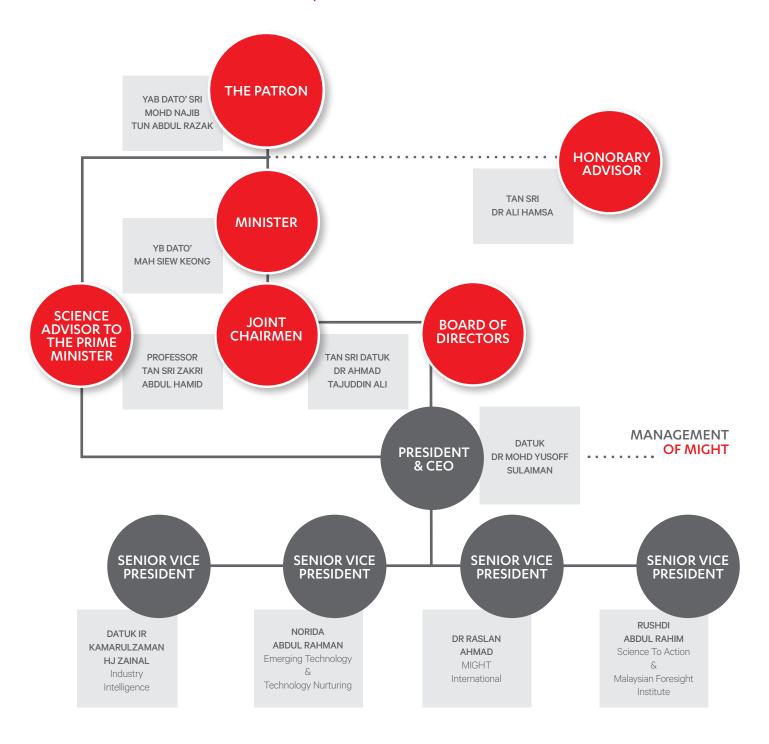
AAJ Management Services Sdn Bhd Suite C-5-4, Wisma Goshen Plaza Pantai, Jalan Pantai Baharu 59200 Kuala Lumpur

#### **Auditor**

BDO 12<sup>th</sup> Floor, Menara Uni. Asia 1008, Jalan Sultan Ismail 50250 Kuala Lumpur

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## Corporate Structure



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## **Board of Directors**



PROFESSOR TAN SRI ZAKRI ABDUL HAMID Science Advisor to the Prime Minister of Malaysia Prime Minister's Office



TAN SRI DATUK DR AHMAD TAJUDDIN ALI Chairman UEM Group Berhad



**DATUK SERI OTHMAN HJ MAHMOOD**Senior Deputy Secretary General
Prime Minister's Department



DATO' SRI DR NOORUL AINUR MOHD NUR Secretary General Ministry of Science, Technology and Innovation (MOSTI)



TAN SRI DATO' SERI MOHD BAKKE SALLEH
President & Group Chief Executive
Sime Darby Berhad



TAN SRI DATUK TEE HOCK SENG Group Managing Director Bina Puri Holdings Bhd



TAN SRI DATO' SERI AHMAD RAMLI MOHD NOR Executive Deputy Chairman/Managing Director Boustead Heavy Industries Berhad



**DATUK KHALILUR RAHMAN EBRAHIM**Executive Chairman
System Consultancy Services Sdn. Bhd



**DATO' DR MOHAMED ARIFFIN ATON**Chairman
Core Competencies Sdn Bhd



**DATO' P'NG SOO HONG**Managing Director
First Solar Malaysia Sdn Bhd



MD ARIF MAHMOOD

Executive Vice President & CEO

Downstream Business

PETRONAS



M.SAROJINI DEVI S.MARUTHAMUTHU

Deputy Under Secretary, Tax Analysis Division

Ministry of Finance (MOF)



AZIZAH HAMZAH
Director, K-Ekonomi Section, Economic
Planning Unit (EPU)
Prime Minister's Department



**DATUK DR MOHD YUSOFF SULAIMAN**President & Chief Executive Officer
Malaysian Industry Government Group for
High Technology (MIGHT)

30 CORPORATE INFORMATION

## Alternate Directors

#### PUAN YATIMAH SARJIMAN

(Alternate Director to YBhg. Datuk Seri Othman Haji Mahmood)

#### MR MATTHEW TEE KAI WOON

(Alternate Director to YBhg. Tan Sri Datuk Tee Hock Seng)

#### YBHG DATO' SERI ABD WAHAB MASKAN

(Alternate Director to YBhg. Tan Sri Dato' Seri Mohd Bakke Salleh)

## Senior Management Team

CORPORATE INFORMATION



**DATUK DR MOHD YUSOFF SULAIMAN**President & Chief Executive Officer



NORIDA ABDUL RAHMAN
Senior Vice President
Emerging Technology & Technology Nurturing



**DATUK IR KAMARULZAMAN HJ ZAINAL**Senior Vice President
Industry Intelligence



**DR RASLAN AHMAD**Senior Vice President
MIGHT International



RUSHDI ABDUL RAHIM
Senior Vice President
Malaysian Foresight Institute
& Science To Action



NIK AHMAD FAIZUL ABDUL MALLEK Vice President Special Projects



MOHD ZAKWAN MOHD ZABIDI
Vice President
Lead Special Officer To The Science Advisor
To The Prime Minister



ABDUL HALIM MOHD BISRI
Vice President
MIGHT Technology Nurturing

32 MIGHT's 19<sup>th</sup> AGM

## MIGHT's 19<sup>th</sup> Annual General Meeting (AGM)

MIGHT's 19<sup>th</sup> Annual General Meeting (AGM) was convened at Kuala Lumpur Golf & Country Club on 13 June 2014, chaired by Joint Chairman of MIGHT, Professor Tan Sri Zakri Abdul Hamid. The AGM was attended by 100 guests comprising representatives of 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 a panel discussion on the topic of Science Communications with local media experts from broadcast, printed and digital media. The interactive session explored issues on how to best approach increasing the coverage of science in the media upon realising the need for an effective science communications to promote the rakyat's interests in understanding STI.

The AGM successfully concluded on a high note about mainstreaming science for the industry, rakyat, and governance through the Science To Action (S2A) initiative launched in November 2013 by the Prime Minister.

The AGM also highlighted the completion of a number of key reports in 2013, namely the National Technology Foresight 2030, the Biomass Action Plan 2020: Nurturing SMEs, the Biomass Economic Benchmaking Report, the Solar Industry Report 2012/2013 as well as the launch of the Malaysia Cleantech Accelerator and Competition Programme, a joint collaboration between MIGHT, UNIDO and Cleantech USA.

During the AGM, the Audited Account of the Company for the year ending 31 December 2013 together with the Reports of the Directors and Auditors thereon were received and endorsed by the members. Similarly, Messrs. BDO Binder was reappointed as the Auditors of the Company for the ensuing year until the next AGM.



# MIGHT Membership

LEAD MEMBERS

MIGHT was established as an independent, industry-driven and non-profit organisation in 1993. MIGHT offers a platform for collaboration 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 perform analysis on high technology industry and business opportunities.

MIGHT members are from various fields, including key government ministries and agencies, public listed companies, 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
- Contribution in providing input 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 registered in Malaysia and owned by Malaysian citizens
- Associate Members Non-Malaysian controlled companies

- Bank Pembangunan
   Malaysia Berhad
- 2. Petroliam Nasional Berhad (PETRONAS)
- 3. Sime Darby Berhad
- 4. TM Berhad

ASSOCIATE MEMBERS

BAE Systems (International)
 Limited

2. Rolls - Royce International Limited

3. Thales Malaysia Sdn Bhd

4. Safran Aerospace Defence Security Malaysia Sdn Bhd 2014 ANNUAL REPORT

MIGHT

35

MIGHT MEMBERSHIP

# MiGHT

PERMANENT MEMBERS

### ORDINARY MEMBERS

- Advanced Air Traffic Systems (M) Sdn Bhd
- 2. Ambank Group
- 3. Aron Sdn Bhd
- 4. Aerospace Composites Malaysia Sdn Bhd
- 5. Atlas X Sdn Bhd
- 6. Axiata Group Berhad
- 7. Berjaya Group Berhad
- 8. Bina Puri Holdings Bhd
- 9. Boustead Heavy Industries Corporation Berhad
- 10. Clara International Beauty Group
- 11. Composites Technology Research Malaysia Sdn Bhd
- 12. Core Competencies Sdn Bhd
- 13. Destini Prima Sdn Bhd
- 14. Dominant Opto Technologies Sdn Bhd
- 15. DRB-HICOM Berhad
- 16. Duopharma (M) Sdn Bhd
- 17. Edaran Otomobil Nasional Berhad (EON Berhad)
- 18. First Solar Malaysia Sdn Bhd
- 19. Gas Malaysia Sdn Bhd
- 20. Heitech Padu Berhad
- 21. Kay Marine Sdn Bhd
- 22. Keretapi Tanah Melayu Berhad
- 23. Khazanah Nasional Berhad
- 24. Kuala Lumpur Kepong Berhad
- 25. Limkokwing Integrated Sdn Bhd
- 26. Malaysia Airlines
- 27. Malaysia Airports Holdings Berhad

- 1. Economic Planning Unit (EPU)
- 2. Energy Commission
- 3. Forest Research Institute of Malaysia (FRIM)
- 4. Institute of Strategic and International Studies (ISIS) Malaysia
- 5. Kulim Technology Park Corporation Bhd
- 6. Majlis Amanah Rakyat (MARA)
- 7. Malaysia External Trade Development Corporation (MATRADE)
- Malaysian Administrative Modernisation and Management Planning Unit (MAMPU)
- Malaysian Agricultural Research and Development Institute (MARDI)
- 10. Malaysian Industrial Development Authority (MIDA)
- 11. Malaysian Maritime Academy Sdn Bhd (ALAM)
- 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 Malaysia
- 18. Ministry of Defence Malaysia
- 19. Ministry of Finance Malaysia
- 20. Ministry of Home Affairs Malaysia
- 21. Ministry of International Trade and Industry Malaysia (MITI)
- 22. Ministry of Science, Technology and Innovation Malaysia (MOSTI)
- 23. Office of Science Advisor to the Prime Minister
- 24. SIRIM Berhad
- 25. Technology Park Malaysia Corporation Sdn Bhd
- 26. Universiti Kebangsaan Malaysia (UKM)
- 27. Universiti Malaya (UM)
- 28. Universiti Putra Malaysia (UPM)
- 29. Universiti Sains Malaysia (USM)
- 30. Universiti Teknikal Malaysia Melaka (UTeM)
- 31. Universiti Teknologi Malaysia (UTM)
- 32. Universiti Teknologi MARA (UiTM)
- 33. Universiti Utara Malaysia (UUM)

- 28. Malaysia Debt Ventures Berhad
- 29. Malaysian Biotechnology Corporation Sdn Bhd (BIOTECHCORP)
- 30. Malaysian Technology Development Corporation Sdn Bhd (MTDC)
- 31. Matrix Power Network Sdn Bhd
- 32. Maxis Communication Berhad
- 33. MMC Corporation Berhad
- 34. Muhibbah Engineering (M) Bhd
- 35. NCM Global Sdn Bhd
- 36. Perbadanan Usahawan Nasional Berhad (PUNB)
- 37. Pernec Corporation Berhad
- 38. Perusahaan Otomobil Kedua Sdn Bhd (PERODUA)
- 39. Perwaia Steel Sdn Bhd
- 40. Pesaka Astana (M) Sdn Bhd
- 41. Pharmaniaga Berhad
- 42. PJS Industries Sdn Bhd
- 43. PNB Equity Resource Corporation Sdn Bhd
- 44. PROTON Holdings Berhad
- 45. Puncak Niaga (M) Sdn Bhd
- 46. Ranhill Utilities
- 47. RHB Bank Berhad
- 48. RUAG Aviation Malaysia Sdn Bhd
- 49. Sapura Group
- 50. Sarawak Energy Berhad
- 51. Scomi Engineering Bhd

- 52. Silterra Malaysia Sdn Bhd
- 53. SMH Rail Sdn Bhd
- 54. System Consultancy Services Sdn Bhd
- 55. Tenaga Nasional Berhad (TNB)
- 56. UEM Group Berhad
- 57. Zetro Aerospace Corporation Sdn Bhd

36 EVENT HIGHLIGHTS



#### 27 January 2014

Stakeholder's Briefing on Biomass Valorisation Centre of Excellence and the Emerging Role of Malaysia in the Global Biofuel Ecosystem



#### 22 February 2014

Graduation Ceremony for Participants of the Youth Capital Development Programmes by MIGHT-Meteor Advanced Manufacturing Sdn Bhd

#### 20 March 2014

MOU Signing Ceremony between MIGHT-Meteor & UTM on the launch of MIGHT Certified Practitioner in STI Management with Master in STI Policy



### 8 April 2014

The Dialogue in Aerospace Industry with, YB Dato' Sri Mustapa Mohamed, Minister of International Trade and Industry (MITI)





#### 19 May 2014

Beyond GDP Symposium The Hilton Kuala Lumpur

# **EVENT HIGHLIGHTS 2014**



#### 25 February 2014

Soft Launch of Kuala Lumpur Engineering Science Fair 2014 (KLESF) by Dato Sri Idris Jusoh, Minister of Education II



#### 17 - 20 March 2014

MIGHT participated in organising the 1<sup>st</sup> MARA International Aerospace Symposium (MINAS) 2014



Kuala Lumpur Engineering Science Fair 2014. The first KLESF, a programme under Science for Wellbeing, attracted approximately 50,000 attendees





27 - 29 May 2014

Futures Thinking and Scenario Planning Workshop



#### 9-11 June 2014

Biomass Asia Conference 2014

#### 23 June 2014

The first Global Cleantech Innovation Programme (GCIP) for Malaysia, organised jointly by MIGHT and UNIDO, engaging local cleantech technopreneurs in a discussion during 'Green Tea' session at MaGIC



### 38 EVENT HIGHLIGHTS

#### 26 June 2014

3<sup>rd</sup> Workshop on the Development of Aerospace Industry Blueprint 2015-2030



#### 21 July 2014

Working Visit by UK Delivery Partners-Newton Ungku Omar Fund



### 20 August 2014

Aidilfitri Celebration at the Prime Minister's Office



Briefing by the Solar Industry MNCs to the Science Advisor to the Prime Minister





#### 18 November 2014

Tan Sri Dato' Seri Ahmad Ramli Mohd Nor, member of MIGHT's BOD from the industry, making his remarks at the 3<sup>rd</sup> National Marine Industries Forum 2014



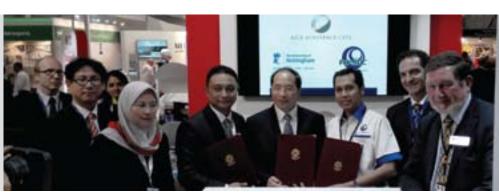
### 16 December 2014

The President & CEO of MIGHT shared his views at the Open Forum Science Education

39 EVENT HIGHLIGHTS

#### 14 July 2014

MoU on R&T Collaboration between AMIC, University of Nottingham and Asia Aerospace City





#### 24 September 2014

Launching of coffee table book on GSIAC at 4<sup>th</sup> GSIAC Meeting 2014 in conjunction with United Nations General Assembly (UNGA) 2014



#### 16 - 19 October 2014

The Deputy Prime Minister briefed on the GCIP competition at MIGHT's booth @ IGEM



AMIC Techno Day 2014 introduced virtual reality in developing the human capital capability for the local aerospace industry



#### 17 November 2014

Official Visit by YB Minister Dato' Mah Siew Keong the Minister In charge for MIGHT under the Prime Minister's Department





#### 19 December 2014

Firm handshakes between MIGHT and Perbandanan Teknologi Hijau Melaka (PTHM) in the collaboration to support the implementation of Melaka Green City Action Plan (GCAP) through Industry Driven Projects & Investments 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.

#### YAB DATO' SRI MOHD NAJIB TUN ABDUL RAZAK

Prime Minister of Malaysia

in conjunction with MIGHT 20<sup>th</sup> Anniversary

(1 November 2013)

# MAJOR ACTIVITIES

SCIENCE 2 ACTION (S2A) & myForesight® PG 42

S2A

Smart Communities

myForesight®

EMERGING TECHNOLOGY PG 56 & TECHNOLOGY NURTURING

Emerging Technology

Technology Nurturing

 ${\it MIGHT\ Meteor\ Advanced\ Manufacturing\ Sdn\ Bhd\ (MMAM)}$ 

A-Bio

INDUSTRY INTELLIGENCE & OFFSET MANAGEMENT SERVICES PG 66

Industry Intelligence

Aerospace

Aerospace Malaysia Innovation Centre (AMIC)

Maritime

Rail

Offset Management Services

MIGHT INTERNATIONAL PG 80

ONE ANOTHER

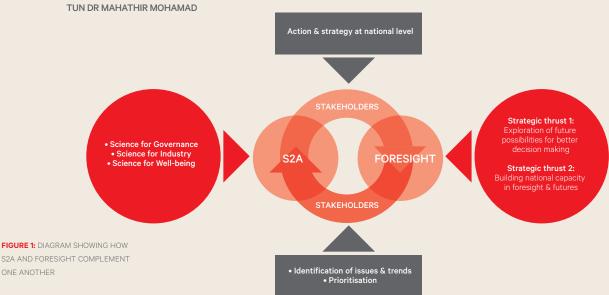
# SCIENCE 2 ACTION (S2A) & myForesight®

#### FROM THEORIES TO ACTION

Since its establishment, MIGHT has continuously been at the forefront of local industrial development. Currently, MIGHT acts as the Implementing Agency for Science to Action (S2A) —a holistic science transformation agenda to intensify Science & Technology activities in the country to ensure sustainable growth beyond 2020.

"Foresight is a matter of studying the present, learning from the past and understanding the needs of the future." With the establishment of myForesight® to promote and harness strategic national development through foresight methodologies and initiatives, MIGHT is able to foresee/provide a comprehensive list of future technologies, list of key drivers for future of works and future scenarios of Malaysia.

In support of the S2A, the Smart Communities Programme was launched to explore ways to balance Malaysia's rapid urbanisation and rural development. With environmental concerns through the application of green technology and ICT serving as a market platform for Green Growth implementation, the initiative is the second highest impact project currently being implemented through GSIAC.



# SCIENCE TO ACTION (S2A)

S2A is complementary, innately supporting the various existing initiatives that have already been undertaken by the Government. It is strategically centred on the intensification of S&T capacity build-up through education, where technological know-how, engineering capabilities, industrial power and most importantly, knowledge, are generated and proliferated. This will be synergised with the deepening of its application into all areas of industry development —creating a broader base for opportunities. The significant multiplying effects would invariably result in positive economic growth and the wellbeing of the people, within the scheme of continuous nation building.

The S2A working framework is based on three thrusts; Science for Governance, Science for Wellbeing and Science for Industry.



to strengthen public and private service delivery systems, in order to create a conducive environment and ecosystem that can become a catalyst for the development of STI



to improve societal wellbeing through the exploitation of science and technology as well as ensure continuous national capability & capacity in S&T to support Nation Building



To leverage S&T to improve & strengthen our industry as well as creating new source of economic growth through exploitation of S&T

TABLE 1: THREE THRUSTS OF S2A

#### SCIENCE FOR GOVERNANCE

Under this thrust, a supreme National Science Council will be established to act as the central body that decides the local STI landscape and its way forward. A study on the current level of R&D and innovation capabilities is underway and will be featured in the OECD Country Review-Malaysia report. This report is expected to assist the government in determining how key capabilities as well as their performance could be improved.

#### **SCIENCE FOR WELLBEING**

In 2014, S2A had been spreading awareness on STI through education through various programmes such as the KL Engineering Science Fair (KLESF), Science@Malaysia, Teaching of Science in the Muslim World and Asia Pacific Climate Change Adaptation Forum 2014. These programmes had simultaneously widened and strengthened the network among science enthusiasts, at both local and global levels. Engagements and collaborations not only ensured broader coverage of shared knowledge but also encouraged interests and generated new ideas related to STEM.

Conception of fund sources is seen as the push factor for the advancement of STEM researches. Under the S2A, the Newton-Ungku Omar Fund was established to address socio-economic issues and the Malaysia Japan Green Energy Fund was setup to invest in efficient and renewable energy assets and businesses in Southeast Asia.

#### **SCIENCE FOR INDUSTRY**

Industry participation plays a big role in fast-forwarding development. Under this thrust, there are three potential industries identified to generate new wealth namely composites, rail and Information & Communications Technology (ICT).

Creation of the National Composite Centre (NCC) Roadmap and Rail Centre of Excellence (RCOE) are part of the initiatives to house all the training and development activities related to the respective industry under one roof. Undertaken by MIMOS, the Internet of Things (IoT) Technical Working Group (TWG) Workshop has kick-started the development of the National IoT Blueprint that aims to take advantage of the numerous opportunities offered by IoT technologies.

YB Dato' Seri Idris Jusoh, the Minister of Education II officiated the inaugural Kuala Lumpur Engineering Science Fair (KLESF'14) at the National Science Centre Kuala Lumpur



In 2014, MIGHT had carried out several key activities under the S2A initiative.

#### SCIENCE FOR GOVERNANCE

#### ESTABLISHMENT OF THE NATIONAL SCIENCE COUNCIL

Agreed by the Prime Minister, the National Science Council will be the authoritative council in science for the country. To date, necessary arrangements are currently being developed by the Office of Science Advisor and MOSTI as the co-secretariats. S2A is providing facilitations and assistance, on an as and when required basis.

#### OECD COUNTRY REVIEW - MALAYSIA

The report covers the review of the current level of R&D and innovation capabilities in the country to help the government determine how key capabilities as well as their performance could be improved.

#### SCIENCE FOR WELLBEING

## KL ENGINEERING SCIENCE FAIR (KLESF) (25-27 APRIL 2014)

KLESF is a multi organisation collaborative programme conducted with the aim to promote STEM.

# SCIENCE@MALAYSIA - CONFERENCE FOR NATIONAL SCIENTIFIC ENGAGEMENT (22 NOVEMBER 2014)

The Scientific Malaysian and Oxford University Malaysia Club (OUMC) co-organised the conference at the Oxford University in support of the S2A agenda. Through a series of panel discussions and exhibitions, the main aims of this conference were:

To highlight Malaysian government efforts in advancing science and technology in the nation

- To highlight career opportunities in the field of science and technology in Malaysia across all industries
- To provide a platform for Malaysian scientific communities abroad to provide their input towards nation building
- To promote research collaborations and knowledge-sharing among the scientific communities in Malaysia and abroad

## TEACHING OF SCIENCE IN MUSLIM WORLD (16 DECEMBER 2014)

The 1st task force meeting of eleven experts on science research in Muslim nations was chaired by the Science Advisor to Prime Minister, Professor Tan Sri Dr Zakri Abdul Hamid. The taskforce sought to jump-start a reform on science education in universities throughout the Muslim world. Some of the proposals included broadening the science curriculum to include the history and philosophy of science; emphasising student-led enquiries as a teaching strategy; evaluating the impact of the language used for teaching; and encouraging research collaboration among Muslim universities. The task force is scheduled to report in June 2015 and will seek partners to implement its recommendations.

#### THE NEWTON - UNGKU OMAR FUND

The fund was established to address socio-economic issues and cover activities ranging from growing capacities of the Malaysian science and innovation community through fellowships, mobility schemes and joint centres; forging research collaborations on development topics; and establishing innovation partners and challenge funds to develop innovative solutions on development topics.

#### THE CALL FOR PROPOSALS FOR INSTITUTIONAL LINKAGES (IL) 2014 (20 NOVEMBER 2014)

This programme under the Newton Ungku - Omar Fund (NUOF) saw a phenomenal response of Malaysian applicants, with Malaysia accounting for 64 out of 233 applications (27.5%), putting Malaysia as the country with the greatest response amongst all participating countries. This achievement is attributed to the joint efforts of MIGHT and the Office of Science Advisor that actively promoted NUOF to local institutions of higher learning, research institutions and the industry in Malaysia.

#### MALAYSIA JAPAN GREEN ENERGY FUND

Might Technology Nurturing (MTN) via its subsidiary Putra Eco Ventures Inc. is progressing with the structural and operational needs of the investment fund between Malaysia and Japan. The team is actively looking for more investment by GLCs and local companies while currently evaluating investment proposals both from local and neighbouring countries. The funds will be invested in efficient and renewable energy assets and businesses in Southeast Asia.

#### SCIENCE FOR INDUSTRY

#### GLOBAL CLEANTECH INNOVATION PROGRAMME (GCIP)

GCIP is an initiative jointly organised by Global Environment Facilities (GEF), United Nations Industrial Development Organization (UNIDO) and MIGHT. The objective of GCIP is to search, fund and foster promising cleantech start-up with a solution to address climate change.

In 2014, GCIP attracted 49 applications whereby 25 semi-finalist were shortlisted to enter the GCIP Accelerator Programme in Malaysia. The programme was run with the 10 steps curriculum from the Cleantech Open module. 6 engagements with experts comprising of 50 local and international mentors were organised

for the semi-finalists. 13 series of webinar were also delivered to complete the Accelerator Programme.

The category winners include Free the Seed Sdn Bhd (Waste to Wealth), Thinking Green (Renewable Energy), Zymeratics (Energy Efficiency) and EcoClay (Water Efficiency).

Free the Seed Sdn Bhd (FTS SB) was selected the National Winner of the 2014 GCIP. FTS SB is a Biotech & Greentech-based company focused on Bio-Packaging; R&D and Manufacturing of Biodegradable Packaging Products from Biomass Waste Materials using a Patented Bio-Enzymatic Technology, for the reduction of global carbon footprints.

#### S2A & BIO ECONOMY

Organised by MBC to showcase biotechnology in advancing science as well as industry.

All winners during the photo session with Deputy Minister of Energy, Green Technology and Water, Dato' Seri Mahdzir Khalid



#### **IOT TWG WORKSHOP**

Undertaken by MIMOS to kick-start the development of the National IoT Blueprint.

#### REGIONAL CORRIDOR ENGAGEMENT

Engagement between Regional Corridors in discussing ways of moving forward with S2A in respective corridors.

#### INTERNATIONAL GREEN & ECO-PRODUCT EXHIBITION AND CONFERENCE MALAYSIA 2014 (IGEM 2014) (16-19 OCTOBER 2014)

GCIP has joined the S2A showcase during the International Green & Eco-Product Exhibition and Conference Malaysia Themed 'Creating Green Wealth', the 5<sup>th</sup> IGEM aims to help push the rapid adoption of green technology which is the emerging driver to deliver a double impact of sustainable economic growth as well as to address the environmental and energy security issues.

In the course of Investors Connect, a sub-event under GCIP, topics on securing local investment were discussed among a panel session that included local venture capital funds, crowdfunding platforms, successful entrepreneurs and industry association.

### CLEANTECH OPEN GLOBAL FORUM 2014 (13-14 NOVEMBER 2014)

Malaysian representatives, Free The Seed Sdn Bhd, managed to attract significant interest from reputable venture capital, angel and private equity funders during the four day event. The leads were Samsung C&T, Frankfurt Germany, INTRUST Global Investment, Washington USA, Dow Chemical Company, California USA, Flagship Venture, Cambridge USA and Watt Capital, New York USA.

# Smart Communities Programme

The focus of this programme is to accelerate the nation's readiness to address two grand challenges facing today's cities, namely **Urbanisation** and **Climate Change.** 

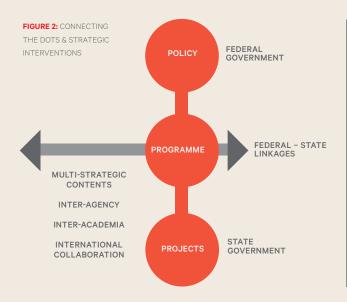
From high technology development perspective, the greening of cities will drive economic growth through new investments, jobs and innovation. Creating new opportunities in the emerging areas via the creation of new industry clusters, increasing local added value, capacity building and industry driven R&D are also part of the agenda.

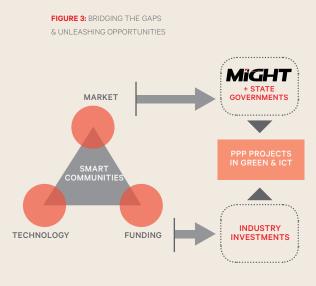
MIGHT strategically supports the integration of city systems, by synergising different stakeholders from multiple content. MIGHT is central in aligning key

activities to support the developmental agenda of the programme.

This programme has commenced with its first Demonstration City in Melaka with focus areas of Green Energy, Green Mobility, and Green Waste.

It is implemented based on industry driven approach and projects focused, bridging the market, technology and funding.





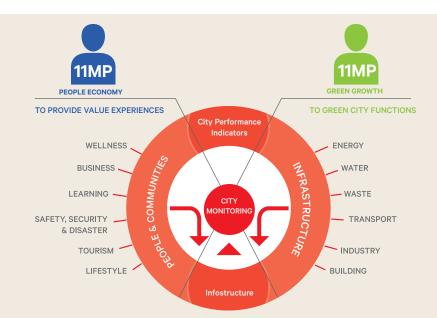


FIGURE 4: INTEGRATING CITY
SYSTEMS FOR HIGH INCLUSIVENESS
& HIGH MULTIPLIER IMPACT

Integration across city systems is important to make cities smarter through 3 key components:

- City functions to ensure more effective city operations through Green and ICT technologies applications
- City Communities to serve the city communities in providing value experiences via e-services
- City Infostructure to integrate and share city big data to drive city innovation and performance monitoring

## MELAKA GREEN TECHNOLOGY ACTION PLAN (GCAP) AS MARKET DRIVER

As part of its efforts to strengthen the strategic direction towards Sustainable Development, Melaka launched its Green City Action Plan 2020 (GCAP) in May 2014 which consists of 6 thematic areas with **35 action plans**. These action plans provide multiple opportunities for the industry to partner with city authorities in strategic projects.

FIGURE 5: GREEN MARKET
OPPORTUNITIES FOR PRIVATEPUBLIC PARTNERSHIP (PPP)



To date, Melaka is the only state that has established the GCAP. Expansion of the Smart Communities Programme to other Demonstration Cities in Malaysia will commence in 2016 by MIGHT. The initial focus will be to facilitate the establishment of the State Green Governance and the GCAP in further opening up new markets for the industry.

# THE INDONESIA-MALAYSIA-THAILAND GROWTH TRIANGLE (IMT-GT) ON SUB-REGIONAL ECONOMIC COLLABORATION AS PLATFORM FOR REGIONAL MARKET ACCESS AND PEER REVIEW

Melaka's strategic positioning as the green city model under the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) has also further improved its market value for industry investments and as strategic market access to the ASEAN region. At the federal level, the Minister of the Economic Planning Unit (EPU), Prime Minister's Department, represents Malaysia for this IMT-GT Sub-Regional Economic Collaboration. Hence, MIGHT's current effort in Melaka has strengthened its linkage with EPU on regional development initiative primarily in the area of industry driven projects and

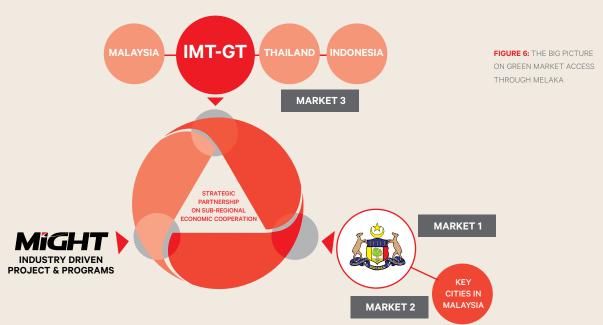
cross border collaboration towards peer reviews and regional integration.

## GREEN TECHNOLOGY - PROJECTS AND MANUFACTURING OPPORTUNITIES

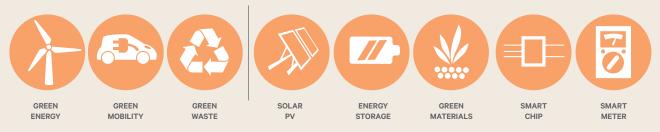
As the Smart Communities Programme is industry driven in nature, projects feasibility is crucial to ensure return of investment to industry. One of the important influencing factors on pricing competitiveness on projects is the ownership of product technology.

Based on the three focus areas, several strategic products have been identified as key to project competitiveness namely, solar PV, inverters, smart chip, smart meters, energy storage and bioplastics. These products open up new manufacturing opportunities to the local industry through its respective industry development programmes driven separately by MIGHT.

As the Smart Communities programme progress into other new emerging areas, more business and investment opportunities are anticipated.



50 SCIENCE 2 ACTION (S2A) & myForesight®



#### **PROJECTS**

**MANUFACTURING** 

FIGURE 7: UNLEASHING GREEN PROJECTS AND MANUFACTURING OPPORTUNITIES

#### **GREEN TECHNOLOGY - FOCUS AREAS**

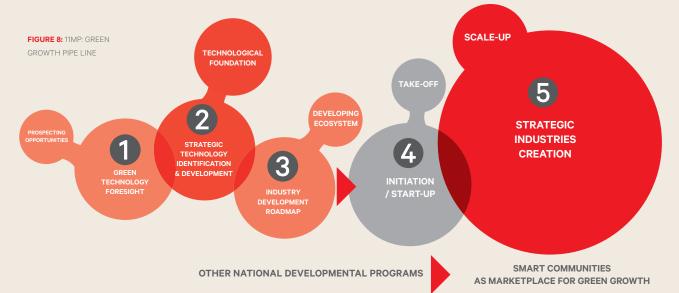
The key focus areas on green projects in Melaka are Green Energy, Green Mobility, and Green Waste. Projects feasibility is crucial to ensure return of investment to industry. One of the important influencing factor on pricing competitiveness on projects is the ownership of product technology.

Based on the three focus areas and its related strategic projects, several strategic products have been identified as key to project competitiveness namely,

solar PV, inverters, smart chip, smart meters, energy storage and bioplastics.

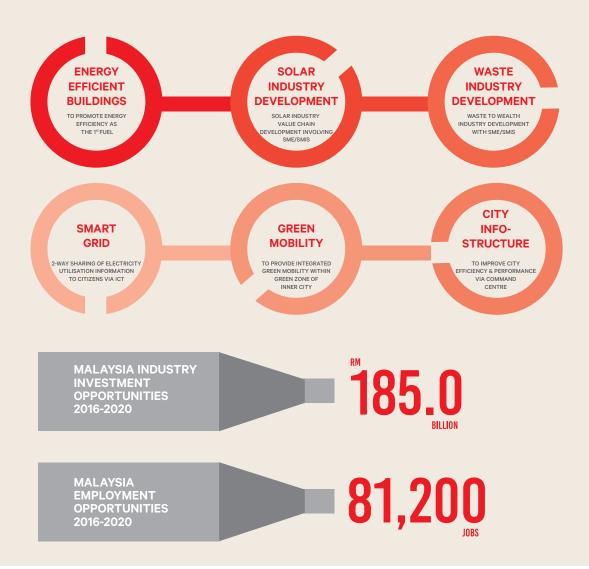
# SYNERGISATION WITH OTHER NATIONAL PROGRAMMES THROUGH PROVIDING MARKET ACCESS

Smart Communities Programme also collaborates with other national developmental programme to collectively provide strategic market access to technopreneurs in Green and ICT industries in its Commercialisation/ Start-up and Scale-up stages.



Based on assessment to date, the implementation of Smart Communities Programme in Melaka provides industry investments opportunities of approximately RM 5.4 billion with the total potential of **RM 185 billion** market, once scaled up in all capital cities in Malaysia by 2020 with **81,200 job** opportunities involving project and manufacturing activities.

FIGURE 9: EARLY PROJECTS WITH RELATED MANUFACTURING ACTIVITIES



# myForesight®

myForesight® harnesses its knowledge on foresight methodologies and its networks to enhance future planning in the country through its initiatives by aligning to two main strategic thrusts:

Strategic Thrust #1: Exploration of future possibilities for better decision making

Strategic Thrust #2: Building national capacity in foresight & futures

Among Foresight projects engaged under the Strategic Thrust #1 in 2014 includes Future of Malaysian Public Service, a series of Scenario Building workshop for the National Aerospace Blueprint 2030 and National Unity 2030: Youth Perspective. Apart from that, myForesight® was also actively involved in high level discussions, providing input and outreaching to various stakeholders such as the Ministry of Finance through UTC-RTC Lab, National Youth Convention 2014: Malaysian Youth Internationalisation, ASEAN Foresight Networks and Pre-convention: ASEAN Youth Leaders' Summit 2015.



In building national capacity in foresight & futures, myForesight® has been working closely with the National Institute of Public Administration (INTAN) in developing an introductory course on future thinking and scenario planning (FTSP). This course has been incorporated as one of the training modules for civil servants.

#### STRATEGIC THRUST #1: EXPLORATION OF FUTURE POSSIBILITIES FOR BETTER DECISION MAKING

#### **FUTURE OF MALAYSIAN PUBLIC SERVICE**

The initiative is created to support Public Service Transformation Programme. Funded partly by United Nations Development Programme (UNDP), MIGHT together with Malaysian Public Service Department (PSD), Prime Minister's Department aims to develop a strategic outlook and policy direction of Malaysian Public Service 2020 and beyond. myForesight® leverages on its experience to conduct scenario planning process to achieve the expected output. Interviews with pertinent stakeholders from public and private sectors was conducted as a value added inputs to the report scheduled to be tabled in September 2015.

#### NATIONAL AEROSPACE BLUEPRINT 2030

The first National Aerospace Blueprint was launched in 1997 which set its target for Malaysia to become a global player by 2015. There are 45 recommendations included in the blueprint to realise the aspiration. To date, more than 75 percent of the recommendations have been implemented. The National Aerospace Blueprint 2030 contains some new guidelines which includes enhancing those institutions with direct influence on the aerospace industry's growth, provide incentives and matching funding for the targeted aerospace investments, capture new market and strengthen the local supply chain. The report were obtained by using foresight methodologies.

#### MINISTRY OF FINANCE - UTC-RTC LAB

Urban Transformation Centre (UTC), Rural Transformation Centre (RTC) and Mini-RTC is an initiative under National Blue Ocean Strategy (NBOS) coordinated by National Strategic Unit (NSU) from the Ministry of Finance. The purpose of the lab was to restrategise relation between UTC, RTC and mini-RTC. myForesight® introduced foresight approach to add value to BOS methodology.

### NATIONAL YOUTH CONVENTION 2014: MALAYSIAN YOUTH INTERNATIONALISATION

The National Youth Convention 2014, is an annual event organised by Majlis Belia Malaysia (MBM), in conjunction with the National Youth Day. It serves as a platform to discuss the position of youth within the global context. The session intended to educate future thinking discipline amongst Malaysian youth and how youth could participate in nation building. Launched by YAB Dato' Sri Najib Tun Abdul Razak, Prime Minister of Malaysia, the event was attended by more than 2000 youth nationwide. myForesight® presented on Mega Trends and Global Challenge of Malaysian Youth post-2015.

#### ASEAN FORESIGHT NETWORK

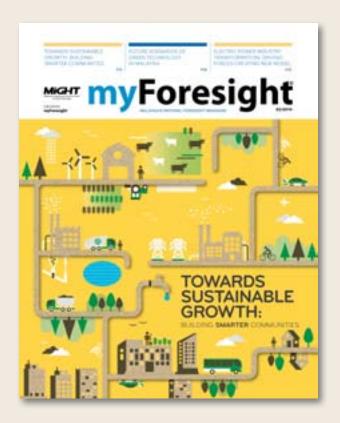
myForesight® visited the Centre for Strategic Futures (CSF), Singapore to establish formal linkage with CSF Singapore in areas of foresight and to explore the idea of establishing regional level foresight networks with respective countries particularly in the ASEAN region.



#### PRE-CONVENTION: ASEAN YOUTH LEADERS' SUMMIT 2015

myForesight® is part of the expert panel to share insights and viewpoints to develop a concrete substantive action plan towards 2015 ASEAN Chairmanship. The discussion aims to enlighten representatives from ASEAN youth on the knowledge and concept of ASEAN Community 2015. Three parallel sessions emphasising on ASEAN pillars namely, Politics & Security, Economic and Socio-culture were conducted during the one and a half day event.

All proceeding from the dialogue will be used as a basis to enhance the formulation of ASEAN Youth Action Plan which will be elaborated and debated in ASEAN Youth Leaders' Summit next year.



#### INPUT FOR FORMULATION OF NATIONAL YOUTH POLICY

Ministry of Youth and Sports are in the midst of drafting the Dasar Belia Malaysia (DBM). This event was held in conjunction with the on-going series of engagements with stakeholders of youth in their effort to refine the concept and framework of Dasar Belia Malaysia. myForesight® was invited to be part of a panel of experts in a series of workshops.

MIGHT provided input on the trend and challenges of Malaysian youth and the target areas for youth development

Deliberation on anticipation of future challenges, trends and issues —both local and global— may shape the future of the nation and youth.

### NATIONAL UNITY 2030: YOUTH PERSPECTIVE (FEBRUARY 2014)

The topic of national reconciliation has been continuously discussed, revisited and deliberated by various stakeholders of the society. The significance of the topic to nation building has captured the attention of myForesight® and has prompted us to embark on a mini scenario session: National Unity - Future of Malaysia 2030; to investigate and explore the topic from youths' perspectives.

The initiative aims to paint the future scenarios of Malaysia in its reconciliation effort, post 2020 till 2030. The expected input from participants are their thoughts and views on national unity and reconciliation.

#### STRATEGIC THRUST #2: BUILDING NATIONAL CAPACITY IN FORESIGHT & FUTURES

### DEVELOPMENT OF FUTURE THINKING AND SCENARIO PLANNING COURSE

This initiative is one of the outputs identified by PSD and UNDP under Human Resources Planning Framework of the Malaysian Public Service 2015-2020. In mainstreaming foresight into the Government's future planning activities, myForesight® together with National Institute of Public Administration (INTAN) is developing an introductory course on future thinking and scenario planning (FTSP). The course has been incorporated as one of the training modules for civil servants.

#### FACULTY OF ECONOMY & MANAGEMENT, UKM - MPOB

Around 20 researchers who are currently conducting studies on Palm Oil participated in the two-day interactive workshop to further understand the method of applying Foresight practices in their studies.

#### INTAN WORKSHOP - FORESIGHT & RISK MANAGEMENT

A workshop organised by INTAN has allocated a slot for attendees to relate to and benefit from Foresight methodologies in risk management issues.

#### FUTURES THINKING WITH PROFESSOR SOHAIL INAYATULLAH

The talk aims to enlighten around 60 senior government officials from various Ministries on future thinking and strategy transformation.

#### NRE SCHOOL OF LEADERSHIP (SOL) PROGRAMME

The Ministry of Natural Resources and Environment (NRE) organised a 4-day workshop to refine the leadership skills among its officers by inculcating foresight practices in the ministry.

#### FORESIGHT CLUB 'NURTURING YOUNG FUTURISTS', UTHM

The second batch of UTHM students will be adopting Foresight methodology and tools in their Bachelor Degree's Project I&II (PSM), as part of the requirements in their bachelor degree final dissertation.

#### AKEPT WORKSHOP - FORESIGHT & SCENARIO PLANNING

This programme is conducted in collaboration with Higher Education Leadership Academy (AKEPT). Foresight and future thinking workshops will be conducted in 14 universities nationwide for young lecturers, identified as an agent of change for the country.



# EMERGING TECHNOLOGY

The Emerging Technology (ET) division in MIGHT drives the agenda on high technology industry development by providing industry intelligence and policy advice based on extensive engagements with the broad industry and government stakeholders to nurture the future of high technology-based industries in the country. In 2014, this initiative led to the report on the National Green Technology Foresight 2030, which serves as guidance in technology application areas to contribute towards a sustainable green high technology industry in Malaysia in the long-term.

Key findings in the Foresight study are used to initiate and drive a few major initiative namely the National Waste Grid Programme with KeTTHA and KPKT focusing on developing the waste industry through the PPP programme. The Malaysia Solar Roadmap 2030 was then initiated with many key stakeholders especially SEDA, MIDA and industry associations.

In the Power sector, ET pioneering work has resulted in the Smart Grid and Net Metering projects with the State of Melaka. ET also contributed to the Offset Management Services for energy sector under the Technology Depository Agency (TDA).

The division also led MIGHT's participation in the IGEM2014, which highlighted all MIGHT's inroads in green high technology sectors.



#### **GREEN TECHNOLOGY**

## GREEN TECHNOLOGY FORESIGHT 2030 (GTF 2030)

GTF 2030 was a joint initiative between KeTTHA and MIGHT, assisted by myForesight® Institute, to create future scenarios of Green Technology in Malaysia. Through this initiative, prioritised green technology applications to fulfil the National Green Technology Policy missions and objectives were identified. By the end of the 11-month project that runs from April 2013 to March 2014, a final report was approved by a Steering Committee chaired by KeTTHA, involving 14 ministries.

Sectors	Vision
ENERGY	Sustainable and affordable energy generated by renewable energy and/or high efficiency low emission (HELE) power plants through efficient and smart transmission and distribution system.
TRANSPORT	A sustainable transportation system that allows the basic access and development needs of individuals and societies while limiting emissions and waste through efficiency gains according to the Avoid, Shift and Improve strategy.
WASTE	Reduction of waste material through green technologies and practices.
BUILDING	All buildings provide safe, healthy and sustainable living/ work environment that incorporates the green concept with respect to materials, construction practices and occupancy.
MANUFACTURING	Malaysia is a global green manufacturing hub for the sourcing, processing and production of green materials, products and services.
WATER	A sustainable water supply that meets the national needs in terms of quantity and quality coupled with sustainable water consumption patterns through the adoption of green technologies.
ICT	Green ICT has successfully facilitated the realisation of energy use efficiency, and enhanced green jobs creation and productivity, towards a high income economy.
FORESTRY	A sustainable supply of forest products and services, whilst maintaining sufficient tracts of forest through effective conservation management.
AGRICULTURE	High profitability and sustainable food supply achieved with minimal land and resources utilisation in smart and green production systems.

Based on a scenario building approach, the exercise of GTF2030 has been able to envision the nation's goals for green technology in 2030 (Table 1). Nine sectorial long-term strategies were formulated towards realising the vision and nine sets of prioritised green technology applications were also identified to achieve the strategies (Table 2).

From this study, it was concluded GTF2030 will provide full support to the development of the National Green Technology Master Plan (GMP2030) by KETTHA/MGTC, in tandem with the outputs of other parallel component studies by MGTC. Additionally, periodic updates of the scenarios and prioritised green technology applications also need to consider disruptive technologies that may emerge.



YAB Tan Sri Muhyiddin Yassin, Deputy Prime Minister of Malaysia, officiated the Inaugural Global Cleantech Innovation Programme (GCIP2014), a programme initiated by UNIDO and MIGHT. Above: Mr Tiep Nguyen-Khac, representative of UNIDO, Datuk Dr Mohd Yusoff Sulaiman, President & CEO MIGHT, and Norida Abd Rahman, GCIP Programme Director and SVP MIGHT

# INTERNATIONAL GREEN TECH AND ECO PRODUCTS EXHIBITION AND CONFERENCE MALAYSIA 2014 (IGEM 2014)

MIGHT made its first debut in IGEM2014, where the Global Cleantech Innovation Programme (GCIP), an international programme with UNIDO, was officially launched by YAB Deputy Prime Minister of Malaysia. This Inaugural GCIP witnessed the announcement of the Grand Winner of the GCIP, who was then invited to participate in the US International Cleantech Open Forum at San Jose, USA in November 2014.

MIGHT hosted an Open Forum during the exhibition which featured discussions such as Living the Green Lifestyle, Green Human Capital Development and Industrial Symbiosis.

#### **BIOMASS**

#### HIGH VALUE GREEN CHEMICAL

MIGHT spearhead initiative to spur local industry participation in high value added green chemical industry, an emerging high technology cluster. ET contributed as Technical Committee Member to prospect and evaluate technology application and techno-business model for the SPV, MYBiomass, that involves Sime Darby and FGV as partners.

#### NATIONAL WASTE GRID

Based on the GTF2030 study, MIGHT initiated a National Waste Grid programme by adopting the Holistic Waste Management concept. The programme converts various waste resource material available in the country into High Value Green Products with minimal effect on the environment through active involvement of the public and private sector. MIGHT has engaged relevant stakeholders for inputs and obtained the approval from KeTTHA and KPKT to run the programme.

# MIGHT DIALOGUE SESSION WITH EUMCCI-EEGT COMMITTEE (21 MARCH 2014)

The dialogue session between MIGHT and 30 representatives from the EUMCCI-EEGT Committee members focused on Malaysian Biomass Industry Action Plan 2020 and Malaysian Solar Industry Report 2012-2013. Among the topics discussed during the session were biomass feedstock security, project financing and the most appropriate FiT for the Solar Industry. The EUMCCI-EEGT delegation included representatives from the German Embassy, Spanish Commercial Office, Embassy of the Kingdom of the Netherlands and Embassy of Sweden.

### BIOMASS ASIA CONFERENCE 2014 (BAC2014) (9-11 JUNE 2014)

BAC2014 is a joint collaboration of the EU-Malaysia Biomass Sustainable Production Initiative (Biomass-SP), MIGHT and the Malaysia Biomass Industries Confederation (MBIC). The event presented 30 speakers with more than 150 participants from 6 countries.

# BIOMASS BENCHMARKING STUDY - POTENTIAL VALUE CREATION FOR COMMERCIAL UTILISATION OF BIOMASS IN MALAYSIA

This report is the culmination of a two year study by MIGHT and MBIC, with the support of the EU, with an objective to provide a quantitative perspective of potential economic value that can be generated from various commercial utilisations of biomass available in Malaysia.

#### 7th ASEAN PLUS 3 FORUM ON BIOMASS ENERGY, ORGANISED BY MARDI (9-10 SEPTEMBER 2014)

MIGHT participated as an exhibitor at the forum which highlighted the theme Biomass Energy for Green Future, emphasising on the development and utilisation of biomass energy. The forum was also attended by delegates from China, Japan and Phillipines.

#### STAKEHOLDERS ENGAGEMENT ON BIOMASS PELLETS (NOVEMBER-DECEMBER 2014)

MIGHT Interest Group (MIG) for biomass organised a series of stakeholder engagement sessions on Alternative Feedstock for the Biomass Pellet in collaboration with MBIC. More than 20 key pellet industry players including MPOB attended the sessions. The objective was to explore the potential in diversifying the feedstock beyond wood waste and empty fruit bunches to include oil palm trunk, discuss the challenges faced by the industry to scale up as a global player of biomass pellet and study the current and future trends of Malaysia's Biomass Pellet market.

#### **SOLAR**

#### MALAYSIA SOLAR ROADMAP 2030

Extensive stakeholder engagements with representatives from government and industry were conducted by MIGHT for the development of the Malaysia Solar Roadmap 2030, that aims to chart common direction and action plan for the solar PV industry development for the country. This concerted initiative involved many stakeholders especially KeTTHA, SEDA, MIDA, PEMANDU, MGTC, MOSTI, and key industry associations namely AMCHAM-MARI and MPMA, Tenaga Nasional Berhad (TNB), Bank Pembangunan, TNB R&D, and universities. The Solar Roadmap will be completed by July 2015. The Roadmap focused on key areas of: Manufacturing, Industry and Technology Development; PV Deployment and Development; Incentive and Finance; Human Capital Development and Awareness Programme.

#### MEETING OF THE SOLAR INDUSTRY WITH THE SCIENCE ADVISOR TO THE PRIME MINISTER (4 NOVEMBER 2014)

A dialogue session was held between solar industry players and the Science Advisor to the Prime Minister. The industry were represented by First Solar Malaysia Sdn Bhd, SunEdison Malaysia Sdn Bhd, Panasonic Energy Malaysia Sdn Bhd, Comtec Solar Sdn Bhd, AUO SunPower Sdn Bhd, Hanwha Q-Cells Malaysia Sdn Bhd, Tokuyama Malaysia Sdn Bhd, Malaysian PV Industry Association (MPIA), and Malaysian PV Manufacturers Association (MPMA). Participants from the government agencies were from PEMANDU, MITI, KETTHA, MIDA, SEDA,



MNCs to Science Advisor to Prime Minister (Solar)

The Malaysia Solar Roadmap 2030 was initiated with many key stakeholders especially SEDA, MIDA and industry associations.

MOSTI, MGTC and TNBR. A workshop on anti-dumping policy was also held during the session. MITI and MIDA briefed and gathered inputs from members.

## AMCHAM-MARI SYMPOSIUM (2 DECEMBER 2014)

During the engagement between local universities and members of AMCHAM-MARI, MIGHT assisted in gathering participation from academicians and researchers with Solar PV backgrounds in the country for a dialogue session. The common issue raised by the members of AMCHAM-MARI is in regards to human resource and the lack of talent willing to work in the industry.

In the Power sector, ET pioneering work has resulted in the Smart Grid and Net Metering projects with the State of Melaka.

#### **ENERGY / POWER**

#### **INDUSTRY ENGAGEMENT**

ENERGY EFFICIENCY (EE ) BRIEFING TO MALAYSIAN ASSOCIATION OF HOTEL OWNERS (MAH) MELAKA CHAPTER (20 AUGUST 2014)

MIGHT and MAESCO were briefed by MAH Melaka Chapter on EE through Energy Performance Contracting (EPC). A total of ten hotels had given their support to the programme by the end of the session. This initiative is in line with the Smart Community Programme under Energy Efficiency which leads towards the Energy Performance Contracting (EPC) by MAESCO.

# SITE VISIT TO TNB PILOT PROJECT ON SMART METERS AT MAHKOTA TECHNOLOGIES SDN BHD (19 AUGUST 2014)

Apart from acquiring insights on Smart Meters system installed by Mahkota Technologies Sdn Bhd in Melaka for the TNB Pilot Project, the visit was also arranged for MIGHT to look at other capabilities of the company. Among the focus areas that were looked into were local capabilities and strengths, technology transfer and also elements of Localisation Programme.

ENERGY EFFICIENCY FOR BUILDING FACILITIES
PRESENTATIONS FOR SMART CITIES SLOT
IN ECOBUILD SEA 2014 IN CONJUNCTION OF
INTERNATIONAL CONSTRUCTION WEEK 2014 (ICW
2014)
(17 & 19 SEPTEMBER 2014)

ICW is the largest and most important annual event covering the full spectrum of construction industry across Malaysia and Southeast Asia. MIGHT gave a presentation on Smart Cities focusing on the importance of energy efficiency (EE) in building facilities.

## SABAH BUSINESS EXPLORATION MISSION (2-4 OCTOBER 2014)

MIGHT visited the POIC office to deliberate on possible future collaboration with the Sabah State on Green Initiatives, especially on Energy Generation for POIC Lahad Datu site. On invitation, MIGHT took the opportunity to visit the CEO of Sabah Energy Corporation (SEC) Sdn Bhd to discuss potential project areas such as Biogas and Virtual Pipeline System.

## KOREAN DELEGATION VISIT TO MIGHT (29 OCTOBER 2014)

The visit serves as a follow up to the Technology Partnering MIGHT-KETEP 2014 event. MIGHT is seriously looking into technology partnering and

technology transfer for Battery storage and smart meter applications.

# INDUSTRIAL ENERGY EFFICIENCY FOR PRIVATE SECTOR (19 DECEMBER 2014)

MIGHT facilitated the working mechanism on the technical input of Energy Efficiency (EE)/ Energy Auditing programme between the private sectors, MAESCO, PTHM, UNIDO and the Government State of Melaka.

#### POLICY INTERVENTION

#### MALAYSIA SMART GRID COMMUNITY (MSGC) (14 APRIL - 16 JUNE 2014)

PEMANDU and Energy Commission Malaysia (EC) coorganised a minilab session where MIGHT provided the technical expertise in the formulation of Malaysian Smart Grid Community (MSGC). The document was presented by PEMANDU to KeTTHA. The Secretary General of KeTTHA, Datuk Loo Took Gee, had officially agreed to and supported MIGHT as the secretariat of the MSGC.

# ASIA LOW EMISSION DEVELOPMENT STRATEGIES (LEDS) FORUM 2014 (11-13 NOVEMBER 2014)

MIGHT participated in ASIA LEDS FORUM 2014, Development through LEDS and Green Growth. In attendance were also 250 policymakers, practitioners, and experts from 19 Asian and Pacific countries. The forum serves as a platform to discuss the latest low-carbon, green growth policies and actions that contribute to economic growth, job creation, and other national development goals. MIGHT, together with PTHM, shared their experiences on the implementation of Green Initiatives in Melaka.

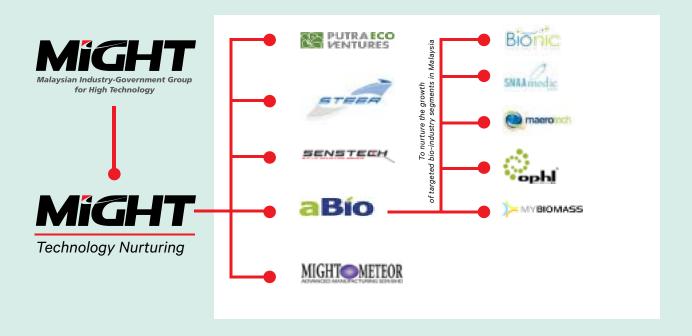
# TECHNOLOGY NURTURING

MIGHT Technology Nurturing Sdn Bhd (MTN) is a wholly owned company with the primary responsibility to operate Technology Nurturing activities in strategic high technology areas. MTN identifies opportunities and carries them through with the creation of technology business ventures. MIGHT continues to nurture the companies by providing advisory, technology and management services which are essential in ensuring the sustainability of these ventures.

In addition to establishing business entities in specific technology areas, MIGHT's technology nurturing initiatives also includes funds management which provides financial assistance for these technology

ventures to grow. Funds currently managed under the MTN Group are the A-Bio fund, which provides funds for biotechnology-related ventures, and Putra Eco Ventures Inc., which manages a fund for the growth of renewable and efficient energy sectors in the South East Asia region.

Technology Nurturing initiative is critical for MIGHT as an advocate towards championing the development and growth of high technology industry which often face the challenges of high capital requirement, emerging technology as well as a dearth in talent and markets.



# Might-Meteor Advanced Manufacturing Sdn Bhd (MMAM)

MMAM as the Human Capital Development (HCD) arm of MIGHT continues to support the Economic Transformation Programme (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) talent for short, medium and long term periods.

#### MIGHT CERTIFIED PROFESSIONAL IN STI MANAGEMENT

MIGHT Certified Professional in STI Management (MCPS) is a programme implemented by MMAM in collaboration with PRIMA Asia Pacific Consulting. Through collaboration with MOSTI, ISTIC and COMSTECH, potential for the programme to be introduced in 57 OIC countries is high.

#### PRI EQUALEARN

MMAM has been appointed by Performance Review Institute (PRI), USA as their associate in providing PRI eQuaLearn training programme to the Malaysian aerospace industry. MMAM has successfully organised 2 programmes: Nadcap Audit Preparation - Chemical Processing and Chemical Processing (Anodizing) - Process Planner in March 2014.

#### GLOBAL TECHNOPRENEUR COMMERCIALISATION

Global Technopreneur Commercialisation (GTC) programme for the Investee Companies of A-Bio was developed by MMAM in collaboration with Lyle Centre, California State University based on their successfully proven P9 programme.

#### BOUSTEAD NAVAL SHIPYARD RATIONALISATION PROGRAMME

Boustead Naval Shipyard (BNS) declared a saving of RM14 million when KD Lekir was delivered to the Royal Malaysia Navy (RMN) earlier than the target completion date. This was achieved through MMAM's direct assistance via BNS Rationalisation Programme. Apart from this unprecedented success story, MMAM also has organised a SBSR benchmarking visit to Korea for the BNS team and plan to extend the services to other local shipyards.

#### MASSIVE OPEN ONLINE COURSE

The Massive Open Online Course (MOOC) project was the brainchild of Datuk Dr Mohd Yusoff Sulaiman, the previous Chairman of MMAM Board/President and the current President and CEO of MIGHT who initiated the engagement together with MARA and UTEM. The service was offered to MARA KKTM and UniKL. The strategy to merge MOOC with IMBE and RPE will create a common online platform and provide industry driven programmes in open access and /or secured close access by various organisations and institutions.

#### RECOGNITION OF PRIOR LEARNING / EXPERIENCE

MMAM has responded to the request by HRDF to submit a proposal for Recognised Prior Learning (RPL) which aims to upskill 70,000 workers to SKM Level 4 equivalent to Industry Diploma and is expected to be implemented in 2016. A new proposal for Recognised Prior Experience (RPE) in collaboration with the Department of Skills, MOHR and City and Guilds (C&G), UK is also in the pipeline. This collaboration will further add value to the programme as niche products that generate sustainable revenues to the company once the details are formulated.

## A-Bio

A-Bio Sdn Bhd (A-Bio), a wholly owned subsidiary of MIGHT Technology Nurturing Sdn Bhd serves as the investment arm of MIGHT. It undertakes the programme of assisting and developing Bumiputera entrepreneurs in the areas of green technology, biotechnology, agriculture technology and nanotechnology.

A-Bio focuses on building the value of existing investments in 2014 by assisting investee companies to enter the market at early commercialisation stage. Technical assessments are jointly conducted with Certification Bodies towards obtaining product accreditation and/or certification for Investee Companies which are still at product development stage.

A-Bio is also venturing into investments in Bumiputera Companies which are at full commercialisation stage through fund sourcing in order to launch them to a higher level locally and/or globally. Various collaboration initiatives are also in the pipeline in the effort to assist eligible Bumiputera Companies obtain access to funding.

MYBiomass, one of A-BIO's investee companies, has achieved a number of significant milestones in 2014 which marked the company's transition from precommercialisation phase to commercialisation.

As part of its Entrepreneur Development Programme, A-Bio has enrolled several Investee Companies to participate in the AIIEE Global Commercialisation for Technopreneurs —an intensive programme developed to enable technopreneurs to realise their business ideas into viable business ventures, and ensuring their ideas are promoted in an action-learning environment.

A-Bio has also participated in promoting various Green Technology based products at the 5th International Greentech & Eco Products Exhibition & Conference, held in October 2014. The technology was featured through a series of Open Forum with the theme Opportunities in Green by A-Bio's Investee Companies; OPHL, MYBiomass, Maerotech and Bionic Ventures. Several sessions were covered by the Investee Companies during the Open Forum with topics related to green technology industry.

With its target to nurture and enhance participation of Bumiputera Companies in the area of Green and Bio-technology, A-Bio together with the Investee Companies invite potential stakeholders to join efforts and prepare the companies to become strong industry players in the market.

Several other key activities undertaken by A-Bio in 2014 to promote biotechnology includes the launching of MicroTEZ by its investee company, OPHL and their participation in WIEF Pyongchang Roundtable 2014 (World Islamic Economic Forum), in Seoul, Korea.

MYBiomass, one of A-BIO's investee companies, has achieved a number of significant milestones in 2014 which marked the company's transition from precommercialisation phase to commercialisation. One of the key highlights is the aggregation activity whereby



66
INDUSTRY
INTELLIGENCE

# INDUSTRY INTELLIGENCE

Industry Intelligence aims to propel the nation to achieve a high income economy. Effective industry-government partnerships are formed to advance the country's competency in high technology and strategic industry. This division serves to facilitate in increasing the contribution of targeted high technology sectors to the GDP and improve effectiveness of R&D investments. Expansion of new sources of growth from both emerging and existing sectors is also taken into account. While charting the road ahead, Industry Intelligence intends to spearhead the way as a Centre of Reference for high technology areas of transportation with its main priorities focused on Aerospace, Maritime and Rail.

# Aerospace

The nation is soaring fast to become a major aerospace player by 2015 through initiatives by MIGHT in the four niche areas of Aerospace which are Parts & Components Manufacturing, Maintainence Repair and Overhaul (MRO), Avionics & Systems' Integration and Centre of Excellence for Aerospace Training. Aiming to be the preferred global aerospace outsourcing centre, active participations in design and build programmes have been strategically laid out for the future of Aerospace industry in Malaysia.

While charting the road ahead, Industry
Intelligence intends to spearhead the way as a
Centre of Reference for high technology areas of
transportation with its main priorities focused on
Aerospace, Maritime and Rail.

# EPP 8: AEROSPACE MANUFACTURING SMES DEVELOPMENT

MIGHT, together with MITI, PEMANDU, SME Corp, MIDA and MATRADE are working closely together in developing the new EPP 8 on SMEs development. Malaysia targets to be the leader in aerospace and component sourcing in the Southeast Asian region by aiming to be a large, sub-assembly Tier 1 and RSP (Risk Sharing Partner).

A series of workshops were held with participation from the six agencies to develop the new EPP 8 for SMEs development under NKEA Business Services. It is led by SME Corp and is to be presented to the NKEA Business Services at the end of Quarter 1 2015. The EPP 8 focuses on growing SMEs in aerospace manufacturing sub-sector to be part of the global supply chain to Tier 2 and Tier 3 suppliers, scheduled to be launched during LIMA 2015 as part of the Aerospace Blueprint initiatives.

#### 11th MALAYSIA PLAN

MIGHT has been requested by MITI Technical Working Group (TWG) Manufacturing to prepare a Strategy Paper on Aerospace Industry to be included in the 11<sup>th</sup> Malaysia Plan. The completed draft of the Strategy Paper is currently under revision by MITI, after which it will be submitted to the 11<sup>th</sup> Malaysia Plan committee.

#### NAPSEC SUB-COMMITTEE

MIGHT has been appointed by the National Professional Services Export Council (NAPSEC) to lead the MRO and Aerospace Services Sub-Committees (SC). Subsequent to the appointment, the first draft of a proposal paper for the MRO and Aerospace Services focusing on exports was submitted by MIGHT to NAPSEC.

#### CONTINUATION OF AEROSPACE INCENTIVE FROM MIDA

Current incentives for the aerospace industry introduced by MIDA in 2010 will expire by end of 2014. Under the advice of MOF, MIGHT together with MIDA is preparing a proposal paper to be submitted to and reviewed by the MOF for continuation of the incentive package.

#### 2<sup>nd</sup> & 3<sup>rd</sup> WORKSHOP ON THE DEVELOPMENT OF MALAYSIAN AEROSPACE INDUSTRY BLUEPRINT 2015-2030 (28 MAY 2014)

In preparation for the Malaysian Aerospace Industry Blueprint 2015-2030, a series of workshops was held and attended by more than 100 participants. During the workshops, opportunities were identified and proposals were made for the manufacturing, MRO, systems integration as well as education and training sub-sectors. The proposed vision for the aerospace industry in Malaysia is to be the No.1 aerospace nation in Southeast Asia and an integral part of the global market by year 2030.

#### VISIT TO KOLEJ KEMAHIRAN TINGGI MARA (KKTM) MASJID TANAH ON AEROSPACE COMPOSITE TRAINING (12 JUNE 2014)

MIGHT organised a visit to KKTM Masjid Tanah, Melaka for a briefing on the progress of the Aerospace Composite Training programme and its future plans. Two training institutions, KKTM and Politeknik Banting, look forward to a possible collaboration on the programme's development in the near future. Meanwhile, KKTM and MARA acknowledged initiatives by MIGHT to establish the National Composites Centre in Malaysia.

# MAINTENANCE, REPAIR & OVERHAUL (MRO) SUB-SECTOR STAKEHOLDER MEETING FOR THE DEVELOPMENT OF MALAYSIAN AEROSPACE BLUEPRINT 2015-2030

(12 AUGUST 2030)

More than 40 participants joined the MRO subsector meeting led by Mr. David Anthony Jones (RUAG), subject matter expert for MRO subsector. Representatives from MOE, MOSTI, MIDA, PEMANDU, MARA, DCA, BIP and MITI were also present.

2<sup>nd</sup> Workshop on the Development of Aerospace Industry Blueprint 2015-2030 on 28 May 2014







# AEROSPACE MANUFACTURING SUB-SECTOR STAKEHOLDER MEETING FOR THE DEVELOPMENT OF MALAYSIAN AEROSPACE BLUEPRINT 2015-2030 (14 AUGUST 2014)

Following the MRO meeting, Mr Dave Davies, a subject matter expert in SME Aerospace chaired a meeting on Aerospace Manufacturing with more than 20 key stakeholders present. In the meeting, around 25 recommendations were made on the matter.

#### SYSTEMS INTEGRATION SUB-SECTOR STAKEHOLDER MEETING FOR THE DEVELOPMENT OF MALAYSIAN AEROSPACE BLUEPRINT 2015-2030 (19 AUGUST 2014)

The systems integration sub-sector stakeholder meeting gathered about 25 participants, led by Datuk Rosdi Mahmud (ADMANCO) as the subject matter expert. This sub-sector is crucial for the aerospace blueprint despite its small number of participation. The vision set by the stakeholders is for the sub-sector to be 'self-reliant (at least 70% local content) in integration and upgrading of strategic assets' before 2030.

### DIALOGUE ON AEROSPACE INDUSTRY WITH MITI MINISTER (21 AUGUST 2014)

A dialogue session between YB Dato' Sri Mustapa Mohamed, Minister of International Trade & Industry (MITI), and the aerospace industry stakeholders was held to discuss developments in the local aerospace industry. MIGHT presented the Development of Aerospace Blueprint 2015-2030 prior to the Stakeholders Briefing on the matter in November 2014.

#### EDUCATION & TRAINING SUB-SECTOR STAKEHOLDER MEETING FOR THE DEVELOPMENT OF MALAYSIAN AEROSPACE BLUEPRINT 2015-2030 (28 AUGUST 2014)

A group of 40 people were present during the education and training sub-sector stakeholders meeting, led by Mr Shamsul Kamar Abu Samah (AMIC) as the subject matter expert. The stakeholders agreed with the vision to be the main provider of competent workforce for the Aerospace Manufacturing sector in Southeast Asia by 2030.

#### **ENGAGEMENT WITH PRO-MEXICO**

Since 2013, MIGHT and Pro-Mexico Trade & Investment have worked closely to promote investment and knowledge transfer between both countries on the development of local aerospace industry. Mexico is globally well known for their initiatives in developing their SME companies to support the aerospace manufacturing subsector. Both are now looking for a possibility of an MOU signing to formalise the engagement.

### DEVELOPMENT OF MALAYSIAN AEROSPACE INDUSTRY BLUEPRINT 2015-2030

The Development of Malaysian Aerospace Industry Blueprint 2015-2030 is a follow up to the initial plan that was introduced by MIGHT in 1997, expiring in 2015. The blueprint collectively addresses various local progress and global changes in the aerospace industry. It also acknowledges related government agencies on current industry capabilities besides charting the way forward for the aerospace industry in Malaysia until 2030.

The Blueprint is scheduled to be presented to the Cabinet by MITI Minister in February 2015 and officially launched by the Prime Minister during the opening ceremony of LIMA 2015.

## STAKEHOLDER BRIEFING ON MALAYSIAN AEROSPACE INDUSTRY BLUEPRINT 2015-2030 (NOVEMBER 2014)

The stakeholder briefing on the Aerospace Blueprint 2015-2030 was well attended by industry players, government agencies and training institutions. The briefing concluded with 40 recommendations proposed for the blueprint.

### LAUNCHING OF AAC-AMIC RESEARCH & TECHNOLOGY CENTRE

In order to further enhance the Aerospace Malaysia Innovation Centre (AMIC) initiative in value-added research activities, AMIC has set up its first industrial lab in November 2014 under a smart partnership with Asia Aerospace City (AAC). AAC, a strategic investment of MARA, which is expected to bridge the gaps in technical competence and engineering facilities required by top aerospace industry players. Located within the German-Malaysian Institute (GMI) in Bangi, the AMIC-AAC R&T Centre houses a number of projects namely Virtual Reality, Advanced Tooling Manufacturing, Automation and Advanced Machining. AMIC has executed 10 R&T projects valued at RM 16.1 million with 15 research partners by the end of 2014.

### 1st MARA INTERNATIONAL AEROSPACE SYMPOSIUM 2014 (MINAS 2014)

MIGHT assisted in organising the symposium content and secured the participation of key industry players to ensure the success of the symposium. The symposium aims to address the concerns on human capital growth development in the aerospace industry through several key activities in pre and post sessions, round table discussions and exhibitions.

#### NADCAP TRAINING PROGRAMME

NADCAP Training Programme is a collaboration between MIGHT and Performance Review Institute (PRI) to provide eQuaLearn training courses in Malaysia. It offers professional development programmes and managed learning resources to improve the quality of personnel, products and processes through public and onsite courses.

Aiming to be the preferred global aerospace outsourcing centre, active participations in design and build programmes have been strategically laid out for the future of Aerospace industry in Malaysia.



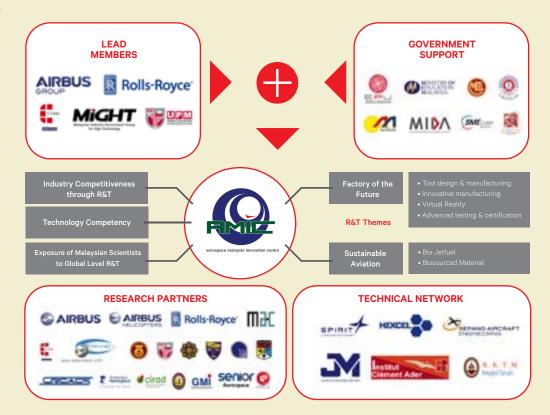
### Aerospace Malaysia Innovation Centre (AMIC)

A SMART PUBLIC-PRIVATE PARTNERSHIP TOWARDS SUSTAINING MALAYSIAN AEROSPACE INDUSTRY COMPETITIVENESS

#### **NETWORK OF INNOVATORS**

AMIC's core business is to embark on collaborative R&T projects, involving industry players and research institutes within the aerospace sector. Research projects are led by founding members, namely; Airbus Group, Rolls Royce and Composites Technology Research Malaysia (CTRM). The link between the industry members with the Government and research institutes is strengthened through the engagement of MIGHT and UPM.

FIGURE 1: AMIC - NETWORK OF INNOVATORS



#### LEADING THE AEROSPACE R&T

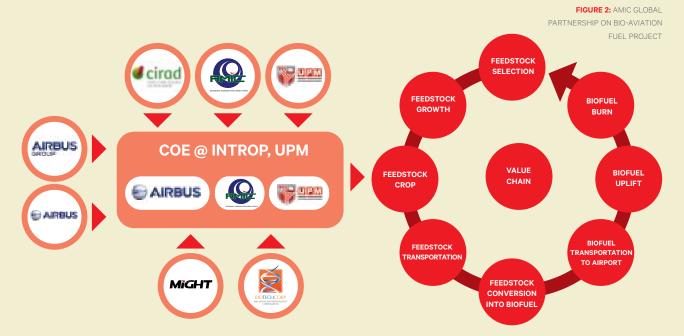
Two research themes namely Sustainable Aviation and Factory of The Future by AMIC are targeted to sustain the Malaysian aerospace industry. AMIC brings together local and global experts into a collaborative research platform which serves as part of AMIC's strategy to create platforms for Malaysian scientists and researchers to participate in R&T projects on a global level.

#### SUSTAINABLE AVIATION

AMIC catalyses its role in the aviation world through the incorporation and fostering of Green Aerospace initiatives and developments in Malaysia. The initiatives play a major role in pushing the green aerospace development forward to ensure that initiatives' outcome are feasible in overcoming the rigorous aerospace testing for gaining accreditation, certification, and implementation. AMIC has also integrated itself and its activities in the global network of Airbus Group and Airbus action worldwide on Sustainable Aviation.

The Center of Excellence (COE) was set up for Sustainable Aviation to focus on:

- i) Bio-aviation Fuel Developments
  - This initiative is part of a greater innovative drive to increase the eco-efficiency of the aerospace industry and its aircrafts.
  - AMIC has set key research projects in motion to develop bio-sourced composites and materials to validate the potential of such materials in the aerospace industry.
- ii) Bio-sourcing of Materials for Composites
  - Not only are the source, treatment and development of the bio-source material important, but equally, the testing, stressing and validation of them for aerospace applications.
  - The bio-source material initiative includes unique international collaboration, due to the advanced concept and the vast potential in the investigation.





#### FACTORY OF THE FUTURE

Although the technologies of the factory of the future are widely available, their implementations in today's factories are still pending. This has influenced AMIC to embark in derisking their use for aerospace companies in Malaysia and within the region. In particular, AMIC is focusing on the following areas;

- Virtual Reality
- Advanced digital technologies on the shop floor
- Advanced material; 3D printing to prototypes and series of components
- Automation in manufacturing process; production lines where computer-suited personnel and robots work side by side

To strengthen Malaysian aerospace composite manufacturing ecosystem, AMIC concentrates on furthering its development into a worldwide reference innovation ecosystem particularly in manufacturing engineering and advanced production technologies for composites. Work on this topic is underway through studies done, focusing on process modelling and process influence on the assembly of composite parts. It will be followed by technology demonstrator projects where use of advanced materials and manufacturing processes will be validated.



#### CENTRE OF EXCELLENCE (COE) FOR SUSTAINABLE AVIATION

AMIC in partnership with UPM, established the COE for Sustainable Aviation in 2014 to house the Sustainable Aviation Fuel project. The COE will be expanded to house AMIC's projects related to Sustainable Materials such as Bio Resin and Bio Composites.

#### AMIC-AAC R&T CENTRE FOR VIRTUAL REALITY & TOOLING

AMIC has embarked on its virtual reality (VR) project in September 2014 through smart partnerships with M-Aerotech, UM and UKM. Under this collaboration, M-Aerotech brings together MARA's group experts from various higher learning organisations. AMIC through its connection with Airbus Group has secured technical support from Airbus Helicopter in providing VR technology and technical expertise.

Under the ACC initiative, a Virtual Reality and Tooling Centre industrial lab in GMI, Bangi is dedicated to focusing their work on various aerospace projects. The centre will operate for a period of 6 years and is expected to remain in GMI considering the additional values it will bring to the research partners and GMI.



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### Maritime

MIGHT continues to spearhead the development of marine industry in Malaysia specifically in Shipbuilding/ Ship Repair (SBSR). Together with other Government agencies and industry players, MIGHT facilitates the implementation of the recommendations based on the 'Malaysian Shipbuilding/ Ship Repair Industry Strategic Plan 2020' (SBSR 2020).

#### EPP 6 - DEVELOPING MALAYSIA AS SHIPBUILDING/ SHIP REPAIR HUB

SBSR was introduced as an EPP under the NKEA Business Services in March 2012 after it was identified as an industry with immense growth potential, specifically for job creation.

MIGHT facilitates with the implementation of the recommendations based on the 'Malaysian Shipbuilding/ Ship Repair Industry Strategic Plan 2020' (SBSR 2020).

The two main initiatives undertaken by local SBSR players are:

### DEVELOPMENT OF LOCAL DESIGN FOR OFFSHORE SUPPORT VESSEL (OSV)

Currently, Malaysia imports most of the vessel designs used for new builds. Boustead Heavy Industry Corporation Berhad (Boustead) has embarked on an effort to develop local vendors in producing local vessel designs. This initiative will assist the SBSR industry to own the design rights

and consequently enable future upgrading and modifications to be carried out locally. Together with PEMANDU, MIGHT is supporting the design development and construction of the prototype vessel, which is anticipated to be ready in 2016.

### DEEPENING OF RIVER AND DEVELOPMENT OF SBSR INDUSTRY IN KUALA BARAM. MIRI

MIGHT, PEMANDU, Miri Port Authority and Shin Yang are jointly preparing a proposal of study on the current and anticipated condition of Kuala Baram river due to siltation (mainly at river mouth). The study includes impact to the industry and projection of revenue from the expansion of shipyards facility in order to capture the potential market from oil and gas (O&G) sector.

Ministry of Infrastructure Development and Communications, Sarawak (MIDCOM) is in the final stages of preparing the papers to be presented to the State Legislative Assembly for approval.

#### **HUMAN CAPITAL DEVELOPMENT (HCD) ON SBSR**

**▼** DEVELOPMENT OF SBSR TRAINING MODULES

AMIM with its role as Industry Lead Body (ILB) for SBSR industry has successfully produced three

training modules related to ship repair activities namely in hull, piping and electrical. MIGHT as a panel contributed its views and suggestions during the Occupational Analysis (OA) process and the development of the National Occupational Skills Standard (NOSS).

The modules are expected to accelerate the production of a trained blue collar workforce which will reduce dependency on foreign workers and eventually standardise training modules throughout the country.

#### **ENGAGEMENT WITH STAKEHOLDERS**

#### MIGHT INTEREST GROUP (MIG) FOR MARITIME

As part of consensus building activities undertaken for the maritime industry stakeholders, meetings through MIG platform were held to resolve specific industry issues. In 2014 several MIG meeting was held.

Among others the meeting discussed on the issues, challenges and new initiatives including the preparation of SBSR strategic paper for 11<sup>th</sup> Malaysian Plan (11MP).

### ■ BRIEFING SESSION TO MINISTRY OF INDUSTRIAL DEVELOPMENT (MID) SARAWAK

MIGHT conducted a briefing session to the Ministry of Industrial Development (MID) Sarawak on the current scenario and potential opportunities as well as issues and challenges to the SBSR industry in the state. Input and suggestions raised during the session were noted for consideration to be put forward by MID to the upper management of Federal Government.

### AWARENESS ON REVISION OF GOODS AND SERVICE TAX (GST) FOR SBSR INDUSTRY

MIGHT facilitated several engagement between Royal Malaysian Customs and industry players to get better understanding on GST treatment for SBSR industry.

#### STRATEGIC PAPERS

#### INCENTIVE PACKAGE FOR SBSR INDUSTRY

MIGHT aims to push forward SBSR as part of the mainstream national agenda. An incentive package for the industry is proposed to promote investments in marine equipment manufacturing, training as well as shipbuilding and ship repair/ MRO activities. The package would stimulate the growth of high value marine design and engineering businesses, foster expansion of shipyard facilities and promote adoption of the latest automation technologies through domestic direct investments (DDIs) and foreign direct investments (FDIs).

Several engagements with MIDA have resulted in a revised proposal submitted to MOF in December 2014 for approval.



### DOMESTIC SHIPPING LICENSE (DSL) AS A MEANS TO PROMOTE THE GROWTH OF MARITIME INDUSTRY

The proposal sets the target for all OSVs and tug boats operating in Malaysian waters after year 2020 to be locally built. MIGHT is currently revising the proposal paper to resolve the related issues in a holistic manner. The proposal is scheduled to be tabled for Cabinet approval in Quarter 4 2015.

#### STRATEGY PAPER FOR 11th MALAYSIAN PLAN (11MP)

In preparation for the 11MP, MIGHT has been requested by MITI to prepare the Strategy Paper for SBSR industry as input for the Manufacturing Sector Strategy Paper. The strategic paper focused on the key levers and identified the niche market to accelerate the growth of the industry until 2020.

#### **EVENTS**

## SPECIALISED MARKETING MISSION (SMM) TO SAUDI ARABIA AND UAE UNDER MATRADE (DECEMBER 2014)

Malaysia is one of the vessel exporters to Middle East countries, such as UAE and Qatar. The mission aims to expand business opportunities in the targeted markets focusing on marine products such as new build vessels, marine equipment, maritime training, supply and marine engineering. The potential sales value recorded from both missions amounted to RM 1.02 billion.

Following the visit, Saudi Arabia has requested Malaysia to provide assistance in setting up SBSR training centers in their country, focusing in the O&G sector.

#### TECHNICAL VISIT TO MIRI, SARAWAK (21 APRIL 2014)

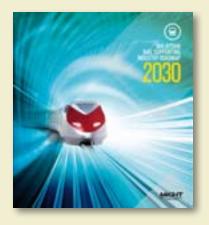
MIGHT coordinated a one-day technical visit to shipyards in Kuala Baram, Miri for government agencies including PEMANDU, MOHR, and MIDA. The purpose of the visit was to further understand the local SBSR industry's environment and establish links with counterparts in Miri shipbuilding cluster.

#### 3rd NATIONAL MARINE INDUSTRIES FORUM (3NMIF) (18 NOVEMBER 2014)

MIGHT together with AMIM, MIMA and RINA-IMarEST, organised the National Marine Industries Forum, themed Leveraging the Oil & Gas Sector for the Development of Marine Industries.

The forum was held to provide a national platform for an open exchange of views on issues in the marine industries among the stakeholders. It also serves as a venue for the stakeholders to deliberate on viable options in promoting the growth of marine industries in Malaysia.





### Rail

Parallel to the Government's transformation efforts to advance the transportation services in the country, Malaysia has become a major player for rail related activities on a global level. Huge investments are being allocated for rail projects by the Government until 2020, thus providing ample growth opportunities in terms of business activities, employment and technological advancement. MIGHT has conducted a series of workshops involving various stakeholders to chart the way forward for the Rail sector.

#### PBC

The objective of PBC is to deliver products and services where payment is directly related to performance. The concept was introduced to encourage outsourcing industry wide common services and the PBC has been incorporated in KTMB's contract. MIGHT co-organised mini workshops on PBC together with KTMB, Rapid Rail, VAS Aero and E-MAS.

#### MALAYSIAN RAIL INDUSTRY PORTAL

The Malaysian Rail Industry Portal serves as a reference for business entities, government agencies, and investors to promote and foster relationship between all stakeholders. The portal, designed to push forward creation of start ups, entrepreneurs and SMEs in the Rail Industry was officially launched for online public access in June 2014.

#### SITE VISITS

Several site visits were carried out to develop relationships with the industry stakeholders and strengthen the current industry potential. Among the engagement sessions are as listed below:

- Site Visit to CSR Zhuzhou Electric Locomotive Manufacturing Plant, Batu Gajah, Perak (19 September 2014)
- Site Visit to SMH Rail Assembly Plant, Rasa (8 October 2014)
- Site Visit to EV Dynamics (27 November 2014)

#### RAIL HUMAN CAPITAL DEVELOPMENT

This programme is specifically created to produce more local experts and to populate the rail industry with a capable workforce. Through this development, rail industry is being introduced to local learning institutions to raise exposure and inculcate interest among students. Rail related R&T projects are undertaken to sustain competitiveness. Key activities that were pursued in 2014 includes discussion on establishment of Rail Centre of Excellence (RCOE) with relevant stakeholders. Site visits to international learning institutions were also carried out as below:

- Benchmarking Visit to Hunan Vocational College of Railway Technology (HVCRT), Zhuzhou China (1 December 2014)
- Benchmarking Visit to Bombardier Thailand and Kasetsart University Rail Engineering Centre (KURAIL), Bangkok Thailand (12 December 2014)

### MALAYSIAN RAIL SUPPORTING INDUSTRY ROADMAP 2030 (MRSIR 2030)

Published in June 2014, the roadmap's purpose is to provide a guideline for the development of rail industry until the year 2030. Seamless transformation of the local industry is anticipated by leveraging on offset programmes to acquire technology and knowhow. Building conducive rail eco-systems is proposed to further enhance the industry. Collectively, these strategies will churn positive growth for the national economy and transform the local rail industry to be a competitive player on a regional as well as global level. Key activities prior to publication includes 8th Future Rail 2030 Committee meeting in July 2014 and proposal evaluation.

## Offset Management Services

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.

#### TRENT900 OFFSET PROGRAMME

A pre-council meeting was carried out with the Offset Committee chaired by KSU MOSTI and it was decided that this programme is to be closed. A ceremony will be held during LIMA 2015 and the Letter of Relief will be handed over to Rolls Royce by the Government of Malaysia to signify its closure.

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.

#### PC7 MKII OFFSET PROGRAMME

The Ministry of Defence procured five additional PC-7 MkII Turbo Trainer Aircrafts for the Royal Malaysian Air Force (RMAF). This procurement initiated an offset programme and PILATUS as the OEM is committed to the requirements by the Government of Malaysia. The proposed projects were to be approved by the MinDEF Offset Committee in January 2015.

#### **8X8 AWV OFFSET PROGRAMME**

#### STRAND AEROSPACE MALAYSIA SDN BHD (STRAND)

Strand is an established engineering services supplier, offering high quality and affordable engineering solutions. The offset programme has been approved by the MinDEF Offset Committee and the project will result in enhanced skills acquisition besides adding value to the local industry and increasing its overall competitiveness. A prospective JV with a South African entity to increase the export potential of Malaysian services industries is also in the pipeline. The outcome of this project will help in building indigenous capacity and ability to independently develop further in the sector. This programme will also contribute in developing meaningful South-South collaboration giving effect to Malaysia's vision of creating centres of excellence in the developing world.

This project is estimated to be worth some RM50 million in Offset Credit Value (OCV).

#### HALAL INDUSTRY DEVELOPMENT INITIATIVE

Due to the high demand of halal food in South Africa, Western Cape Fine Food Initiative (WCFFI), consisting of manufacturers of halal food, distributors and traders is interested in procuring halal products from Malaysia. Together with the Department of Trade & Industry

(DTI), WCFFI is focusing on halal activities in the Fast-Moving Consumer Goods (FMCG) sectors. An MoU between HDC and WCFFI was signed on 28<sup>th</sup> October 2014 during WIEF 2014, witnessed by the Prime Minister of Malaysia. Offset Management Services Division was instrumental in getting this MoU signed.

The value for this project has not been finalised, but is expected to generate a quantum of around RM 100 million.

#### RAIL SIGNALLING & COMMUNICATION TRAINING COURSEWARE

In support of rail industry development in Malaysia, the OMS Division is proposing a Rail Signalling & Communication Training Courseware to be provided by THALES to local industry players.

This project is one of the initiatives towards rail-ready professionals based on industry demands. The total value chain of the courseware development offers technical training for blue collar tradesmen; providing bridging programmes for graduate engineers as well as short courses.

Thales and Offset Management Services has agreed on an OCV valued at €56 million.

#### 10\*6 CARS ELECTRIC TRAIN SET (ETS) OFFSET PROGRAMME

The Offset Agreement was signed between CSR ZELC and Government of Malaysia on 12 December 2014. As a follow-up to the agreement, the OMS Division is currently focusing on the effort to increase the localisation value from 2% to 30% by having more local companies to participate in the programme. OMS Division is in the midst of organising a business engagement session between potential companies from Malaysia and CSR ZELC suppliers from China to create smart partnerships.

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## MIGHT INTERNATIONAL

MIGHT has pursued a series of high level international engagements and strategic positions in 2014. Through its continuous local and international engagements, MIGHT succeeded in building a bridge between international experts and high level national stakeholders through strategic platforms and high impact programmes. With these endeavours, MIGHT has been recognised as a strong strategic partner by the local and international ministries/organisations.





### GLOBAL SCIENCE & INNOVATION ADVISORY COUNCIL (GSIAC)

The activities and events which took place under GSIAC were as follows:

### PRESIDENT OBAMA'S WORKING VISIT TO MALAYSIA (26-27 APRIL 2014)

Because of MIGHT's active engagement with United States through GSIAC for the past three years, MIGHT was emphasised in the joint-statement between YAB Dato' Seri Najib Tun Razak and President Barack Obama. This further signifies our commitment to strengthen the bilateral relationship between our two nations.

"....The Prime Minister highlighted to President Obama the initiatives under the Global Science and Innovation Advisory Council (GSIAC), a joint New York Academy of Sciences and Malaysian Industry-Government Group for High Technology (MIGHT) forum with a mandate to develop science, technology and innovation strategies to achieve Malaysia's vision 2020...."

Source: Joint Statement by President Obama and Prime Minister Najib of Malaysia White House, 27 April 2014

### 4th GSIAC ANNUAL MEETING (24 SEPTEMBER 2014)

The GSIAC annual meeting was held in conjunction with the United Nation General Assembly (UNGA) week. MIGHT was involved in several key events listed below:

### SECOND ANNUAL INTERNATIONAL CONFERENCE ON SUSTAINABLE DEVELOPMENT PRACTICE (ICSDP) (17-18 SEPTEMBER 2014)

MIGHT obtained a special slot to promote and showcase Malaysia's best practices on Sustainable Development. The event was attended by 400 delegates including various high level stakeholders from international organisations such as, UN Sustainable Development Solutions Network, Global Association of Masters of Development Practice, Colombia University and Global Environment Facilities (GEF). The publication *Rising to the Challenge* was also launched during this event by Professor Jeffrey Sachs.

### LAUNCHING OF GLOBAL STEM ALLIANCE (22 SEPTEMBER 2014)

The event was held at the United Nations to an audience of over 400 dignitaries, Heads of State, Nobel Laureates, diplomats and fortune 500 business leaders. The Alliance was formed to create a new generation of STEM (science, technology, engineering and math) leaders and innovators, in partnership with governments, industry, philanthropists, NGOs and leading academic institutions around the world.

#### 4<sup>th</sup> GSIAC ANNUAL MEETING (24 SEPTEMBER 2014)

Among the highlights of the meeting was the launch of the GSIAC Coffee Table Book by YAB Prime Minister of Malaysia to publish the endeavours of GSIAC over the past 3 years. GSIAC also showcased the Science 2 Action (S2A) and Sustainable Development initiatives.

Certificates of appreciation were handed out to 20 Malaysian school children involved in the STEM & Nobelist Mindset Summer Institute programme conducted by the New York Academy of Sciences.



The GSIAC meeting was attended by 47 Council members of whom, 28 are international council members, 12 are National council members and 7 Ex-officio

2 MoU/MoA in the area of education and health were signed during the pre-networking dinner, which signify our continuous commitment and also help strengthen our international collaborations.

#### WORKING VISIT TO JAPAN (2-5 APRIL 2014)

MIGHT went on a working visit to discuss further on current initiatives borne from GSIAC, specifically on Smart Communities. Several strategic meetings were held during the visit. The purpose of the meeting was to establish funding for green projects in Malaysia, especially Putra Eco Ventures. MIGHT also met up with the Japanese Bank for Global Corporation (JBIC) to consider potential collaborations and with PEV's Japanese partners to discuss projects in Malaysia.

An engagement session and site inspection to Mitsubishi Electric's Smart Grid Demonstration Project in Osaka was carried out, during which potential collaboration opportunities were deliberated with Mitsubishi's Senior Management.

METI Senior officials together with President of K-RIP met the Mayor of Kitakyushu during their visit to the city. The working visit to Kitakyushu Eco-Town Centre, Fujitsu's Smart Grid Demonstration Project, was also part of preliminary activities for the GSIAC Inter-Sessional Meeting on Sustainable Green Futures / Smart Partnership: Renewable Energy and Energy Efficiency.

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INTERNATIONAL

#### **MULTILATERAL ENGAGEMENTS**

### BEYOND GDP: TRANSITIONING INTO SUSTAINABILITY (17-19 MAY 2014)

The International Human Dimensions Programme on Global Environmental Change (IHDP) and MIGHT, in partnership with the Japanese Ministry of Environment, organised this symposium to explore the limits of traditional economic indicators and measure social progress. The event was attended by 403 participants from international organisations.

The three-day programme included:

### INCLUSIVE WEALTH REPORT (IWR) WORKSHOP (17-18 MAY 2014)

The workshop, attended by authors and reviewers of the IWR 2014, was held in preparation for the finalisation of the report prior to publication. It was divided into three categories —Human Capital (Health and Education), Produced Capital and Natural Capital— which equates to the measurement of a nation's wealth according to the inclusive wealth index. Among the outcome of the meeting was the decision for the IWR 2014 to be launched at the 2014 Education for Sustainable Development (ESD) World Conference.

### SCIENCE COMMITTEE (SC) MEETING (19 MAY 2014)

The Science Committee Members discussed short-term decisions relevant to the future of IWR as well as reviewed the long-term impact envisioned by the IWR's past and upcoming work.

### SYMPOSIUM (19 MAY 2014)

The symposium started with a welcoming remark by Professor Tan Sri Dr Zakri Abdul Hamid. The highlight of the symposium was the panel session by prominent panelist and the youth session by students of PERMATAPintar. The forum ended with a closing remark delivered by honourable

Senator Dato' Sri Abdul Wahid Omar, Minister in the Prime Minister's Department.

### UNU-IIGH BUILDING LAUNCH (1 MARCH 2014)

The government of Malaysia presented UNU-IIGH with a building located in HUKM, Kuala Lumpur to showcase continuous support of the country towards the initiatives of United Nations University. A launching event was held to recognise the works of UNU-IIGH as a think tank for UN.

## SDSN MALAYSIA CHAPTER – LEADERSHIP COUNCIL INAUGURAL MEETING (30 MAY 2014)

The 1st SDSN Malaysian Chapter leadership council Meeting was successfully held and chaired by Professor Tan Sri Zakri Abdul Hamid, attended by 11 experts from the field of sustainable development. The main agenda of the 1st SDSN Malaysian Chapter leadership council Meeting was to appoint its members and elaborate further on new initiatives/working plan. The meeting concluded with the approval of the Work Plan for 2014 - 2015



### THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OFCD)

Throughout 2014, MIGHT strengthened Malaysia's presence in OECD by participating in its key activities as follows:

#### 43'd WORKING PARTY IN INNOVATION AND TECHNOLOGY POLICY (TIP) MEETING (18-20 JUNE 2014)

Together with more than 20 OECD members, MIGHT participated in the TIP Thematic Workshop on Public/ Private Partnership (PPP) in STI and the 43rd Working Group on Innovation and Technology Policy (TIP) meeting. MIGHT shared Malaysia's experience during the TIP PPP work. The main outcome of the meeting was MIGHT announcing its intention to undertake the OECD Country Innovation Review, the report for which will be presented during the ASEAN+ in 2015. As a follow up from the announcement, MIGHT organised a Fact Finding Mission (FFM) for OECD officers to conduct interview sessions with their Malaysian counterparts.

#### OECD COUNTRY INNOVATION POLICY REVIEW

The Review will focus on strategies to enhance the capacities and capabilities of Malaysian enterprises with particular regard to the role of public and private research organisations, the Higher Education system, and specialised intermediaries in the generation and diffusion of knowledge and its economic valorisation through innovation. It will assess how related processes are shaped by public policy, including the National Policy for Science, Technology and Innovation (NPSTI) 2013-2020, with a view to propose improvements in existing policy instruments and governance arrangements.

The Review will also be able to provide input for Science to Action (S2A), where MIGHT acts as the Implementing Agency.

#### OECD STEERING COMMITTEE

 $\operatorname{\mathsf{MIGHT}}$  has put together a Steering Committee to ensure key players that are involved with the STI ecosystem

participate in the OECD's Country Innovation Policy review. The first meeting was conducted on 22 July 2014 and the first draft of the review is scheduled to be assessed in May 2015

#### FACT FINDING MISSION (17-27 JULY 2014)

MIGHT has succesfully scheduled 20 interviews with a wide range of stakeholders from various backgrounds that represent STI including ministries, industry captains, academia, technology parks, corridors (IRDA) and others.

## FACT FINDING MISSION ON NATIONAL INTELLECTUAL PROPERTY SYSTEM OF MALAYSIA (1-13 OCTOBER 2014)

Following OECD plans to conduct a study on Malaysia's National Intellectual Property System during the 43<sup>rd</sup> TIP Meeting, MIGHT have coordinated more than 20 meetings involving ministries, companies and academia from the intellectual property sector. OECD will analyse the input given and subsequently produce documents and recommendations for local stakeholders.

#### BILATERAL ENGAGEMENTS: COLLABORATIONS WITH AFRICAN COUNTRIES

Malaysia is committed to the South-South cooperation and it is of strategic importance that MIGHT strengthen the relationships and plan active collaborations with African nations. Besides assisting in the development of human resource, MIGHT is also involved in other bilateral engagements with African countries as listed below:

### MIGHT'S SPECIAL MISSION TO MAURITIUS (11-13 MARCH)

The Special Mission to Mauritius was conducted in conjunction with the Minister of International Trade and Investment's (MITI) visit to Mauritius where MIGHT participated in the following programmes:

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- Bilateral Meeting between Dato' Sri Mustapa Mohamed, Minister of International Trade & Industry of Malaysia (MITI) and the Hon. Dr Arvin Boolell, Minister of Foreign Affairs, Regional Integration & International Trade of Mauritius (MOFARIIT)
- Mauritius Malaysia Business Forum
- MIGHT Malaysia Mauritius Cooperation Initiative Meeting

The meetings have resulted in favourable outcomes for both parties. Through MIGHT, Smart Partnership will be explored further in new areas of cooperation, particularly in high technology, education and Blue Ocean Economy. An MoU between MIGHT and the Board of Investment Mauritius (BOIM) is scheduled to be signed once details are finalised. Knowledge transfer will also be carried out through exchanges of personnel from both countries.

### WORKING VISIT TO MOZAMBIQUE AND SOUTH AFRICA (21-25 APRIL 2014)

MIGHT attended both Joint Committee meetings on S&T and STI on a working visit and the meetings resulted in advantageous outcomes as below:

- MIGHT Members and other industry players are strategically positioned to penetrate African markets for future business prospects
- The establishment of the Industrial Scientific Research Council in Mozambique (MISRC) will enable MIGHT to have improved visibility in international prospecting of high technology in the African continent
- MIGHT is able to highlight one of GSIAC's initiatives (Smart Village Rimbunan Kaseh) in South Africa
- The strengthening of MIGHT's current initiatives with regards to aerospace industry development and offset programme

#### 1st REPUBLIC OF MOZAMBIQUE-MALAYSIA JCM ON S&T

MIGHT presented a proposal on the setting up of the Mozambique Industrial and Scientific Research Council (MISRC) during the 1st Republic of Mozambique-Malaysia JCM on S&T. The Ministry has been requested to revert by July 2014.

# BILATERAL ENGAGEMENT: HIGH LEVEL COURTESY DISCUSSION WITH RUSSIAN DEPUTY MINISTER (26 MARCH 2014)

MIGHT organised a high level courtesy discussion with Russian delegates, led by His Excellency Alexey Likhachev, Deputy Minister of Economic Development Russia with 37 Russian government and industry players to establish contacts with potential business partners and explore new areas for collaboration.



Our People

































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