



Paving the Way for Graphene in Malaysia

8 November 2016

Datuk Mark Rozario Chief Executive Officer Agensi Inovasi Malaysia

About AIM



Agensi Inovasi Malaysia was set up through an Act of Parliament in December 2010. AIM is administered by a 17-member Governance Council chaired by the Honourable Prime Minister



Current GC Members

- YAB Prime Minister of Malaysia
- Minister of Higher Education
- Minister in the Prime Minister's Department and Special Advisor to Agensi Inovasi Malaysia
- Minister in the Prime Minister's Department (EPU)
- Minister of Science, Technology and Innovation
- Minister of International Trade and Industry
- Minister of Domestic Trade, Co-operatives and Consumerism
- Second Minister of Finance
- Chief Executive Officer, Performance Management and Delivery Unit (PEMANDU)
- Chief Secretary to the Government of Malaysia
- Managing Director of Khazanah Nasional Berhad
- Founder & President of LimKokWing University of Creative Technology
- President of International Association of Universities (Paris)
- Science Advisor to the Prime Minister
- Group Chief Editor and Executive Director, Star Publications (M) Bhd.
- Chairman, Yayasan Salam Malaysia
- Chief Executive Officer of Agensi Inovasi Malaysia



We employ multiple approaches towards innovation...





THINKING CULTURE

Catalysing the social sector eco-system to enable strategic public-private collaboration & citizen empowerment



CATALYSE COMMERCIALISATION

INVESTMENTS



Quality of Life INNOVATION I

NBS

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INNOVATING ORGANISATIONS

Providing support to mid-size and large organisations on innovation









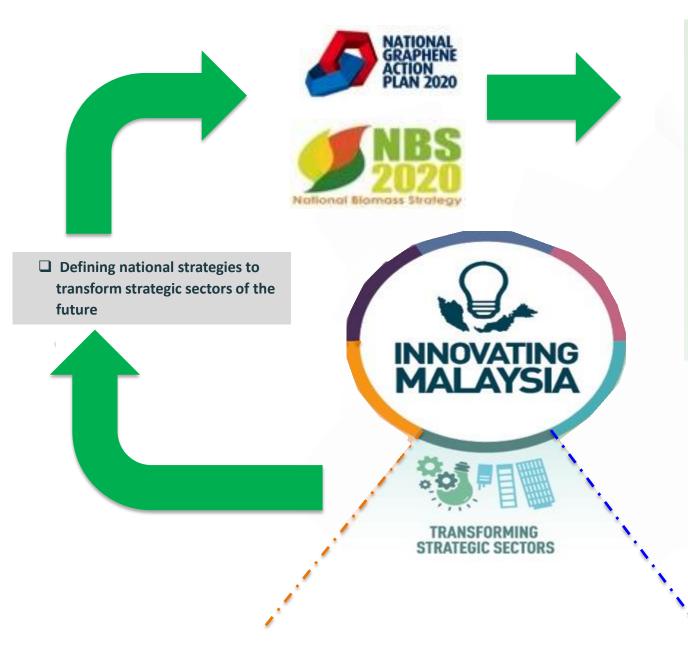


Defining national strategies to transform identified strategic sectors of the future



Catalysing greater collaboration activities between industry and academia to generate commercial-ready IP





GENERATE NEW SOURCES OF INCOME

CREATE
HIGH-SKILLED
JOBS

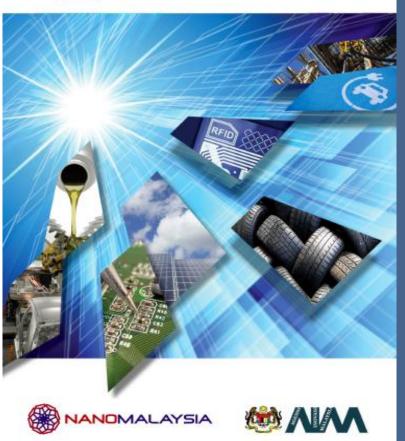


ENHANCE DEVELOPMENT
OF SUSTAINABLE NEW
INDUSTRIES

NATIONAL GRAPHENE ACTION PLAN 2020



Potential GNI by 2020 Jobs Created by 2020 RM 20 billion 9,000



Total universe of Graphene applications evaluated for technical feasibility

- Ultra-capacitors
- Li-ion battery anode
- Photovoltaics
- Hydrogen-based fuel cells
- Energy Stranger
- Composite filler
- Composite matrix
- Protective coatings
- Water filtration
- Outgassing barrier

Transparent electrodes

radiation shielding

interface material

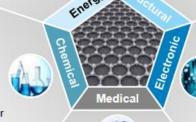
Conductive inks

Heat spreader/thermal

Electromagnetic

Food packaging

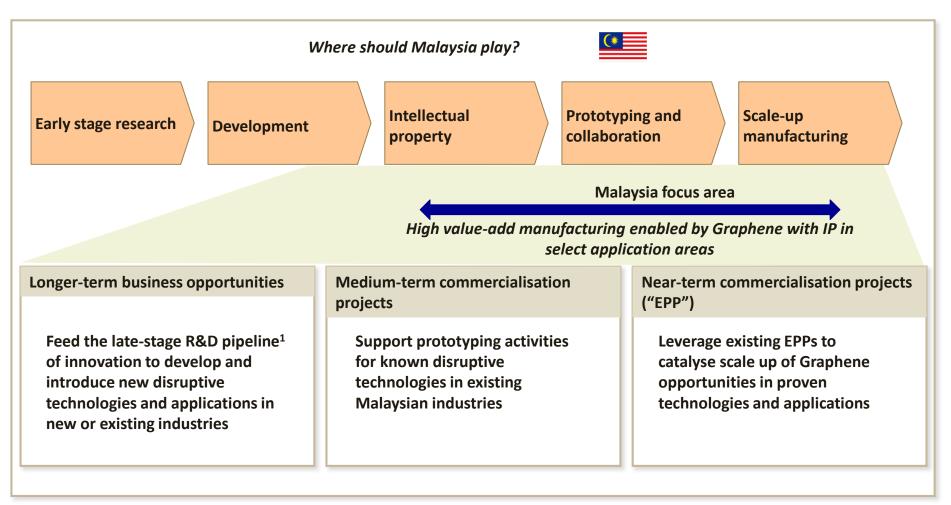
- Plastics additives
- Rubber additives
- Catalyst supports
- Nanofluids (drilling fluids, lubricants)
- Sensor applications
- Dispersing agents for insoluble materials



- Digital electronics
 Photodetectors &
 - lasers
 - Radio-Frequency electronics
 - Non-volatile memory
- Anti-bacterial medical dressings
 Human tissue engineering
- DNA sequencing
- Magnetic Resonance Imaging contrast agents



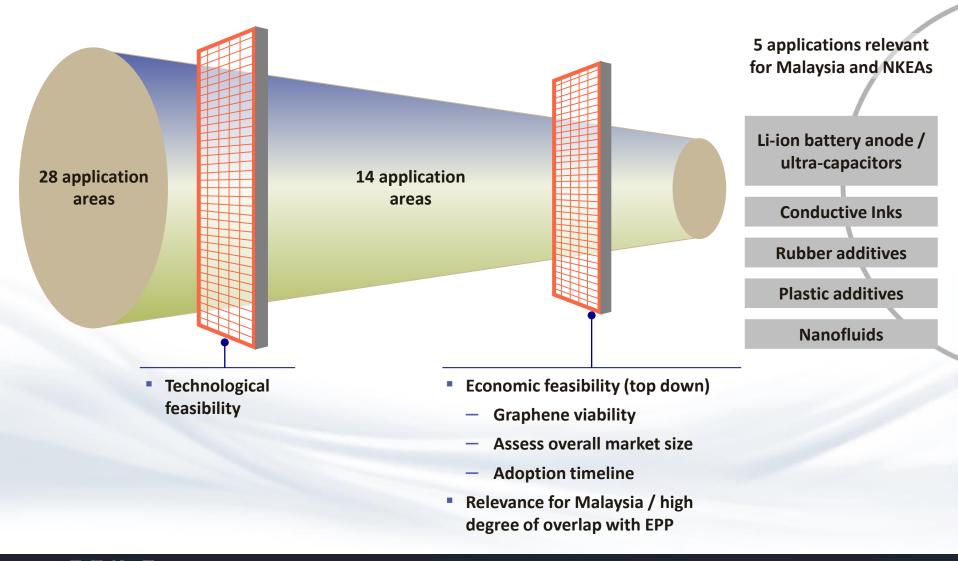
NGAP 2020 identified key strategic opportunities for Malaysia to focus on when developing high-value industries with Graphene as a key enabler



1 Requires investment in university research grants to facilitate longer term R&D, similar to other countries (commercialisation window beyond 2020)



Through systematic analysis, 5 applications were found to be the most technologically feasible and highly relevant to Malaysia



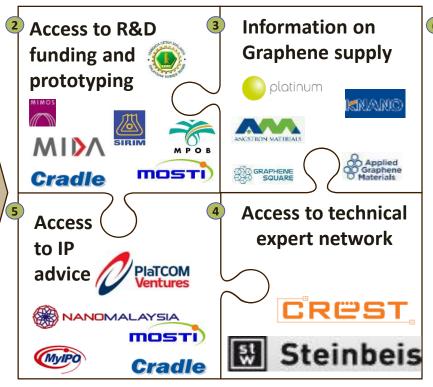


The Government plays a critical role in establishing, supporting and maintaining Graphene's project development activities and funding landscape

Awareness
building
& facilitating
projects

NANDMALAYSIA
(Lead Agency)

PEMANDL





Co-ordination and monitoring





Steering Committee

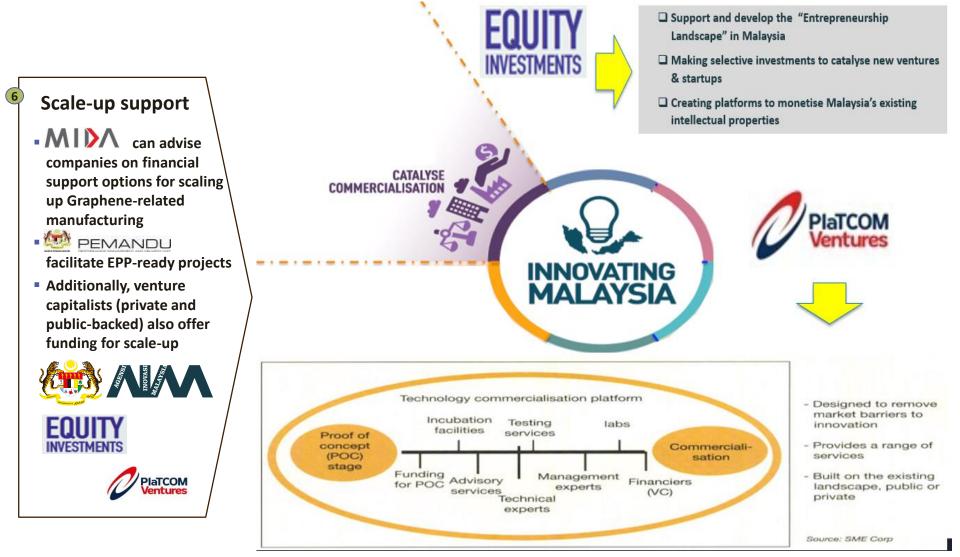
YBM CEO
YBM MITI PEMANDU YBM MOST

NanoMalaysia EPU PEMANDU

AIM MIDA NND MITI



Funding and Scale Up Support for Graphene by AIM







Enhancing Malaysia's Graphene Eco-system by Linking Key Initiatives and Future Graphene Potential to Network of NCII Companies





Encourage New Entrepreneurs & New Companies that Place High Priority in ROII



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Encourage & Increase Design Thinking & Future Innovative Society & Leaders







Decrease in Government Spending in Social Services by Encouraging & Leveraging on the Private Sector via Incentives & a Clear Social Finance Model

Increase the Current Network Pipeline by Creating NCII Modules for SME & Mid Tier Companies so all Companies can Track their Innovation & Potential New Revenue from it















Leverage on Experts from Academia that can be Used to Solve "Real" Company & Industry Problems & Increase Collaborations Between Industry Players & Academia Experts







THANK YOU