Saya mengesahkan bahawa pembekal
telah menjalankan kerja dengan sempurna

Lee Wan Wei
Manager
Electrical and Electronics Productivity Nexus
Productivity Growth Division
Malaysia Productivity Corporation

EEPN Governing Committee Meeting and Strategic Sessions Slides
YBhg. Dato' Seri Wong Siew Hai
(Chairman of EEPN)

Agenda

ITEM	AGENDA
1	Malaysia Semiconductor Industry Association (MSIA)
2	National E&E Forum 2020
3	EEPN 2020's Review
4	Future of E&E
5	EEPN Strategic Framework 2021-2025
6	Key Strategic Updates • Progress updates on 2020's Key Strategies • Update on 2021's Strategy Initiatives (SI)
7	Presentation on MPC's Sectoral Productivity Level

MALAYSIA SEMICONDUCTOR INDUSTRY ASSOCIATION

MSIA (Malaysia Semiconductor Industry Association)

Objectives

R&D and Technology

- To strategically develop Malaysia's semiconductor industry including electronics and systems by nurturing and growing the complete semiconductor eco-system

Eco-system

- To elevate Malaysia's semiconductor companies' global market position and value chain by enhancing their capabilities and capacities

Advocacy

- To be the collective voice of the semiconductor industry by advocating industry's challenges and building positive relationships with the government and its agencies, and other industry associations and chambers of commerce

Global Competitiveness

- To collaborate with the government on strategies formulation and policy advocacy to enable Malaysia's semiconductor industry, including electronics and systems, to be globally competitive

E&E Future Charter

Salient points from MIDA, MITI, MATRADE, MPC & EEPN

Attendees unanimously agreed with the suggestion to form a national entity to represent entire E&E industry in Malaysia

- MIDA reiterated that this suggestion was high-lighted during the last budget (RMK11: 2016-2020), because M'sian E&E industry representation is fragmented
- EPU is also in agreement, MPC also submitted for funding
- But progress slowed down due to request for funding not allocated
- Responses to MIDA's survey for investment and headcount are not very accurate, due to double capturing by over-lapping associations e.g. Silterra is under SFAM and also KITA etc (comment from industry)
- MATRADE has members from Malaysian Exporters, but do not have MNCs representation
- Even after 40 years, there are still no associations for semiconductor industry i.e. assembly and test
- Suggestion was to leverage FMM but attendees do not agreed
  - The attendees explained that the E&E contribution is significant (38% of export), and need a separate representation on its own
  - So as to ensure better integration, consolidation and undivided attention, and to build ecosystem and supply chain for the future

Salient points from MIDA, MITI, MATRADE, MPC & EEPN

Proposed Working Group membership

- Industry: Dato' Seri SH Wong, Dato' Png, KC Lau, Dato' YJ Lim, Dato' Peter, David Khor, Vejaykumar
- Government: MIDA, MPC, MATRADE
- Secretariat: EEPN/MPC

Feedback and potential issues to avoid

- E&E entity needs to be nibble and able to respond fast
    - If too large group, will be cumbersome and paralyzed
    - A nibble core committee to manage the chapters
- Case study to avoid
    - Association of Malaysian Medical Industries – AMMI (www.ammi.com.my)
        - Currently struggling to have a single voice, due to wide scope e.g. medical devices, gloves mfg, pharma companies, sales companies
- Avoid antitrust guideline violations and risks
    - Trade association viewed as members' agreement to share information with all members
- Use an ecosystem approach, to help prioritize what representations are urgently required

Way forward

Pre-work needed

1. What are the Business Propositions
   - What are the 'problem statements' and 'what are we solving'
   - What's the benefits to members
2. Recommend structure for Malaysia E&E Industry Chamber, or a Society, an Association etc
3. Research on how to integrate various organizations and affiliations
4. Proposed the organization structure
5. Research on other association/chambers on structure & M&A
6. Draft the Constitution i.e. Memorandum and Articles of Association (M&A)
7. Benchmarking (what objectives and how they operate)
   - Taiwan Semiconductor Industry Association - TSIA (www.tsia.org.tw)
   - Singapore Semiconductor Industry Association - SSIA (www.ssia.org.sg)
   - Local associations e.g. Malaysian Petrochemicals Associations - MPA (www.mpa.org.my)
   - Malaysian Palm Oil Association – MPOA (www.mpoa.org.my)

Way forward

Suggestions from a company secretary and a lawyer

- Most associations or chambers are registered with Registrar of Society (ROS) as a society.
    - FMM is a Berhad, company limited by guarantee.
    - AMCHAM is a Berhad, company limited by guarantee.
    - Frepenca is a society & their constitution is available online.
- Lowest cost is to register & maintain as a society.
- Recommend to check with ROS, and register it ourselves (need to provide relevant docs)
- Required documents
    1. Name of Society
    2. Ad Hoc Committee members, Names, NRIC Nos, Occupation, Employer, Address.
    3. Need a President, Vice President (one/more), Secretary, Treasurer, Assistants to Secretary and Treasurer
    4. Optional: ~ 5 committee members (number to be defined by board), 2 Internal Auditors
    5. Address of Society
    6. Brief Objectives
    7. How many categories of membership? Who qualifies? How much is the membership Fee.
    8. Minutes of meeting confirming the above items

Benchmarking : Taiwan, Singapore, USA

	TSIA	SSIA	SIA	MSIA
1. Objectives	1. Promote cooperation among different sectors in the local semiconductor industry 2. Participate in global standard setting and activities related to the development of the semiconductor industry 3. Engage in international negotiations on behalf of the local industry 4. Provide consultation and services for its member companies 5. Create better communications among its member companies and with other industry associations 6. Provide suggestions to the government on industrial policies	1. The SSIA is the voice of Singapore's semiconductor industry and is committed to support this important sector in Singapore in order to facilitate substantial growth of the whole semiconductor economy of the country. 2. To create and sustain a highly competitive, leading-edge and vibrant semiconductor industry in Singapore and the region. 3. To steer, advocate and facilitate the full value chain of the semiconductor industry in Singapore acting as a common industry voice.	1. SIA help the industry grow and unites semiconductor companies around common challenges. 2. SIA seeks to strengthen U.S. leadership in semiconductor manufacturing, design, and research by working with Congress, the Administration, and key industry stakeholders to encourage policies and regulations that fuel innovation, propel business, and drive international competition.	1. R&D and Technology – To Strategically Develop Malaysia's semiconductor industry including electronics and systems by nurturing and growing the complete semiconductor eco-system. 2. Eco-system – To elevate Malaysia companies' to the global market and value chain by enhancing their capabilities and capacities. 3. Advocate – To be the collective voice of the semiconductor industry by advocating industry's challenges and building positive relationships with the government and its agencies, and other industry's associations and chambers. 4. Globally Competitive – To collaborate with the government on strategies formulation and policy advocacy to enable Malaysia semiconductor industry including electronics and systems to be globally competitive.
2. Activities	1. Participating in international activities 2. Organizing seminars, training courses, international conferences and meetings 3. International negotiation 4. Networking and local cooperation	1. SSIA is an organization chartered to advocate and facilitate substantial growth of the semiconductor sector and its businesses internationally	1. Defining strategies to promote and maintain world leadership in technology for our members 2. Advocating for public policies that provide a fair field for competition 3. Promoting fair and open trade 4. Tracking and distributing statistical information of market trends	1. Promoting local SMEs-MNCs industry collaboration to establish a complete semiconductor value chain and eco-system. 2. Supporting talents development to optimize local talents capabilities and productivity. 3. Networking and cross industry collaboration. 4. Market intelligence for potential B2B (facilitate govt to identify potential members/ manufacturers to support the interest received from potential investor in order to market Malaysia as the best site during the selection or feasibility phase) (either at feasibility study phase/site selection phase) 5. Upskilling of members knowledge by providing updates of industry outlook or trends via seminar, training, promotion activities eg fair etc.

Benchmarking : Taiwan, Singapore, USA

	TSIA	SSIA	SIA	MSIA
3. Association Logo				
4. Membership Structure	1. Ordinary Member	1. MNC (AF: S$2,000) 2. SME (AF: S$400) 3. Government and Academic Institutions (AF: S$900) 4. Associate Member (AF: S$2,000) 5. Students (AF: S$50) 6. Individual (AF: S$90*)	1. Charter Members 2. International Members 3. Corporate Members 4. Corporate Partners	1. Charter Members 2. Ordinary Member 3. Affiliated Member – Semicon Supply Chain (logistics, banks, consultancy firm, industrial park developer, Global Business Services, accounting firm, label) 4. Honorary Member 5. Individual Member

Benchmarking : Taiwan, Singapore, USA

	TSIA	SSIA	SIA	MSIA
5. Association Structure	1. Honorary Chairman 2. Chairman 3. Executive Board Director : 4 4. Board Director : 9 5. Chairman, Supervisory Board 6. Supervisory Board : 2 i. Energy Committee ii. IC Design Committee iii. Market Information Committee iv. Finance Committee v. JSTC Committee vi. Industry Strategy Committee vii. Industry & University Committee viii. TSIA Award Committee	1. Chairman 2. Vice Chairman 3. Secretary 4. Treasurer 5. Board Member : 5	1. Board Member : 20 2. President/CEO; 3. Vice President 1; 4. Vice President 2; 5. CFO : 1 6. Director: 5 7. Manager: 3 8. Associate : 1 9. PA / Secretary : 1	1. President; Dato Seri SH Wong 2. Vice President 1; Dato Png 3. Vice President 2; Dato YJ Lim 4. Secretary; David Khor 5. Treasurer; Ms. Ng Lan Kheng, Deloitte 6. Ordinary Committee : minimum 5 KC Lau, Inari; EK Tan, Greatech; Dato Peter, Infineon; Vejay, Smart Modular; Amarjit, Micron; Solomon, Motorola; Jabil; Yap Suan See, Finisar; (Chu, Vitrox; Chuah, Pentamaster; Dato Heng, Globetronics; Ng San Beng, Aemulus; Jeffery Hwang, QDOS) • Minimum 30% board members from Malaysian companies Sub-committees:- i. IC & System Design & Development & Tools ii. Wafer Fabrication & Key Related Suppliers iii. Assembly, Test & Packaging iv. Electronics Manufacturing Services (EMS) & System Manufacturing v. Green energy (Solar & LED) vi. Medical Device vii. Equipment Manufacturing for FSAT, Systems and Automation viii. IR4.0 and System Integrators

Ros constitution requirement (cross matrix

No.	Requirements	Status
1	Association Name : Persatuan Industri Semikonduktor Malaysia (Malaysia Semiconductor Industry Association – MSIA)	
2	Place of Business : Malaysia Productivity Corporation (MPC) Northern Region Office Malaysia Productivity Corporation Beg Berkunci 206, Jalan Tun Hamdan Sheikh Tahir, 13200 Kepala Batas Seberang Perai Utara, Pulau Pinang.	
3	Objectives : 1. R&D and Technology – To strategically develop Malaysia's semiconductor industry including electronics and systems by nurturing and growing the complete semiconductor eco-system; 2. Eco-system – To elevate Malaysian companies to the global market and value chain by enhancing their capabilities and capacities; 3. Advocate – To be the collective voice of the semiconductor industry by advocating industry's challenges and building positive relationships with the government and its agencies, and other industry's associations and chambers; and 4. Globally Competitive – To collaborate with the government on strategies formulation and policy advocacy to enable Malaysia semiconductor industry including electronics and systems to be globally competitive.	

Ros constitution requirement (cross matrix

No.	Requirements	Status
4	Membership : 1. Founding member 2. Charter member 3. Ordinary member 4. Affiliated / Associated member 5. Honorary member	🟩
5	Registration & Termination	🟩
6	Source of Income 1. The entrance fee and annual subscription fee 2. Fund Raising 3. Business Matching 4. Strategic Offsite Meeting 5. Organise events – Seminar, Training, Conference, Luncheon Talk, Webinar and etc.	🟩
7	General Meeting The quorum is 50% of membership in attendance or 20 ordinary / charter members whichever is lower of the total voting delegates of membership of The Association	🟩

Ros constitution requirement (cross matrix

No.	Requirements	Status
8	Board Members 1. A President; 2. A Vice President 1; 3. A Vice President 2; 4. A Secretary; 5. A Treasurer; and 6. A minimum of five (5) Board Members	■
9	Duties of Office-Bearers	■
10	Financial Provision Financial spending approval will be decided by Board Members	■
11	Audit Two person(s) who are not officers of The Association may be appointed as Auditors of The Association at an Annual General Meeting, and any Auditors so appointed shall hold office until the conclusion of the next Annual General Meeting of The Association.	■
12	Property Administrator / Trustees	■
13	Interpretation	■

Ros constitution requirement (cross matrix

No.	Requirements	Status
14	Advisor / Patron The Board shall it deems fit and necessary appoint qualified persons to be the Advisor or Patron of the Society. The person appointed must give his consent in writing	🟩
15	Prohibition No illegal or immoral practices shall be permitted on the premises of The Association	🟩
16	Amendment of Constitution 1. Amendments of Rules	🟩
17	Dissolution	🟩
18	Flag, Logo and Badge	🟩

Support letter from MPC to have MSIA's registered address to be at MPC Northern Address

Malaysia Productivity Corporation (MPC)
Northern Region Office Malaysia Productivity Corporation
Beg Berkunci 206, Jalan Tun Hamdan Sheikh Tahir,
13200 Kepala Batas Seberang Perai Utara, Pulau Pinang.

List of documents and information needed for ROS submission

1. **Protem Committee Personal Information Detail**
   - as per attached on document entitled <u>MSIA Protem Committee Details (Responses) with password</u>
   - as per link https://bit.ly/3lj4YGt
2. **Protem Committee Minutes of Meeting**
   - as per attached on document entitled <u>MSIA Protem Committee Minutes of Meeting</u>
   - as per link https://bit.ly/38vGpTp
3. **MSIA Constitution**
   - as per attached on document entitled <u>MSIA Draft Constitution submitted to ROS</u>
   - as per link https://bit.ly/32wQ4VW

REVIEW OF DOCUMENTS AND INFORMATION NEEDED FOR ROS SUBMISSION

Protem Committee Personal Information Detail

(as per attached in Excel format , containing all information including IC number, address etc)

Protem Committee	Salutation	Full Name	Occupation
President	Dato Seri	Wong Siew Hai	Director
Vice President 1	Dato'	P'ng Soo Hong	Vice President & Managing Director Manufacturing Operations First Solar Malaysia Sdn Bhd
Vice President 2	Dato	Lim Yong Jin	Regional President
Secretary	Ms	Yap Suan See	Vice President & Managing Director
Assistant Secretary	Mr	Leow Chun Meng	Business Development Manager
Treasurer	Ms	Ng Lan Kheng	Executive Director
Committee Members	Mr	Lee Kam Heng	Vice President & General Manager
Committee Members	Dato	Peter Christian Halm	Vice President & Chief Financial Officer
Committee Members	Mr	Vejaya Kumar Narayanan	General Manager
Committee Members	Mr	Lee Chee Hong	Managing Director
Committee Members	Mr	Tan Eng Kee	Chief Executive Officer
Committee Members	Mr	Yong Chong Chin	Vice President - Operations
Committee Members	Mr	Lee Boon Chun	Ceo - Xfab Sarawak
Committee Members	Mr	Lew Hon Sang	Vice President
Committee Members	Mr	Jose A Hernandez Lopez	VP, Manufacturing Operations
Committee Members	Mr	Yogannaidu A/L Sivanchalam	Managing Director
Committee Members	Mr	Lau Kean Cheong	Group CEO/Executive Director
Committee Members	Dato	Foong Wei Kuong	Group MD

MSIA (Malaysia Semiconductor Industry Association)
Background Information

- Registered address : MPC Northern Region Office, Kepala Batas, Penang

- Categories of membership
  - Ordinary member
  - Founding member
  - Charter member
  - Affiliated member
  - Honorary member

- Minimum requirement to establish association : members from 7 states

- Registration with ROS in progress (submitted end of October 2020)

Update on formation of MSIA to AMCHAM 14 Sep 2020

MPC · **EEPN** ELECTRICAL AND ELECTRONICS PRODUCTIVITY NEXUS

National E&E Forum 2020

30th November 2020 | Kuala Lumpur

"Strive for growth against the tide of disruptions"

Supported by

MATRADE · MIDA · MDEC® · SMECORP MALAYSIA · MIGHT Malaysian Industry-Government Group for High Technology

Date	30 November 2020
Online platform	MPC Zoom Webinar
Time	8.30 am – 1.00 pm
Target audience	policy makers, industry especially Malaysia companies & SMEs related to E&E industry
Theme	Strive for growth against the tide of disruptions
Objectives	**Sharing on The Future of E&E Industry amidst the impact of global supply chain** • Impact of COVID-19 pandemic and US-China trade war • How does it affect the E&E industry future growth? • How are E&E companies responding to these impacts? **Overcoming the challenges in moving up the value chain in Systems Design & Development** • Explore how we can create board and system design in Ecosystem in Malaysia, look at how other countries started • How to expand global supply chain on board & system Ecosystem • How do we emulate the Taiwan's experience? **Role of technology centres in creating global companies: key learnings for Malaysia** • Benchmark global tech centers to identify their winning formula, and adapt to local landscape • Identify barriers and challenges faced by Malaysian companies in becoming global champions • How to align existing and new technology centers to spearhead E&E transformation in Malaysia • Strengthen linkages between tech centers and E&E industry to enhance capabilities of local companies

Time	Items
08:30 - 09:00	Registration
09:00 - 09:10	Welcoming Remarks by MPC
09:10 - 09:30	Opening Speech by MITI
09:30 – 09:45	Launching of Electrical and Electronics Marketplace Malaysia (EEMM) Portal • Launching speech by YBhg. Dato' Seri Wong Siew Hai (project advisor)
09:45 – 10:30	Keynote Speaker : Falan Yinug, Director, Industry Statistics and Economic Policy at Semiconductor Industry Association Title: Future of E&E Industry amidst the impact of global supply chain
10:30 – 11:30	Panel Discussion 1 "Overcoming the challenges in moving up the value chain in Systems Design & Development • Speaker (Panelist 1): Dr Jordan Jiang, CEO and General Manager, IEI • Moderator: Dato' Cheok Lay Leng, General Manager, Penang Hill Corporation • Panelist 2: Tan Eng Kee, Chief Executive Officer, Greatech Integration (M) Sdn Bhd • Panelist 3: Tan Teng Wang , Senior Director of Custom Asic Engineering, Intel Corporation
11.30 – 12.45	Panel Discussion 2 "Role of technology centres in creating global companies : key learnings for Malaysia" • Speaker (Panelist 1): Dr. Pei-Zen Chang , Executive Vice President Industrial Technology Research Institute (ITRI), • Moderator : Prof Datuk Dr. Wong Lai Sum , Former CEO of MATRADE • Panelist 2 : Terry Tsao , Global Chief Marketing Officer, President of SEMI Taiwan • Panelist 3 : Smita Kuriakose, Senior Economist with the World Bank Group
12:45 –1:00	Closing Remarks by YB Dato Sri Mustapa Mohamed, Minister in the Prime Minister Department (Economy)
1:00	The End

National E&E Forum 2020

30th November 2020 | Kuala Lumpur

MPC | EEPN ELECTRICAL AND ELECTRONICS PRODUCTIVITY NEXUS

Speakers, Panelist and Moderators

Smita Kuriakose
Senior Economist
World Bank Group

Dr. Jordan Jiang
CEO of IEI Integration
Corp

Falan Yinug
Director, Industry Statistics
and Economic Policy
Semiconductor Industry Association (SIA)

Dr Pei-Zen Chang
Executive Vice President
Industrial Technology
Research Institute

Terry Tsao
Global Chief Marketing Officer and
President of SEMI Taiwan

Dato Cheok Lay Leng
General Manager
Penang Hill Corporation

Tan Eng Kee
Chief Executive Officer, Greatech
Technology Berhad

Tan Teng Wang
Senior Director of Custom Asics Engineering,
INTEL Corporation

Prof Datuk Dr Wong Lai Sum
Former CEO of MATRADE

Supported by

MATRADE MIDA MDEC SMECORP MALAYSIA MiGHT Malaysian Industry-Government Group for High Technology

Keynote Speaker

Falan Yinug
Director, Industry Statistics and Economic Policy
Focus: Industry Analysis, Market Research, Economic Policy

Falan Yinug is director of industry statistics and economic policy at SIA. Responsible for managing SIA's statistics and data program, Falan represents SIA in the World Semiconductor Trade Statistics (WSTS) program, which maintains industry-driven monthly sales data for the global industry as well as sales forecasts. His work also entails supporting SIA's advocacy efforts through economic research and analysis. In pursuit of this goal, he works closely with SIA staff and member companies, federal statistical agencies, domestic and international companies and business associations, international organizations, foreign government officials, and the academic and think tank community.

Falan has prior experience with the high-tech industry, having worked for the U.S. International Trade Commission as its semiconductor and semiconductor manufacturing equipment analyst for 9 years. Falan began his career with the federal government as a Presidential Management Fellow and has worked at the Office of Management and Budget and the Office of the U.S. Trade Representative. He has a B.A. in history from Carleton College, and a master's in public policy from the Harvard Kennedy School. He lived in Honduras as a Peace Corps volunteer for 2.5 years and speaks Spanish.

Falan enjoys traveling, sports, reading, and music.

National E&E Forum 2020
30th November 2020 | Kuala Lumpur

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EEPN
ELECTRICAL AND ELECTRONICS
PRODUCTIVITY NEXUS

Speakers

Dr. Jordan Jiang
CEO of IEI Integration Corp

Dr. Jordan Jiang is the CEO of IEI Integration Corporation (IEI) (TAIEX: 3022), joined IEI from 2004, and leads IEI to be the major IoT (Internet of Things) and smart city solution provider recently. Dr. Jiang, was born in Taiwan and lived in the United States for 19 years. He finished his Ph. D in industrial engineering from Arizona State University.

With Dr. Jiang's strong background in industry and his SPORT(S-Stay Humble, P- Passion, O-Open Mind, R-Responsibility & Accountability, T- Think Big & Go Big), he leads IEI to win lots of businesses in AI , Healthcare, Networking, Industrial 4.0, transportation, retail, fitness, gaming etc.

The vision of Dr.Jiang is to lead IEI to make a contribution to the Earth by providing more intelligent solutions to improve our environment and make it a better place to live.

Dr Pei-Zen Chang
Executive Vice President
Industrial Technology Research Institute

Dr. Pei-Zen Chang joined ITRI in 2016, supervising industrial technology R&D, international cooperation, and venture capital businesses. Prior to joining ITRI, he served as the Deputy Executive Secretary of Executive Yuan Science and Technology Advisory Group and Adjunct Consultant to the Ministry of Economic Affairs, promoting the development of forward-looking technologies for Taiwan. He was also a professor and Secretary-General of National Taiwan University (NTU), conducting basic technological research and fostering industry-academia cooperation.

Dr. Chang is responsible for ITRI's technological R&D in information and communications, mechanical and mechatronic systems, and electronic and optoelectronic system technologies. Recent focuses include artificial intelligence, 5G communication systems, Internet of Things, smart manufacturing, self-driving vehicles, and drones. At the same time, Dr. Chang is committed to linking Taiwan's research institutions with global industries. He has been supervising the international program of Department of Industrial Technology under Ministry of Economic Affairs and led delegations to visit the US, Asian countries such as China, Japan, India, Malaysia, Indonesia, Thailand, and the Philippines, and European countries including Germany, France, the UK, Spain, Finland, Russia, and Czech Republic. Moreover, Dr. Chang also supervises ITRI's venture capital arm ITIC, which majorly invests in American, Japanese, and Taiwanese high tech startups.

Panelists

Tan Eng Kee

Chief Executive Officer, Greatech Technology Berhad

EK Tan is the CEO of Greatech Technology Berhad. EK obtained a Certificate in Mechanical Engineering from Politeknik Sultan Abdul Halim Mu'adzam Shah, Kedah in 1991. He brings with him approximately 28 years of working experience, of which majority of his time was spent in the automation industry. As the CEO, EK is instrumental in the growth and development of the company where he contributed significantly in penetrating foreign markets as well as in the expansion of the business. EK is currently responsible for driving the future direction of the company and development of the business strategies. In the industry, EK is sitting in the Malaysia Semiconductor Industry Association (MSIA) as a Committee Member in the pursuit of integrating, consolidating and building healthy ecosystem and supply chain for the E&E industry in the future. Apart from that, EK is also a Committee Member of the Management Council in Penang Skills and Development Centre in its core vision to drive excellency in skills and talent development. During his free time, EK loves reading especially books and articles related to shaping leaders for tomorrow. Besides, he loves engaging good conversations with various leaders in different industries to expand his knowledge and his capacity to learn. EK firmly believes that together, we can do greater things. Thus, his company motto reads out as TOGETHER, WE CREATE POSSIBILITIES.

Tan Teng Wang

Senior Director of Customs Asic Engineering, INTEL Corporation

TW joined Intel in 1988 as Product Engineer and was actively involved in silicon design and development. He was one of the four founding design engineers for Intel Penang Design Center (PDC). TW Tan co-managed Penang Design Center (PDC) from 1997 to 1999. During his 10 years of work on silicon design in PDC, TW developed several key integrated circuit, namely EISA bus controller, chipset and microcontrollers i.e. Intel MCS ® 196 and MCS ® 251 architecture. Additionally, he led a team that developed the world's first USB controller and hub which was heavily promoted at COMDEX in 1995/96. Apart from this, TW spearheaded the formation the Board Design Centre Malaysia(BDCM) in 1999 with just 20 design engineers and it has now expanded under TW Tan's leadership, which include Design, Validation, BIOS development, Operations and Marketing. In 2007 TW Tan transition to become the General Manager for CPG's Intel Client Board Operation (ICBO). Managing employees in USA and Asia. In late 2009 TW Tan became Director of Technology Development & Asia Operation (TDAO) for Intel Client Board Division with employees residing in USA and Asia. In mid 2012 TW Tan become Director of DCG Si Development/ Cloud Silicon Group in Penang, his team responsible for Development of Data Center SoC product In 2020 TW Tan become Sr Director of Custom Asic Engineering of PSG in Penang responsible for development of Asic and Soc product for Data Platform Group (DPG). TW holds a Bachelor of Electronic Engineering degree from University Sciences Malaysia and holder of a US patent

Panelists

Terry Tsao
Global Chief Marketing Officer and President of SEMI Taiwan

As the Global Chief Marketing Officer and President of SEMI Taiwan, Terry Tsao leads global marketing activities at SEMI, including strategic, operational, product, and communications marketing. Tsao also oversees the association's programs, products, and services in Taiwan, and is responsible for relationships with SEMI members as well as with representatives of local industry, government, and academia. Additionally, he supports SEMI international programs and serves members worldwide.

Prior to joining SEMI, Tsao was Managing Director of International Data Corporation in Taiwan. He has also served as APAC Marketing Director for Trend Micro, Inc., and held various marketing positions with Leo Burnett Taiwan, Far Eastone Telecommunications Company, Ltd., and Ogilvy Advertising.

Tsao holds an MBA from Baruch College City University, New York, and an Executive MBA from National Taiwan University.

Smita Kuriakose
Senior Economist, Finance, Competitiveness & Innovation, World Bank Group

Smita Kuriakose is a Senior Economist in the Finance, Competitiveness and Innovation Global Practice in the World Bank. She is currently based in the Malaysia Knowledge and Research Hub where she leads the work program on private sector development, innovation and entrepreneurship. Her expertise is in science, technology & innovation policy, skills development, business environment and competitiveness.

Her work has covered over 20 countries. She has led regional flagships publications in the Europe and Central Asia, East Asia and Pacific and Africa regions on innovation and entrepreneurship issues and multi-sectoral operations of both Development Policy and Investment Policy Instruments. In East Asia and Pacific region, she has led policy dialogues on innovation and entrepreneurship in China, Malaysia, Vietnam and Thailand.

Prior to joining the Bank in Washington DC, she worked on a United Nations Project and the Poverty Reduction and Economic Management Unit of the World Bank at New Delhi, India where she focused on fiscal and macro policies. Smita holds graduate degrees in Economics from the University of Maryland, College Park in the US and the Delhi School of Economics in India.

Moderators

Dato Cheok Lay Leng
General Manager, Penang Hill Corporation

LL is currently the general manager of Penang Hill Corporation (PHC), a Penang State statutory body since 1st January 2017 after a brief retirement. Prior to joining PHC, he has 30 years of experience in the electronics industries that include 12 years as chief executive and executive management with technology start-ups based in Hong Kong, China and USA, until March 2016. LL began his career at Intel Corporation that spanned over 18 years, as a design engineer for microprocessors and microcontrollers and subsequently held engineering and senior management positions in USA and Penang Malaysia. He had been a general manager managing business and engineering development in Asia and Europe. He was also member of the Intel team that developed the first version of Universal Serial Bus technology (USB v1.0) and co-managed the global adoption of USB technology as an industry standard for the personal computing platform in mid-1990s. LL had served on technical advisory and academic boards, and had taught technical subjects and strategic management topics. He assisted in the setup of "Center of Excellence for Electrical & Electronics" under the Northern Corridor Economic Region initiative at Universiti Sains Malaysia in 2009. He has been a guest lecturer for technopreneurship workshops for developing countries organized by The International Science, Technology and Innovation Center for South-South Cooperation (ISTIC), under the auspices of UNESCO since 2010. LL continues to stay involved in the industry through technology ventures. He regularly participates in the Electrical & Electronic Productivity Nexus (EEPN) Governing Council and Tech Dome Penang board meetings. He had served on the board of Tenaga National Berhad as an independent non-executive director in 2020. LL holds one US patent in Universal Serial Bus technology.

Prof Datuk Dr Wong Lai Sum
Former CEO of MATRADE

Datuk Dr. Wong has a diversified background, both academically and professionally. Besides a Bachelor's Degree in Biochemistry, she also has a Master's Degree in Public Administration and a PhD in Business from the University of Malaya. Her areas of expertise include international business, trade, taxation, financial and corporate management, as well as strategic planning. Her illustrious career saw 36 years in civil service, of which 24 years was with the Malaysia External Trade Development Corporation (MATRADE). As its former CEO, she has invaluable insights on what it takes to advance businesses across borders. She has done extensive research on competitiveness of companies. In recent years, she has taken an active role in coaching and development of companies, including those in the E&E sector.
She is currently a board member of several companies and an adviser to the Faculty of Business and Accountancy, University Malaya. .

National E&E Forum 2020: Speakers and Panelist Invitation Checklist

No	Item & Description	Name	PIC	Status
1	Keynote speaker Future of E&E Industry amidst the impact of global supply chain • Impact of COVID-19 pandemic and US-China trade war • How does it affect the E&E industry future growth? • How are E&E companies responding to these impacts?	International Speaker : Option 1 : INTEL	SH Wong/Dr Thomas	To be confirmed
2	1st Panel Overcoming challenges in moving up the value chain in Systems Design & Development • Explore how we can create board and system design in Ecosystem in Malaysia, look at how other countries started • How to expand global supply chain on board & system Ecosystem • How do we emulate the Taiwan's experience?	Speaker (Panelist 1) : Dr Jordan Jiang (CEO and GM, IEI)	Dr. Thomas	Confirmed
		Moderator: Dato' SH P'ng (First Solar)		Confirmed
		Panelist 2 : Vitrox Corporation Berhad	SH Wong	To be confirmed
		Panelist 3 : TW Tan (Intel)	Dr. Thomas	Confirmed
3	2nd Panel How technology centres create global champions : key learnings for Malaysia • Benchmark global tech centers to identify their winning formula, and adapt to local landscape • Identify barriers and challenges faced by Malaysian companies in becoming global champions • How to align existing and new technology centers to spearhead E&E transformation in Malaysia • Strengthen linkages between tech centers and E&E industry to enhance capabilities of local companies	Speaker (Panelist 1) : ITRI	SH Wong	To be confirmed Alt EY, PWC, BCG, McKinsey, KPMG
		Moderator : Datuk Dr. Wong Lai Sum	MPC	Confirmed
		Panelist 2 : SEMI	SH Wong	SEMI confirmed participation. The name of the panelist tbd.
		Panelist 3 : Sumita (World Bank)	SH Wong/MPC	Confirmed

National E&E Forum 2020: VVIP and VIP Invitation Checklist (50-60 pax in the hall)

No	Item	Description	PIC	Status
1	Welcoming Remarks	Mr Tian Chua, Chairman of MPC	MPC	To be confirmed
2	Opening Speech	YB Datuk Seri Azmin Ali, Senior Minister of International Trade and Industry	MPC/MITI	Invited (to be confirmed)
3	Launching of EEMM	YBhg Dato Seri SH Wong, Champion of EEPN	EEPN/MPC	Confirmed
4	Closing Remarks	YB Dato Sri Mustapa Mohamed, Minister in the Prime Minister Department (Economy)		To be confirmed (Mr Tan Kay Kiang (EPU))
5	MITI and selected Government Agencies (5 pax)	KSU MITI , TKSU MITI, KSU MOSTI, KSU MEDAC MITI and Agencies : CEO Matrade, CEO MIDA, CEO SME Corp, CEO MDEC, CEO MIDF, CEO MARII, CEO MSI, CEO SIRIM, DG of Standard Malaysia CEO MIMOS, CEO EXIM Bank CEO of Invest KL / Invest Penang Governor of BNM (Director of Economics Department) CEO MIGHT DG EPU CEO NCER	MPC	KSU MITI (confirmed) TKSU MITI (confirmed)
6	EEPN Governing Committee	Government and Private Sectors	MPC	Invitation to be sent later
7	Industry Associations (2 pax)	AMCHAM EUMCCI MICCI FMM TEEAM ACCCIM/SERC SFAM FMSDC JACTIM MGCC / AHK Malaysia Other manufacturing productivity nexus (MEPN & CPN) Public and private universities	MPC/EEPN	List to be provided and confirmed later

National E&E Forum 2020: Operational Checklist

No	Item	Description	PIC	Status
1	Speech	Emcee and Emcee Script	MPC	Suggestion : Abbey (MPC)
		Welcoming Remarks – MPC Chairman	MPC	Madam Lok Lee Lee
		Opening Speech – YBMK	MPC	Jesselynn Lai (tbc)
		Launching Speech – Dato Seri SH Wong	MPC	Jesselynn Lai (tbc)
		Closing Speech – YB TokPa	MPC	Madam Lok Lee Lee
2	Invitation Letters/Email of VVIP and VIP	Letters / Email to VVIP 1. MPC Chairman 2. YBMK MITI 3. YB Dato Sri Mustapa	MPC	1. To be sent by Corporate (Syafiqah) 2. YBMK : sent last week, waiting for confirmation 3. To be sent by this week (deadline 6 Nov 2020)
		Head of Agencies KSU MITI , TKSU MITI KSU MOSTI KSU MEDAC CEO Matrade CEO MIDA CEO SME Corp CEO MDEC CEO MIMOS CEO MIDF CEO MARII CEO MSI CEO SIRIM CEO EXIM Bank DG of Standard Malaysia CEO of Invest Malaysia	MPC	1. To be sent, another letter by KP (Deadline 6 Nov 2020) (Letter with reply slip) – in BM
3		EEPN Governing Committee members	EEPN Secretariat	1. To be sent by email (Deadline 13 Nov 2020) 2. Registration through Zoom Webinar

National E&E Forum 2020: Operational Checklist

No	Item	Description	PIC	Status
	Invitation and Registration	Invitation Form and Link (Zoom Webinar)	MPC	To be prepared and emailed (Deadline : 13 Nov 2020) Zoom Webinar booked
		Registration Process (Physical during the actual day)	MPC	Will need assistance from DMO (Pn Anariza/Nadia/Fauziah) to help the registration during the actual day. Use QR code / paperless approach
		Information Board (QR code)	MPC	The agenda of the programme
	Panelist, Speakers, and Moderators	Presentation Slides	MPC	To be prepared by speakers and panelists
		Talking points and Q&A	MPC	Handle have Slido (1 person) Handle FB questions (1 person)
		Curriculum Vitaes (CV)	MPC	To be provided by panelist and speaker upon replying the letter and reply slip
		Confirmation Letter	MPC	Confirmation letter to include reply slip and ask for speakers and panelist CVs and photos
		Honorarium	MPC	Moderator (honorarium + token of appreciation (certificate/eCert)
	Promotion and Marketing	Background	MPC	Supplier (Jemz) is preparing. First draft by 6 Nov
		Brochure and Poster	MPC	Supplier (Jemz) is preparing. First draft by 6 Nov
		Bunting	MPC	Supplier (Jemz) is preparing. First draft by 6 Nov
		Slides template	MPC	Supplier (Jemz) is preparing. First draft by 6 Nov
		Whatsapp and Email template promotion & marketing	MPC	To be prepared and emailed (Deadline : 13 Nov 2020)
		Social media (FB/Twitter/Instagram), website and online platform (Eventbrite) promotions	MPC	To be prepared and emailed (Deadline : 13 Nov 2020)

National E&E Forum 2020: Operational Checklist

No	Item	Description	PIC	Status
	Technical and Logistic	Food and Beverages	MPC	Eden Catering for 60 pax including vegetarian
		Hall/Conference Room	MITI	- Booked - Cabaret (half moon) layout
		Online platform	MPC	Supplier (Treeofus)
		EEMM Video Launching	MPC/EEPN	Ongoing recording
		AV System	MITI	Technical assistance from MIT MPC and MITI
		Slido for Q&A	MPC	Supplier (Treeofus) and MIT MPC to helps
		Transport	MPC	MPC car (booked)
		Photographer	MPC	En Zain (booked)
	Media	Media invitation	MITI/MPC/EPU	MPC Media
		Press release (ENG/BM)	MPC	To be prepared by MPC
	Gift and souvenirs	eCert	MPC	To get designer to design eCert
		Door Gift for attendees	MPC	Check with Marketing. To discuss with Athirah
	Program Documentation	Rapporteur Report	MPC	Candidates : To get help from DMO/Nexus new officers (2-3 officers) Lead : Madam Lok Lee Lee
		Evaluation Form	MPC	To be prepared
		Thank you note	MPC	To be prepared
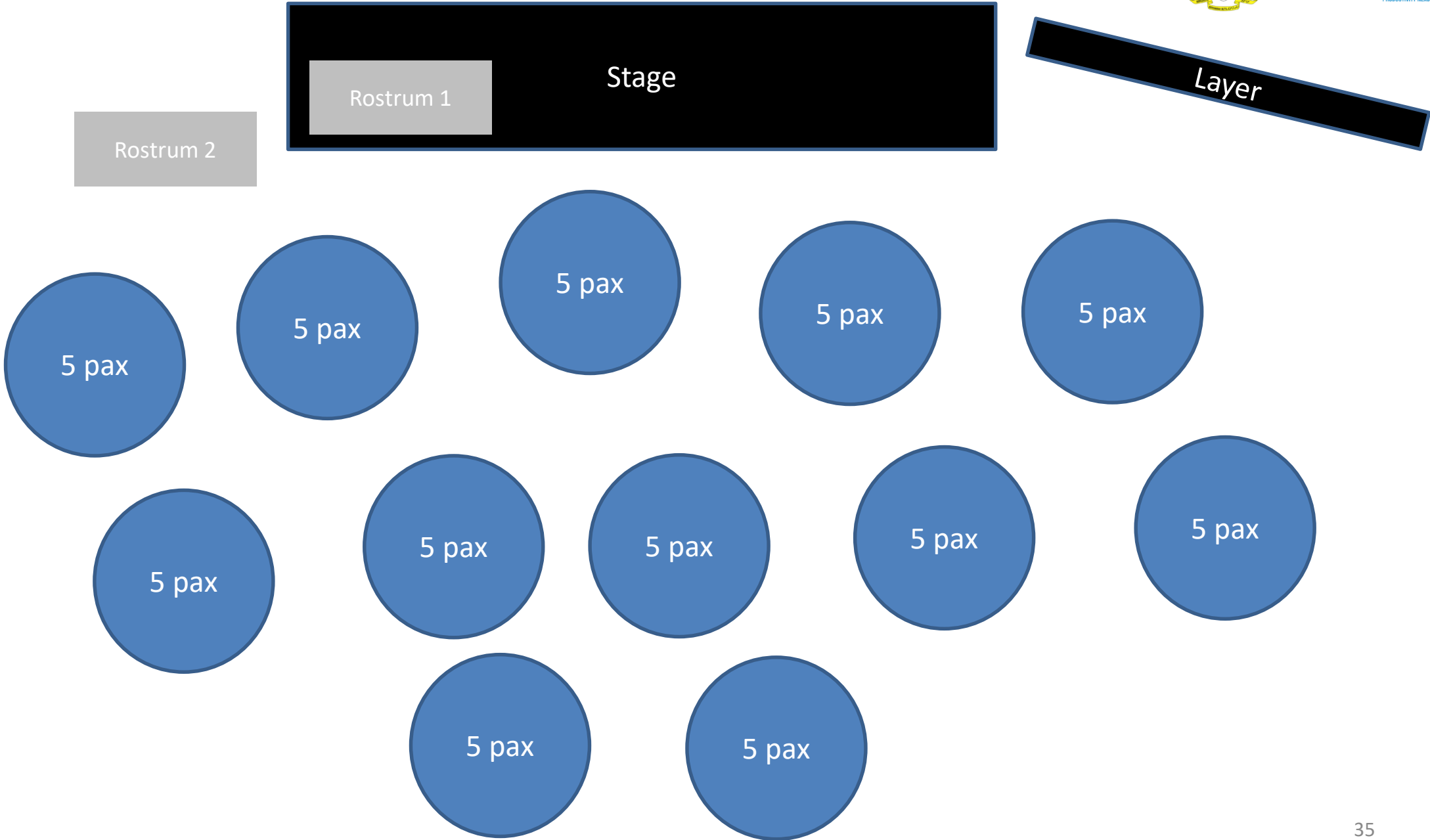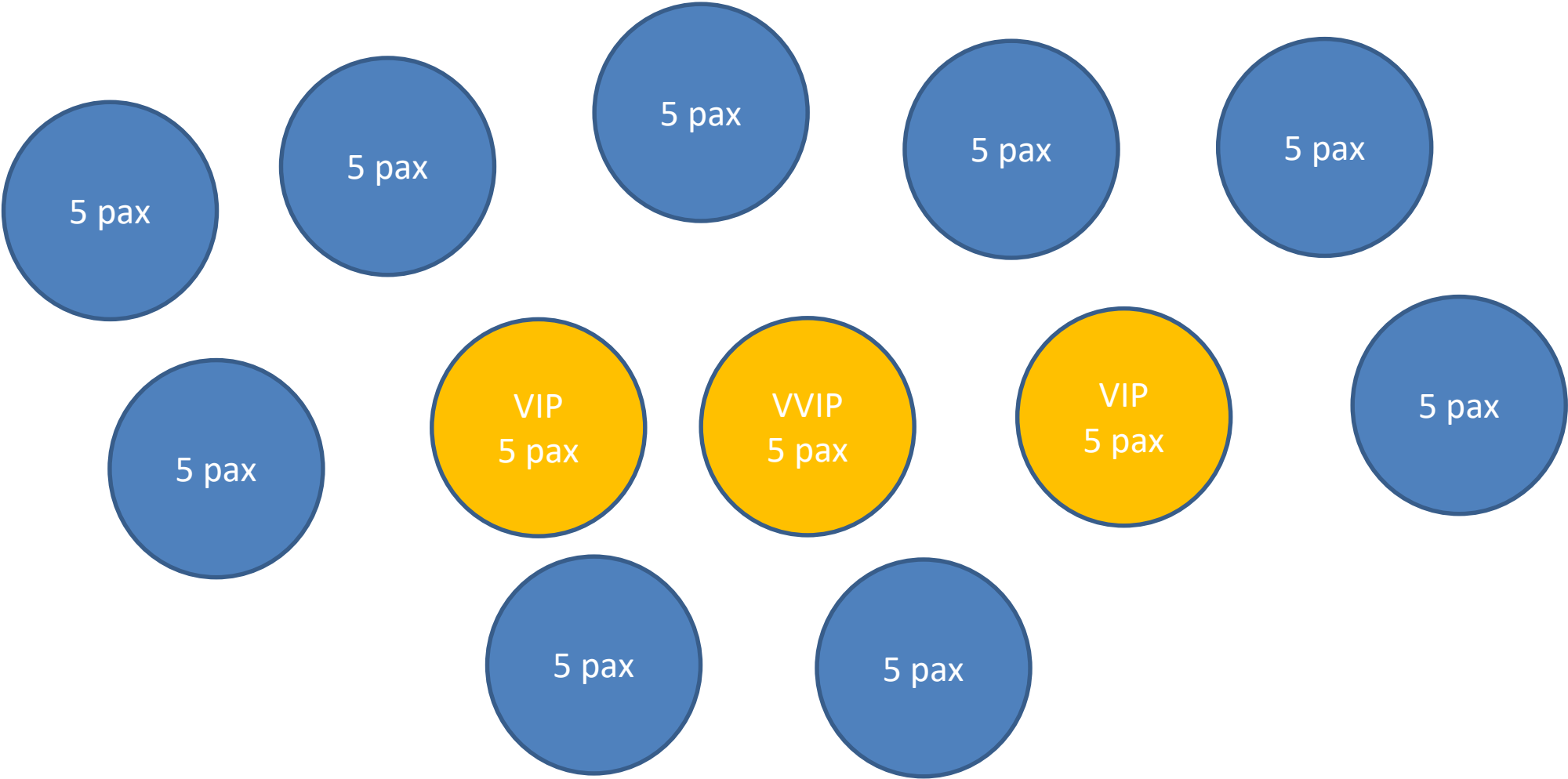
EEPN Status Update to EPU

YBhg. Dato' Seri Wong Siew Hai
(Champion of EEPN)

37

Four Key Strategies established under EEPN

Enhance Higher Value-Added Activities

Dr. Hari Narayanan (VC of APU, ex GM of Motorola)

Nurture Talent Development

Dato' Seri Wong Siew Hai (Chairman of MAEI, AMCHAM)

Creating Value towards I4.0 Ecosystem

Dr. Thomas Ooi (Senior Manager, IOT Group, Intel Corp)

Strengthen SME Development

Mr. KC Lau (Group CEO, Inari-Amertron Berhad)

EEPN Strategies in relation to Key Initiatives of the Malaysia Productivity Blueprint (MPB)

Thrusts	MPB Initiatives	EEPN Strategies 2019/2020
Workforce	E1. Strengthening collaboration between industry, government and universities to ensure supply of industry-ready engineers	1) Drive universities curriculum embedment for SIAP Program for IC design 2) Formulate key modules for other high value-added engineering initiatives, i.e. Test Engineering Development & Embedded Software Solutioning *(will be incorporated into NTIC)*
	E2. Upskill workers to prioritize innovative thinking to foster productive culture	1) Prepare SMEs towards the 'New Normal' re: COVID-19 (3 webinar series) 2) Conducted SME Leadership Development Programme (2019) 3) Conducted Advance I4.0 Training (2019 - with UM-Steerix & Aachen University) 4) Organize E&E Forum challenges & opportunities (2019), Nov 2020 - SME & New Normal
Technology	E3. Accelerate collaboration and strengthen knowledge sharing between industry players, through Centre of Excellence	Nurturing and Incubating for Industry 4.0 (I4.0) activities 1. Proliferate Plugfest 1.0 (Industrial IoT) nation-wide (since 2018) ⎤ 2. Pilot first Plugfest 2.0 (AI-based Machine Vision) (new for 2020) ⎦ (local companies focus) 3. Drive I4.0 hackathon activities (West & East Malaysia) – university focus 4. Organize I4.0 Regional Conference (2020) 5. Host Virtual I4.0 Webinars (2020) 6. Organize EEPN IOT Conference (2019)
Industry Structure	E4. Promote higher value add activities, including Research, Development and Design and produce complex products	1) Establish a virtual marketplace to promote Malaysian E&E companies to the world - EEMM 2) Establish semiconductor association to be the collective voice of the semiconductor industry - Malaysia Semiconductor Industry Association (MSIA) 3) Drive MNC & LLC to support local companies - Inari waterfall effect 4) Assisted in the establishment of IC product design company - SkyeChip 5) Promoted the establishment of NCER Technology Innovation Centre (NTIC) 6) Provide inputs to E&E Roadmap, RMK-12, New IMP4 and budget 2021
Business Enviro-nment	E5. Enforce minimal guaranteed service levels for utilities and infrastructures in key industrial zones	1) Review import-export materials for E&E at border and behind border (RURB) 2) Expanded the World Bank Ease of Doing Business ranking on Getting Electricity to focus on power quality by TWGGE (strong collaboration among TNB, ST, MPC & EEPN)

E1.2 Drive universities curriculum embedment for Structured Industry Apprenticeship Program (SIAP) Program for IC design

- SIAP is a University curriculum enhancement and embedment program, for IC Design & Development
- In partnership with MOHE; many rounds of 3-way discussions/workshops with EEPN, MOHE & Universities
  - YBrs. Dr. Wan Zuhainis Saad, Director of Academic Excellence Division
- Six training modules have been finalized by the Industry
  - Introduction to Design
  - Digital frontend
  - Digital backend
  - Design for Testability (DFT)
  - Analog
  - Circuit Layout

Status and Next Steps
- At least 5 public universities (2 universities -6 modules, 3 universities - partial modules) in September 2020
- Will proliferate SIAP to private universities

7 Participating Universities
1. Universiti Sains Malaysia (USM)
2. Universiti Malaysia Perlis (UNIMAP)
3. Universiti of Malaya (UM)
4. Universiti Teknologi Malaysia (UTM)
5. Universiti Teknologi MARA (UiTM)
6. Universiti Putra Malaysia (UPM)
7. Universiti Tun Hussein Onn Malaysia (UTHM)

MPC's Business Virtual Advisory Services Model

E2.1 Prepare SMEs towards the 'New Normal' re: COVID-19

1 **Webinars**

2 **E&E Virtual Advisory Clinics**

4 **Virtual Marketplace – Window to the World**

1

2

3

4

5

3 E&E Virtual Business Mentoring

Productivity Training & Measurement

E4.1 Establish a virtual marketplace to promote Malaysian E&E companies to the world
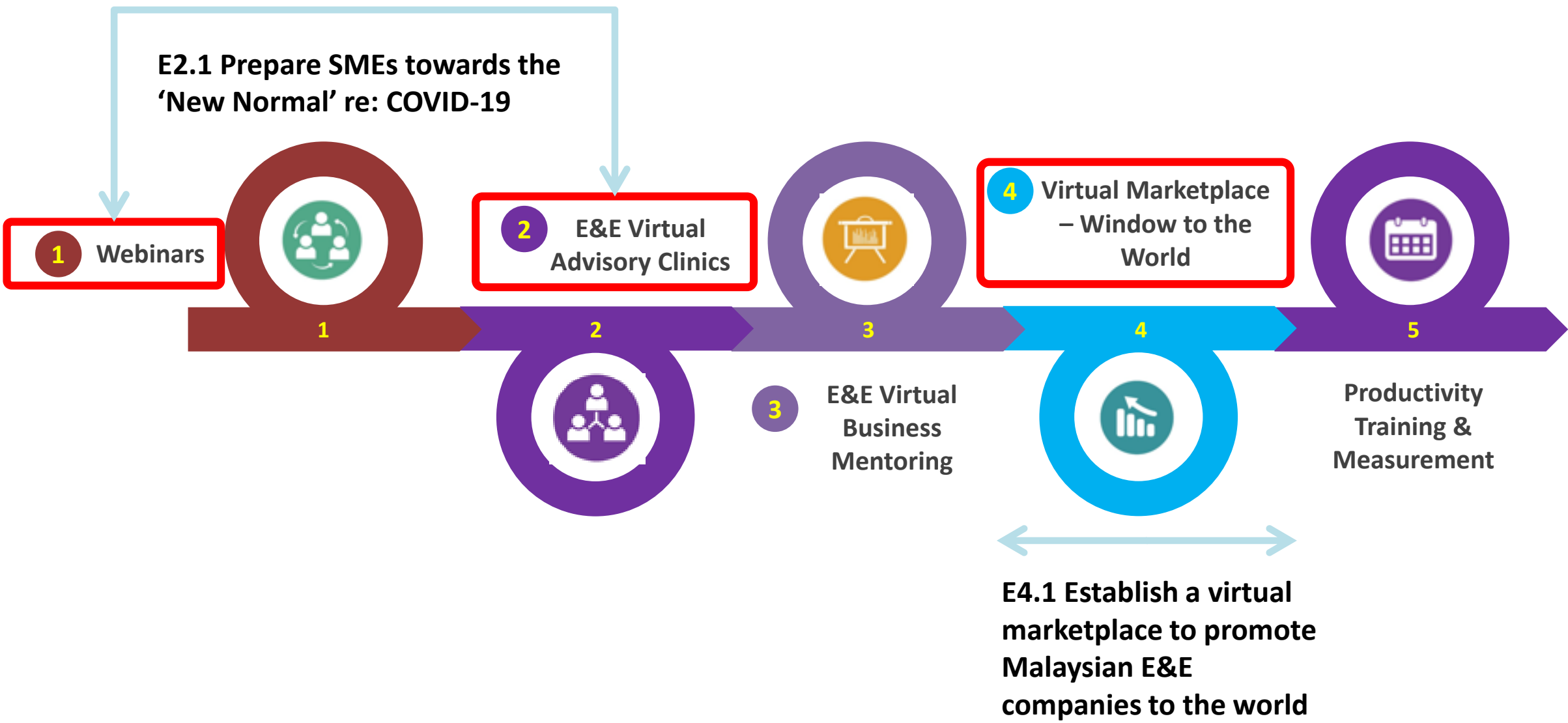
E2.1 Prepare SMEs towards the 'New Normal' re: COVID-19

A series of 3 Webinars were organized in May 2020

- Objective: To assist businesses, especially SMEs to understand the challenges in the New Normal and help them in their recovery process
- Opening by **YB Dato' Seri Mohamed Azmin Ali, Senior Minister of International Trade and Industry**
- Closing by **YB Dato' Sri Mustapa Mohamed, Minister in the Prime Minister's Department (Economy)**
- 5 International speakers presented and participated as panelists

Rethink, Reinvent, Revitalize
In The New Normal
(13 May 2020)
Participants: **465**
Countries: **16**

Making The Climb
Towards Recovery
(18 May 2020)
Participants: **226**
Countries: **4**

Growing Business Against
The Tides of Disruption
(28 May 2020)
Participants: **418**
Countries: **7**

In collaboration with

E2.1 Prepare SMEs towards the 'New Normal' re: COVID-19

Electrical & Electronics Virtual Advisory Clinics (EEVAC)

Summary of applications & sessions

- Total successful applications = 17 companies (16 SMEs & 1 MNC)
- Total completed sessions = 16 companies
- Upcoming session = 1 company

Top 3 issues highlighted by companies:-

1. Market access
2. Financial assistance, e.g. Penjana/incentives
3. Digitalisation

E3.1 Nurturing and Incubating for Industry 4.0 (I4.0) activities

I4.0 Plugfests and Hackathons	No. of participants
Plugfest 1.0: Industrial Internet of Things (IIoT)	132 engineers from 67 companies (2018-2019)
Plugfest 2.0: AI-base Machine Vision System (AIoT)	24 engineers from 13 companies (Aug 2020) Oct 2020 2nd training
Hackathon West Malaysia	95 university students from 8+13 teams (2019) 2020 will be held in 10-Oct
Hackathon East Malaysia	58 university students from 13 teams (18 Oct 2020)

Penang (1/2018)
27~29 November 2018

Penang (1/2020)
24~28 August 2020

Petaling Jaya (1/2019)
22~24 April 2019

Technology Park Malaysia (1/2019)
5~6 October 2019

Johor (2/2019)
22~24 July 2019

Johor (1/2020)
10 October 2020

West Malaysia

East Malaysia

Sarawak (3/2019)
19~21 September 2019

Sarawak (2/2020)
18 October 2020

Legend

Plugfest 1.0 (IIoT)
Industrial Internet of Thing

Plugfest 2.0 (AIoT)
AI-based Machine Vision

Hackathon
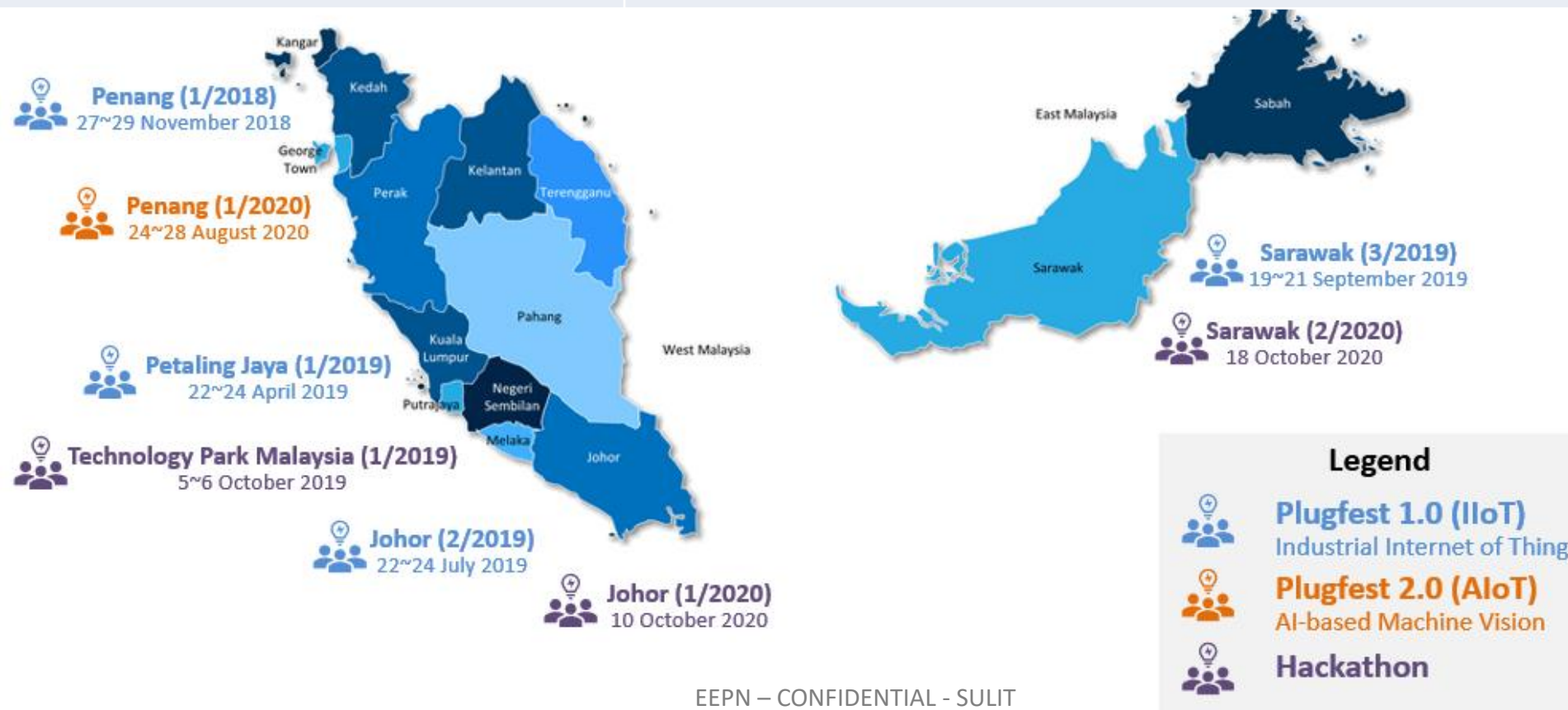
E3.1 Nurturing and Incubating for Industry 4.0 (I4.0) activities

I4.0 Regional Conference held on 29-30 Jun 2020 (Webinar)

- Objective: To promote Malaysia's position in the region in IR4.0 by sharing latest research papers from academic
- A total of 259 participants from 21 Universities
- 50 submission papers, 3 keynote speakers, 10 plenary speakers and 46 papers presenters (from 5 countries)
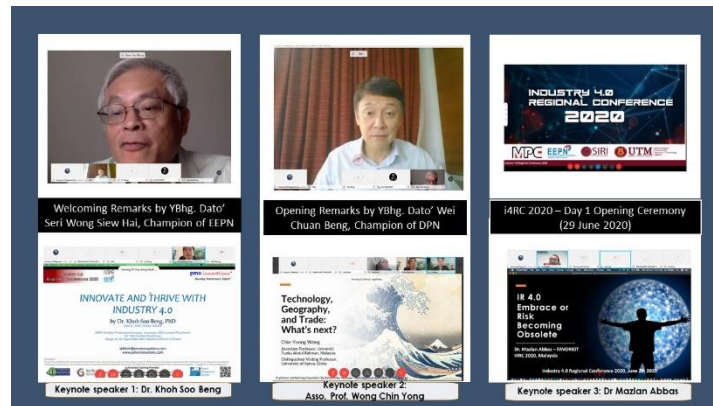
I4.0 Webinars	No. of participants
Series of two I4.0 Webinars, partnered with Elliance I4.0 Technology Centre	329 participants from 257 organizations
Series of four I4.0 Webinar, partnered with UM-Steerix & Aachen University	210 participants from 161 organizations

E3.1 Nurturing and Incubating for Industry 4.0 (I4.0) activities
I4.0 Technology Centers

Network of I4.0 Technology Centers to create value towards industry
- Train The Trainers in Plugfest 1.0 (IIoT) - Nov 2020
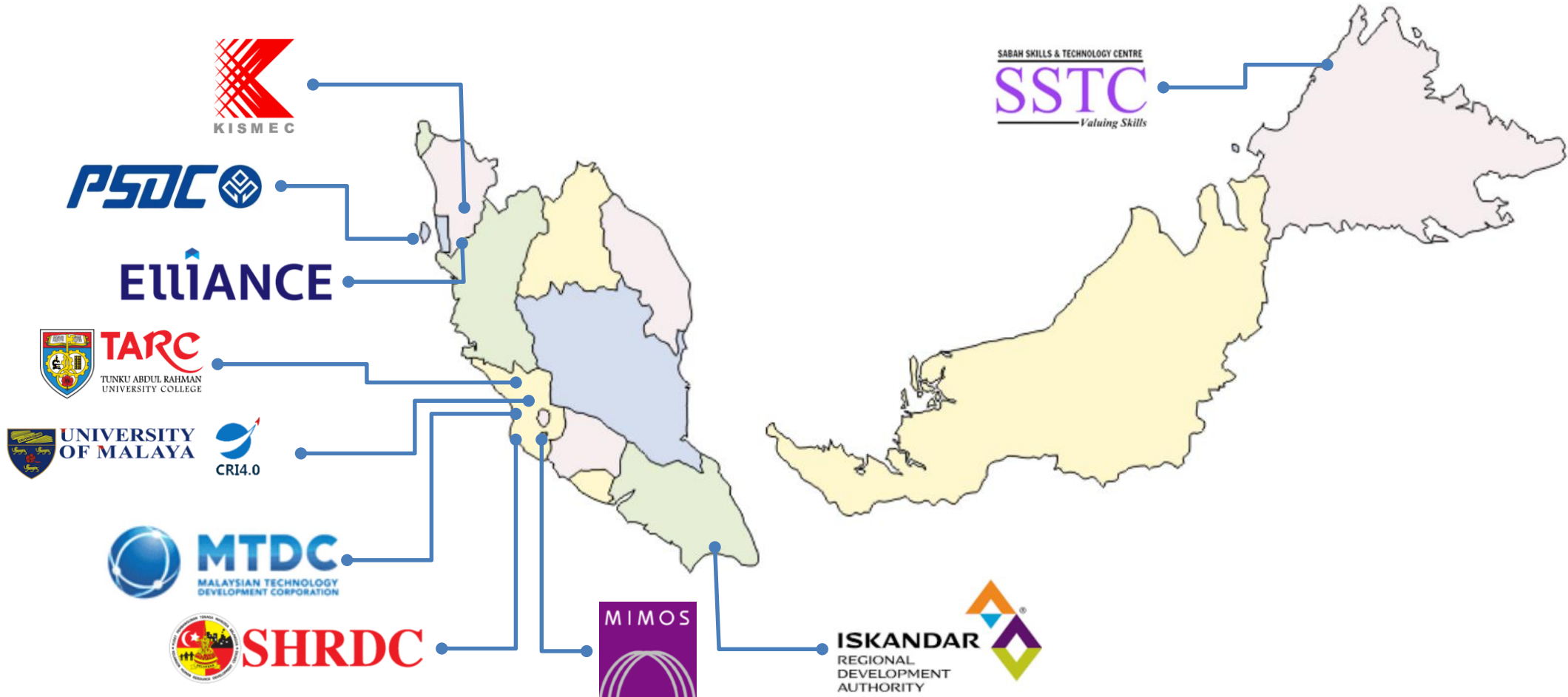
E4.1 Establish a virtual marketplace to promote Malaysian E&E companies to the world

E&E Marketplace Malaysia (EEMM)

- <u>100% funded by Industry; the Industry is accountable for their own productivity</u>
  - 27 companies confirmed sponsoring
- E&E categories – suppliers can showcase their core products & services
- Track who visit the site and which categories (big data analytics)
- Driver of EEMM is from Industry and Working Committee from Government agencies & Industry

  Chairperson: Mr. Noorazidi Che Azib (Inari Technology)
  Members:
  - Mr. Zaky Moh (SME Corporation)
  - Mr. Mohd Mazlan Mokhtar (MIDA)
  - Mr. Damian Santosh Samson (MATRADE)
  - Mr. Sivakumar (First Solar)
  - Mr. Farid Wajidi Mat Yusoff (USAINS Holding)
  - Ms. Lee Wan Wei (MPC)
  - Mr. WM Cheang (EEPN Rep)

EEMM
ELECTRICAL AND ELECTRONICS MARKETPLACE MALAYSIA

www.eemm.com.my

Status and Next Steps

- EEMM will Go-Live by November 2020

EEMM ELECTRICAL AND ELECTRONICS MARKETPLACE MALAYSIA

ELECTRICAL AND ELECTRONICS MARKETPLACE MALAYSIA
Gateway to Malaysian E&E Companies

Promoting E&E Companies in Malaysia to the World. Join us!

SCAN ME

Featuring the E&E Categories:
1. IC and System Design and Development
2. Semiconductor Front End and Wafer Fabrications
3. Assembly, Test, Packaging and Outsource Assembly & Test Services (OSAT)
4. Electronic Manufacturing Services (EMS)
5. Green Energy
6. Equipment Automation and Mechanization
7. Healthcare and Medical Devices
8. Industry 4.0 and System Integrators
9. Transportation Systems

& many more.......

About EEMM:

Electrical and Electronics Marketplace Malaysia (EEMM) is a B2B online marketplace portal specifically developed for the E&E industry in Malaysia. Established in June 2020 by Electrical and Electronics Productivity Nexus (EEPN) in collaboration with USAINS Holding Sdn. Bhd., the EEMM was coined with the main objective to serve as the important gateway in promoting Malaysian E&E companies to the international market.

The Electrical and Electronics Productivity Nexus (EEPN), established under the Malaysia Productivity Blueprint, is tasked to raise the country's E&E productivity and to enhance competitiveness. EEPN's key strategies include strengthen our local E&E companies and nurturing them to be global champions. EEPN formulated numerous new marketing strategies to promote our local E&E companies globally, one of which is our B2B online marketplace portal, the EEMM.

Surf www.eemm.com.my for more details.

Contact: admin@eemm.com.my

Supported By **EEPN**

E4.2 Establish semiconductor association to be the collective voice of the semiconductor industry - Malaysia Semiconductor Industry Association (MSIA)

Persatuan Industri Semikonduktor Malaysia

- Objectives
  - R&D and Technology – To Strategically Develop Malaysia's semiconductor industry including electronics and systems by nurturing and growing the complete semiconductor eco-system.
  - Eco-system – To elevate Malaysia's semiconductor companies' to the global market position and value chain by enhancing their capabilities and capacities.
  - Advocacy – To be the collective voice of the semiconductor industry by advocating industry's challenges and building positive relationships with the government and its agencies, and other industry associations and chambers of commerce.
  - Global Competitiveness – To collaborate with the government on strategies formulation and policy advocacy to enable Malaysia's semiconductor industry, including electronics and systems, to be globally competitive.
- Registered Address
  - MPC's Northern Region Office, Kepala Batas, Penang
- Minimum three (3) board members will be from Malaysian companies

Status and Next Steps

- MSIA protem committee meeting 1/2020, was held on 11 Sep 2020
- Finalize constitution with protem committee on 8 Oct 2020
- Submit for approval to Registrar of Society (ROS) in Oct/Nov 2020

Collaboration & Co-Development with Local Suppliers
Inari Amertron Berhad

SULIT

SUPPLIER INPUT

- Collaboration with local equipment, system, material, software/hardware, academia & service supplier.
- Expanding the local ECO system.
- Connecting with Government Agencies and Academia

T&R & INSPECTION AUTOMATION SYSTEM
High Speed Tape n Reel Die picker. Standalone Inspection & Sorting
Mi EQUIPMENT

AUTOMATIC DIE BACKSIDE LASER MARKER
High Speed die-back marker
BSIR Wafer Back Inspect System

IDM CONSUMABLE
Packaging Material Solutions: ESD Bags, Tape n Reel

ERP, MES & SHOPFLOOR AUTOMATED SYSTEMS
Highly efficient production WIP tracking and control system

TOOLING & FABRICATION
High precision jigs & fixtures

WAFER PROCESSING AUTOMATION SYSTEM
Precision & Fully automatic 6"~8"wafer taping systems
WAFTECH

TEST HANDLER
High Precision Wafer Probers for single & dual cores.
SRM   EXISTECH

INSPECTION SYSTEM
2D/3D Auto Optical Inspection system for backend and test inspections
ViTrox   17

MIDA
CREST
PSDC
TalentCorp Malaysia
dream CATCHER
USAINS INFOTECH SDN. BHD.
USM UNIVERSITI SAINS MALAYSIA
U-MAP

Self-sufficient Local Ecosystem

Govt Agencies & Institution

E5.1 Review import-export materials for E&E at border and behind border - Reducing Unnecessary Regulatory Burdens (RURB)

Objective: To identify the unnecessary regulatory burdens on import and export formalities "At The Border" and "Behind The Border" and recommends options for reducing them.

- A total of 16 regulatory issues & 14 non-regulatory issues have been highlighted by businesses
- **Top 3 issues:-**
    1. Inconsistency of Customs requirements
    2. Movement of goods from LMW to FIZ, movement of excess materials from LMW to sister's companies & customers overseas
    3. Dagangnet - online forms not friendly and difficulty to trace

2 engagement sessions with Business & Regulators has done to validate those issues

- 1st Engagement (17 Sep 2020) & 2nd Engagement (1 Oct 2020)
    - Business: 13 pax from 8 organizations
    - Regulators: 34 pax from 6 organizations

Gathering information with Businesses been carried out Nationwide on Feb 2020		
Selangor / KL	MAEI / MPIA / TEEAM / FMM	6 Feb 2020
Sarawak	SEA / SECA / FMM Sarawak	14 Feb 2020
Penang	FREPENCA / PEMA / FMM Penang	20 Feb 2020
Kedah	SFAM / KITA / FMM Kedah	
Johor	JBEEA / FMM Johor (online)	27 Feb 2020

Summary

What is working:-

- EEPN's strategies in relation to Key Initiatives of the Malaysia Productivity Blueprint (MPB) are on track and meeting KPIs
- The model of having Government & Industry joint leadership (Chair & Co-chairs) and membership in the Governing Committee is working effectively

What has changed:-

- Over the last 3 years, EEPN has expanded from Enterprise & Sectoral level to include National level initiatives (National E&E roadmap, SIAP, MSIA, Virtual Marketplace, Plugfests & Hackathons, etc…)
- Given the COVID-19 situation, we have tweaked our approaches
  - More Smart Partnerships (UM-Steerix, MDEC, Digital Productivity Nexus, MIGHT, …)
  - Conduct more programmes virtually
  - Reprioritize to assist SMEs to rethink, reinvent & revitalize in the new normal

Help needed:-

- Funds to conduct new study on E&E subsectors supply chain ecosystem
  - Completed 2 studies in 2019
    1. Study on Productivity and Contribution of the Malaysian E&E Industry by UTAR
    2. Study on Current Labs and Testing Capabilities for E&E Manufacturing Ecosystem in Malaysia by USAINS
- Funding needed for training SMEs & talent development programmes

Summary

E&E Landscape and Economic Contributions

- E&E is a major contributor to Malaysia's economy
- Malaysia has a complete E&E Value Chain
- But we need to move further up the Value Chain
- Our E&E Vision and Framework

E&E Framework

S1: Unlock MNCs potential contributions
S2: Nurture local companies re: global champions
S3: Build talent and leadership development
S4: Enable and forge a robust E&E ecosystem
S5: Establish 'enabling' government policies

Key EEPN's initiatives

- SIAP: a University curriculum enhancement & embedment program
- Business webinars to prepare SMEs towards the 'new normal'
- E&E Virtual Advisory Clinics (EEVAC) re: market access, financial assistances and digitalization
- Virtual marketplace to promote Malaysian E&E companies to the world
- SMEs waterfall model to drive local vendors development

EEPN Industry 4.0 Initiatives

- Plugfest 1.0 (Industrial IoT)
- Plugfest 2.0 (AI-based Machine Vision Systems)
- I4.0 Hackathons (West and East Malaysia)
- Network of I4.0 Technology Centers
- I4.0 Regional Conference
- I4.0 Experts webinars

Outstanding Issues faced by Industry

Industry related

1. People coming in going out – MIDA set up one-stop centre "My Entry", KDN "??"
2. LMW vs FIZ with respect to materials
3. Worried 2nd wave of MCO
   - Targeted
   - Xxx

Employment related

1. Unemployment rate for Malaysian workers, legal & illegal foreign workers
2. Working with MOHE with regards of hiring graduates – supply chain, procurement materials production planning, logistics….
   - Give graduate trainee (get subsidy from Jom Kerja 1K)
   - After 6 weeks training, working with USAINs

Thank You

https://www.facebook.com/MPCHQ   @MPC_HQ   MPC TIP   @mpc_hq

MALAYSIA PRODUCTIVITY CORPORATION

DRIVING PRODUCTIVITY OF THE NATION

EEPN Strategic Planning 2021
Next Steps

EEPN Strategic Planning 2021

Shortlisting EEPN strategies

- Series of 3 Business Recovery Webinars in May 2020
- Moderated by Prof. Datuk Dr. Wong Lai Sum
- 5 Strategies

- 49 respondents to EEPN's quick survey in Jun 2020
- 5 Way Forward Strategies

Webinars

Other Inputs

EEPN Quick Survey
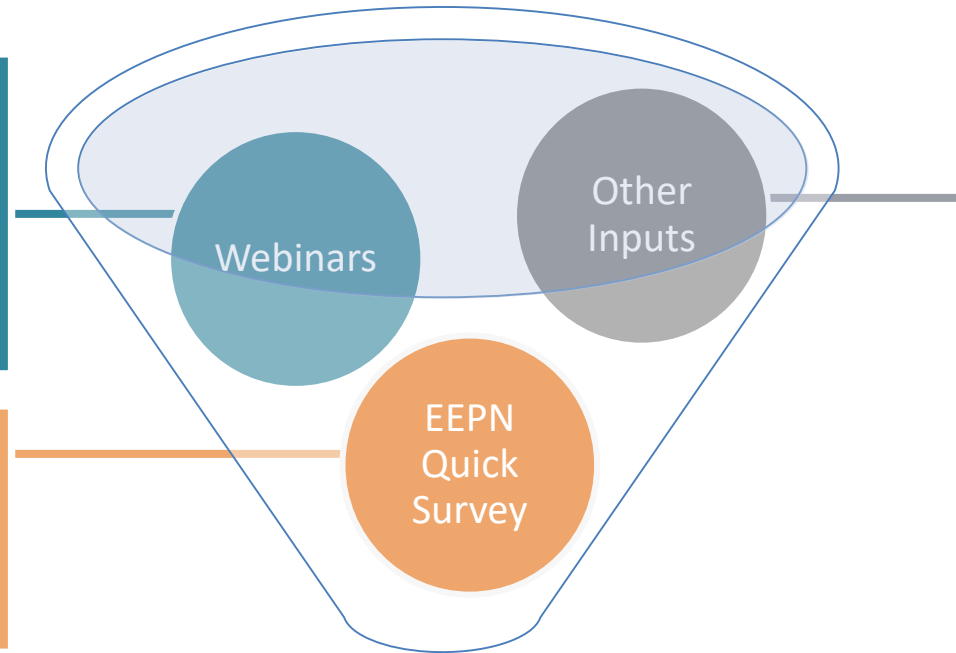
- IMP4 Strategic Framework
- RMK-12 Submissions
- Environmental Scan
- Global Outlook Reports

Brainstorm

Shortlist Strategies

- EEPN Strategic Planning 2021
- 16th July 2020

Strategic Planning 2021: Highlight #1
'Buy Local' policy

Comments & Feedback
- Build Resiliency in our local supply chain ecosystem
- Need a policy on 'Buying Local', to promote locally production (can be MNCs or local companies)
- Many countries do the same e.g. US, China, Korea, Taiwan etc
    - Need to support SMEs, which are generally low end and low technology
    - Need to balance, because incumbent have advantage
- Benefits e.g. encourage sustainable investments and promote technology transfers
- Do with special tax incentives and rebates, and <u>not</u> by implementing import tariffs

Suggestion & Action Item
- During COVID-19, we have information on local vendors and supply chain
- EEPN, MITI, MIDA to
    - Look a data collected and understand our entire ecosystem
    - Identify the weak links of our ecosystem
    - Analyze and recommend improvements
- Work with MIDA's domestic investment division to support identified Tier 1 and Tier 2 players
- <mark>Conduct a study re: local supply chain, local content and value add in E&E eco-system (Owner: EEPN)</mark>

Strategic Planning 2021: Highlight #2
National E&E Policy

Comments & Feedback

- Have a national E&E roadmap
- We do not know whether COVID is a long term
- We need to be consistent in our E&E direction
  - Deepening our roots in Manufacturing
  - Improve productivity via I4.0 (what data to support our productivity trends?)
- Focus on the 'critical few' vs the 'trivial many'
  - We have very strong automation capability and competency
  - Nurture them to be global champions
  - Our goals is to attract FDIs and getting MNCs; what about goals to create more unicorns
  - Can we expand E&E to also cover medical devices, EVs etc?

Suggestion & Action Item

- MIDA/MITI/MOSTI is current conducting a National E&E roadmap (have gotten feedback from MNCs; next step is SMEs engagement).. By Rafizah of MITI/Robert of MIGHT
- EEPN can leverage this platform

Strategic Planning 2021: Other Highlights

US-China trade tension

- Capitalize on US-China trade tension
- E&E will have a 'dual' world... US centric & China centric

MIDA's incentives enhancement update

- MIDA's updated promoted activities was approved by MOF in mid 2019
- Incentives supporting updated promoted activities is currently is use

Suggestion & Action Item

- Invite MIDA to share update/status (~ 30 mins)

MIDA's Updated Promoted Activities :	Design and Development and services of • Integrated Circuit Design • IC Packaging Design • Embedded System Design • Test and Engineering Design Services for E&E clusters and its connecting supply chain ecosystem

Vision 2025 – Be a Leading E&E Industry Engine of the World
- ## Reinventing Malaysian E&E Industry for the Future

- A robust E&E ecosystem is our competitive advantage
- Technology development institutions are driving technologies and innovations
- Strategically integrated total supply chain solutions

- MNCs continue to thrive and expand in Malaysia
- MNCs' contributes strategically towards E&E in Malaysia

MNCs

ECOSYSTEM

2025
Be a Leading E&E
Industry Engine of
the World
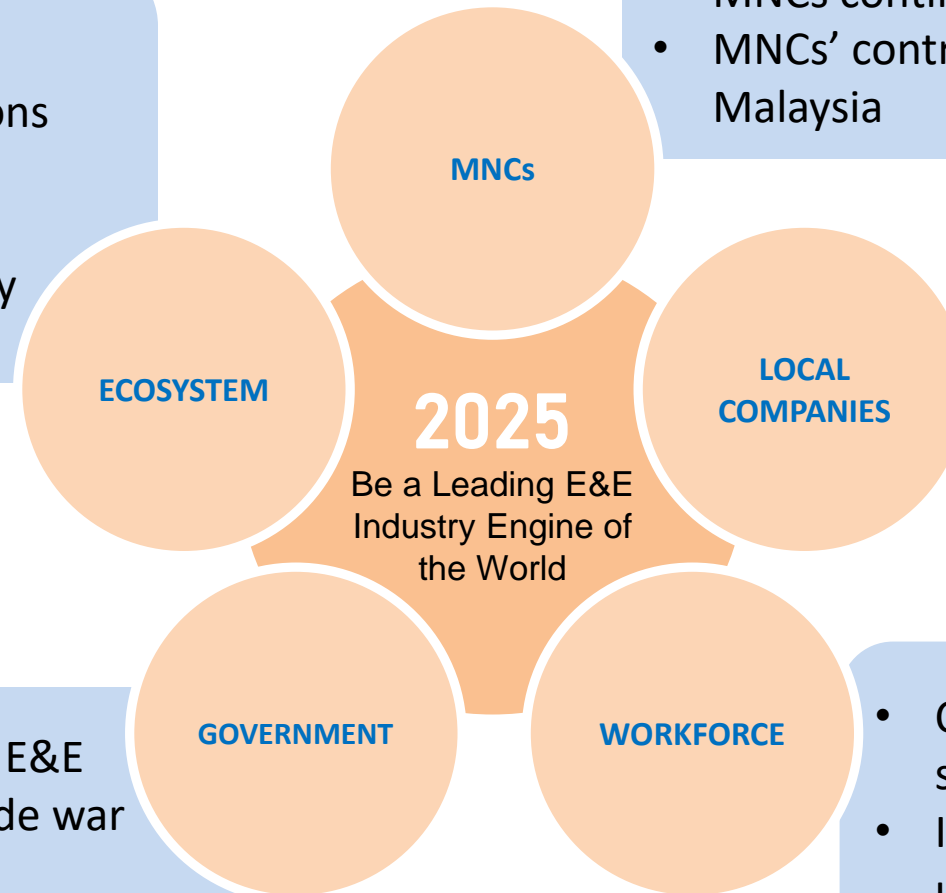
LOCAL COMPANIES

- Local E&E companies as an engine of growth for Malaysia
- Local companies competing globally with innovations and technologies

GOVERNMENT

WORKFORCE

- Government as an enabler towards E&E Industry (capitalize on US-China trade war and COVID-19 disruptions)
- Balanced incentives and support towards MNCs and local companies

- Competent and skilled workforce to support E&E Vision 2025
- Industry continues to expand, unrestricted by talent supply

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Strategic Framework

E&E 2025

MNCs

LOCAL COMPANIES

TALENT

ECOSYSTEM

GOVERNMENT POLICIES

SI 1

SI 1: UNLOCK MNCs POTENTIAL CONTRIBUTIONS TOWARDS E&E IN MALAYSIA
SI 1.1 Retention of MNCs and transfer of knowledge & technology to Malaysian companies
SI 1.2 Support MNCs growth to create greater spillover effects / multiplier effects

SI 2

SI 2: NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS
SI 2.1 Facilitate local companies to embrace emerging technologies, design and innovation
SI 2.2 Grow Tier 1 local companies, and waterfall benefits to grow Tier 2 companies
SI 2.3 Enhance local companies' visibility through collaborations and partnerships

SI 3

SI 3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
SI 3.1 Develop talent to embark on high-value activities
SI 3.2 Increase talent pool to support industry growth
SI 3.3 Promote software engineering & programming skills to future-proof workforce
SI 3.4 Develop regional and global leaders
SI 3.5 Align public universities towards industry's requirements

SI 4

SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive tech. development
SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness
SI 4.3 Streamline and establish accountability of research institutions and COEs

SI 5

SI 5: ESTABLISH GOVERNMENT POLICIES WHICH PROMOTE E&E GROWTH
SI 5.1 Formulate a National E&E Policy and Roadmap
SI 5.2 Incentivize investments which are of strategic importance
SI 5.3 Establish a national-level strategy for workforce development

SI 1. Unlock MNCs contributions

SI 1: UNLOCK MNCs POTENTIAL CONTRIBUTIONS TOWARDS E&E IN MALAYSIA
SI 1.1 Increase knowledge, technology and retention of MNCs
SI 1.2 Support MNCs growth to create greater spillover effects / multiplier effects

SI 1.1

SI 1.1 Retention of MNCs and transfer of knowledge and technology to Malaysian companies
- Grow in tandem on global technology evolution with MNCs
- Creatively drive for higher local contents and supply chain (which still comply with WTO requirements)
- Well defined localization programs, with clear implementation deliverables
- Ensure local companies benefit from spill over effects

SI 1.2

SI 1.2 Support MNCs growth to create greater spillover effects / multiplier effects
- Expand on current MNCs' vendor development programs
- Leverage MNCs to strengthen our ecosystems and integrated supply chain solution
- Focus on high value jobs which can develop our talent competencies

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SI 2: Nurture local companies

SI 2: NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS
SI 2.1 Facilitate local companies to embrace emerging technologies, design and innovation
SI 2.2 Grow Tier 1 local companies, and waterfall benefits to grow Tier 2 companies
SI 2.3 Enhance local companies' visibility through collaborations and partnerships

SI 2.1

SI 2.1 Facilitate local companies to embrace emerging technologies, design and innovation
- Lower the risks for local companies to invest in emerging technologies
- Support local companies with 'buy local' mindset; with respect to design, products, equipment and services

SI 2.2

SI 2.2 Grow Tier 1 local companies, and waterfall benefits to grow Tier 2 companies
- Preparing SMEs towards Public Listing exercise
- Grow local companies through GLCs' support and investments
- Leverage MIGHT's Technomart to facilitate match-making
- Expand on Inari's 'waterfall' model; seek out more of similar model
- Be a leading automation hub with global recognition

SI 2.3

SI 2.3 Enhance local companies' global visibility through collaborations and partnerships
- Assist local companies to assess global market by developing a Virtual Market Place portal to promote Malaysian E&E suppliers to overseas companies; and enhance global outreach.
- Information mining rather than create own database
- Form partnerships with different web-sites/database

SI 3: Build Talent and Leadership Development

SI 3: BUILD TALENT TO DRIVE E&E GROWTH
SI 3.1 Develop talent to embark on high-value activities
SI 3.2 Increase talent pool to support Industry growth
SI 3.3 Promote software engineering & programming skills to future-proof workforce
SI 3.4 Develop regional and global leaders
SI 3.5 Align public universities towards industry's requirements

SI 3.1

SI 3.1 Develop talent to embark on high-value activities
- Post-School Finishing for niche areas
- PhD & MSc programs to compete globally
- Deepening our competencies in IC Design, embedded system design and solutioning, M&E design, test engineering

SI 3.5

SI 3.5 Align public universities towards industry's requirements
- Partner with MOE/MOHR to drive Universities curriculum enhancement and embedment
- Measure universities by their ability to produce Industry ready graduates
- Elite Universities: which specializes in certain faculty and areas of expertise, with dedicated experts
- Closer University and Industry collaboration e.g. University inside industry

SI 3.4

SI 3.4 Develop regional and global leaders
- Prepare senior managers to be regional and global leaders through transformational leadership development programs

SI 3.2

SI 3.2 Increase talent pool to support Industry growth
- Industrial Upskilling for yet-to-be employed graduates
- Advanced Upskilling Program for experienced engineers
- More TVET, dual training and learning programs for technicians for factory floor operations

SI 3.3

SI 3.3 Promote software engineering and programming skills to future-proof our workforce
- Establish software and AI academy to drive programming and software development to complement existing hardware-focused competencies e.g. software parks
- Focus on computer science, programming, algorithm etc

SI 4: Enabling Ecosystem

SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
SI 4.1 Setup a Malaysian Technology and Innovation Center (MTIC) for E&E
SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness
SI 4.3 Streamline and establish accountability of research institutions and COEs

SI 4.3

SI 4.3 Streamline and establish accountability of research institutions and COEs
- Develop new products and services (areas of applications), leveraging on global technologies
- Examples: advanced packaging, batteries for electric cars, applications based on 5G technologies etc

SI 4.1

SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations
- Offer assistance to the growth of the E&E Industry
- Provide strategic guidance and support to local companies and high-tech start-ups
- Be a strategic think tank for the future of Malaysia's E&E industry
- Facilitate shared labs and tools to lower the cost of D&D's barrier to entry e.g. EDA and M-CAD tools

SI 4.2

SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness
- Drive I4.0 related technologies e.g. data analytics. machine learning, AI etc
- Establish Malaysia's E&E as an Advanced Manufacturing Hub
- Strengthen I4.0 technology centers to accelerate implementation of I4.0 initiatives
- Continue to assist SMEs to jumpstart I4.0 journey e.g Plugfests
- Nurture local I4.0 solution providers to innovate and develop local I.40 solutions

SI 5: Establish Government Policies

SI 5: ESTABLISH GOVERNMENT POLICIES WHICH PROMOTE E&E GROWTH

SI 5.1 Formulate a National E&E Policy and Roadmap

SI 5.2 Incentivize investments which are of strategic importance

SI 5.3 Define a national-level strategy for workforce development

SI 5.1

SI 5.1 Formulate a National E&E Policy and Roadmap

- Access to ministerial level for direct high-level engagements
- National strategy to grow local SMEs companies, and develop workforce
- Government's business-conducive policies in making Malaysia a choice location for investments
- Leverage FTAs to enhance Malaysia as an attractive destination for FDIs and to provide market access to local companies
- Policy to encourage government to give local companies a chance to bid for contracts especially in design and development of products and services
- Ensuring infrastructure readiness

SI 5.3

SI 5.3 Establish a national-level strategy for workforce development

- Define a holistic strategy for talent development to support the growth of E&E industry
- Focus on how and what scholarship to be given to top students, especially in STEM
- Embrace a policy to use other countries' talents to support E&E industry's growth, including hiring of foreign engineers graduating from local public and private universities
- Implement a transparent online end-to-end system for foreign workers' applications and approval (no manual approvals); and finalize the Multi Tier Levy System
- Allocate strategic funding for talent development to support the growth of key industry sectors

SI 5.2

SI 5.2 Incentivize investments which are of strategic importance

- Benchmark Incentives to ensure competitiveness taking into account the impact of COVID-19
- Structure tiered incentives for those with wide spillover effects and higher multiplier effects e.g. LM3 (Local Multipliers)
- Provide incentives, even after expiration of pioneer status, to encourage further re-investments
- New incentive policies to drive D&D and higher value chain activities
- Speed up application process (and issues resolution) brought up by business sectors

EEPN Strategic Planning 2021

Next Steps

Series of 3 Business
- Recovery Webinars in May 2020
- Moderated by Prof. Datuk Dr. Wong Lai Sum
- 5 Strategies

- 49 respondents to EEPN's quick survey in Jun 2020
- 5 Way Forward Strategies

Webinars

Other Inputs

EEPN Quick Survey

- IMP4 Strategic Framework
- RMK-12 Submissions
- Environmental Scan
- Global Outlook Reports

Brainstorm

Shortlist Strategies

Malaysia E&E Strategic Framwork has many owners e.g. MITI, MOSTI, MOHE, MOHR, MIDA, MATRADE, SME Corp, MPC etc

Malaysia E&E Vision 2025 and Strategic Framework

E&E 2025

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Translate relevant strategies into EEPN Workplans 2021

EEPN - SULIT

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EEPN Strategic Planning 2021
Translate relevant strategies into EEPN Workplans 2021

KS#3 Work Plan 2020

Creating Value towards Industry 4.0 Ecosystem

Initiatives

Owners

KPIs

Budget

Key Strategies	Action Items	KPI 2020	Measure
Creating Value towards Industry 4.0 Ecosystem	1. Plugfest 1.0 IIoT proliferation nation-wide Description: • Standardize PLUGFEST 1.0 (IIOT) training content, for nation wide proliferation • Review and standardize training content and hardware • Create EEPN training content based on what is available Status & Next Steps: • Plugfest training modules and hardware have been standardized • Plugfest 1/2020 in Sabah (1-3 September 2020) • Plugfest 2/2020 in Johor (Oct 2020) • Plugfest 3/2020 in KL (Nov 2020) Lead by EEPN, supported by MPC, Intel & others	3	Training Curriculum complete and 3 PLUGFEST events
	2. Pilot PLUGFEST 2.0 (AI-based Machine Vision) via online platform Description: • AI-based Machine Vision will have direct value-add to production floor operations Status & Next Steps: • Delivery partner has been identified • Identify partner to develop training package and delivery mechanism • 1st pilot event is August 2020 • 2nd event is Q4 2020 Lead by EEPN, supported by MPC	2	Plugfest 2.0 events

Sample

2

The Future of Malaysia's E&E Industry and the Way Forward

EEPN Input to RMK-12
Attn. YB Dato' Sri Mustapa Mohamed
Minister in the Prime Minister's Office (Economy)

By YBhg. Dato' Seri Wong Siew Hai
Champion of EEPN

November 2020

Agenda

1. E&E Industry: Current Landscape and Contributions

2. Recommendations and Way Forward

Contributions of E&E industry in Malaysia

Contributions to economy

Exports Contribution **RM 380 billion** 38.2% of total exports (in 2019)	**GDP Contribution** **RM 81 billion** 6.3 % of national GDP (in 2019)	**Employment** **560,000** (in 2019)

Contributions in other dimensions

- Technology and Knowledge Transfers
- Global Supply Chain management
- Global Business Services (GBS)
- Design and Development
- Global and Regional Leadership

Impact to economy (due to MCO1 ~ MCO3)

Impact to Exports **RM 29 billion** (for 42 days of MCO)	Impact to GDP **RM 7.3 billion** (for 42 days of MCO)

Source: EEPN

Malaysia's E&E Ecosystem

MPC | **EEPN** ELECTRICAL AND ELECTRONICS PRODUCTIVITY NEXUS

SEMICONDUCTOR

DESIGN & DEV

IC Design
- Intel
- UST Global
- Microchip
- SkyeChip
- Oppstar
- SyMMiD
- Infinecs

EMS Design
- Plexus

Industrial Design
- Motorola
- Keysight
- NI
- Clarion
- Contron
- PixArt
- Elsoft

WAFER FAB
- Infineon
- Osram
- X-Fab
- ON Semi
- Fuji Electric
- Renesas
- SilTerra

FABLESS
- Broadcom
- Skyworks
- Qorvo

ASSEMBLY, TEST & PACKAGING

OSAT
- TF-AMD
- ASE Group
- UTAC
- Amkor
- Inari Amertron
- MPI/Carsem
- Globetronic
- Unisem
- AIC

NON-OSAT
- Intel
- Texas Instrument
- ON Semi
- IDT (Renesas)
- Analog Devices
- Finisar
- Osram
- Sensata
- Vishay
- Micron
- Infineon
- Renesas
- NXP
- ST Microelectronic
- HP
- Smart Modular
- ASE
- ROHM
- Nexperia

SUB-CON MANAGEMENT
- Wolfspeed
- Analog Devices
- MACOM
- PSemi (Murata)
- Max Linear
- Semtech
- Infineon
- Power Integrations

PRODUCT MANUFACTURING

ELECTRONIC MANUFACTURING SERVICES (EMS)
- Flextronics
- Jabil
- Celestica
- Plexus
- Polar Electro
- Sanmina
- Benchmark
- Hotayi
- Venture
- Escatec
- Nation Gate
- VS Industries
- SKP Resources
- SMT Tech
- PIE Industrial
- ATA IMS
- K-One

PRODUCTS

Consumer
- Dell
- Panasonic
- Sony
- Dyson

LED
- Osram
- Lumileds
- Dominant Opto
- Tech

Industrial
- Keysight
- Bosch
- Motorola
- Honeywell
- National Instruments

Memory & Storage
- Micron
- Western Digital
- JCY
- MMI

Automotive
- Bosch
- Clarion

Medical Devices & Equipment
- Boston Scientific
- Agilent
- Smith + Nephew
- Dexcom
- Japan Lifeline
- Teleflex
- Ambu
- B. Braun
- Abbott Lab
- Paramit
- BD
- Cochlear
- Knowles

Solar
- First Solar
- AUO Sunpower
- Hanhwa Q-Cells
- Jinko Solar
- JA Solar
- Longi Solar
- Sun Everywhere

SUPPORTING SERVICES

AUTOMATION & WAFER FAB EQUIPMENT
- ViTrox
- Elsoft
- NSW
- Greatech
- Aemulus
- Exis Tech
- SRM
- ACM
- MQ Technology
- Pentamaster
- MMS Venture
- DF Automation
- UWC
- TTVision
- AAC Technologies
- SAM Meerkat
- Waftech
- VisDynamics
- Mi Technovation
- SFP Technology
- Suki Technology
- Lam Research
- Advantest
- Tanaka
- Cohu
- Muehlbauer

PRECISION ENGINEERING
- Kobay
- Engtek
- Wong Engineering
- Prodelcon
- RC Precision
- MDS Advance
- Walta Engineering
- Tecomet
- KMWE

ENGINEERING SERVICES
- KESM (burn-in and test services)
- Tessolve
- Experior (Test engineering)
- QAV (LED testing)
- Testhub
- MyReka Tech

PARTS & COMPONENTS
- Molex
- ITW Meritex
- Ibiden
- Mini Circuits
- AVX
- Kobe Precision Tech
- JFTech
- FoundPac
- Amlex
- QDOS
- Golden Etna

SOFTWARE / SYSTEM DEVELOPMENT (5G / IoT / IR4.0)
- SAP
- Google
- IBM
- Microsoft
- National Instrument
- UST Global
- HCL
- Software AG
- MDT Innovations
- Elliance
- Sophic
- UBCT
- Cytron

GLOBAL BUSINESS SERVICES (GBS)
- Dell
- Jabil
- Intel
- Broadcom
- Keysight
- IBM
- Abbot Lab
- AMD
- B. Braun
- Monitor ERP Systems
- Lumileds
- Celestica
- Siemens
- Osram
- Zebra Technologies
- Agilent
- IDT (Renesas)
- Luxoft

Legend
Black = Foreign company
Blue = Malaysian company

Environmental Scan

Emerging Technologies	**Emerging technologies continue to progress ahead** (5G/6G, IOT, AI/Deep Learning, AR/VR, Semicon technology 7nm/5nm, Green Technology, EV etc)
Global Talents	**War for global talents continues to intensify**

US-China Trade War

Impact of US-China Trade War (will it improve with Biden?)

Future supply chain impacts in three stages
- Short term: manufacturers diverting trade i.e. temporary tariff-dodging workarounds
- Mid term: manufacturers scale production & reallocate personnel at preexisting facilities (risk mitigation)
- Long term: Significant decoupling takes place high upfront costs & advance planning needed (risk mitigation)

Winners in Asia
- Vietnam (exports to US rose by 35% (US$17.5 billion)
- Taiwan (comparative advantage in Semicon & hardware components)

Covid-19 vaccine	**WFH - Will the vaccine be available in 2021?**

source: https://carnegieendowment.org/2020/06/24/in-u.s.-china-trade-war-new-supply-chains-rattle-markets-pub-82145 (24th June 2020)

Where is Malaysia's E&E ?

Semiconductor Complexity and Value by Production Phase *

	Design & Development	Front-End Manufacturing (Wafer Fabrication)	Back-End Manufacturing (Assembly, Test & Packaging)
Technological Complexity	High	High	Medium
Capital Intensity	Medium	High	Low
Share of Value of Final Chip	45%	45%	10%

Production Capabilities by Countries

	Architecture & Design	Front-End Manufacturing (Wafer Fabrication)	Back-End Manufacturing (Assembly, Test & Packaging)	Equipment & Materials
US	Leading	Minimal	None	Minimal
UK	Leading	None	None	None
Netherlands	None	None	None	Leading
Germany	None	None	None	Strong
China	Strong	Strong	Minimal	None
South Korea	Strong	Leading	None	Minimal
Japan	Strong	None	Minimal	Leading
Taiwan	Minimal	Leading	None	None
Malaysia	None	None	Leading	None
Philippines	None	None	Leading	None

Capability

None	
Minimal	
Strong	
Leading	

Source: Analysis by Belfer Center, Harvard Kennedy School (July 2020)

EEPN's Vision 2025 – Be a Leading E&E Industry Engine of the World
Strategic Framework
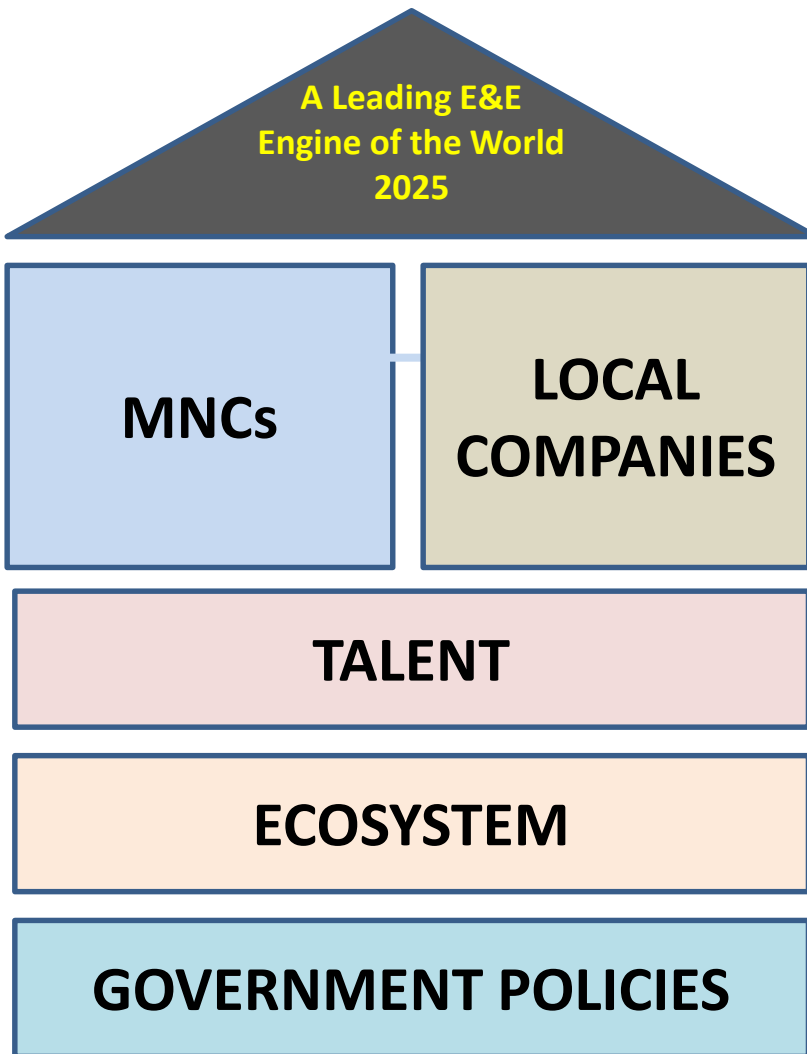
A Leading E&E Engine of the World 2025

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SI 3

SI 3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
SI 3.1 Develop talent to embark and support high-value and high-tech product and technology
SI 3.2 Increase talent pool (especially STEM) to support industry growth
SI 3.3 Promote software engineering & programming skills to future-proof workforce
SI 3.4 Develop regional and global leaders
SI 3.5 Enhance SME leadership training and development to enable growth
SI 3.6 Align public universities towards industry's requirements

SI 4

SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive tech. development
SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness (including DDI)
SI 4.3 Streamline and establish accountability of research institutions and COEs

SI 5

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SI 5.1 Formulate a National E&E Policy and Roadmap
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EEPN - SULIT

Establish a virtual marketplace to promote Malaysian E&E companies to the world

E&E Marketplace Malaysia (EEMM)

- 100% funded by Industry; the Industry is accountable for their own productivity
  - ✓ sponsored by 27 companies
- E&E categories – suppliers can showcase their core products & services
- Track who visit the site and which categories (big data analytics)
- Driver of EEMM is from Industry and Working Committee membership from Government agencies & Industry

Status and Next Steps

- EEMM will Go-Live by November 2020

www.eemm.com.my

ELECTRICAL AND ELECTRONICS MARKETPLACE MALAYSIA
Gateway to Malaysian E&E Companies

Promoting E&E Companies in Malaysia to the World. Join us!

SCAN ME

Featuring the E&E Categories:

1. IC and System Design and Development
2. Semiconductor Front End and Wafer Fabrications
3. Assembly, Test, Packaging and Outsource Assembly & Test Services (OSAT)
4. Electronic Manufacturing Services (EMS)
5. Green Energy
6. Equipment Automation and Mechanization
7. Healthcare and Medical Devices
8. Industry 4.0 and System Integrators
9. Transportation Systems

& many more.......

About EEMM:

Electrical and Electronics Marketplace Malaysia (EEMM) is a B2B online marketplace portal specifically developed for the E&E industry in Malaysia. Established in June 2020 by Electrical and Electronics Productivity Nexus (EEPN) in collaboration with USAINS Holding Sdn. Bhd., the EEMM was coined with the main objective to serve as the important gateway in promoting Malaysian E&E companies to the international market.

The Electrical and Electronics Productivity Nexus (EEPN), established under the Malaysia Productivity Blueprint, is tasked to raise the country's E&E productivity and to enhance competitiveness. EEPN's key strategies include strengthen our local E&E companies and nurturing them to be global champions. EEPN formulated numerous new marketing strategies to promote our local E&E companies globally, one of which is our B2B online marketplace portal, the EEMM.

Surf www.eemm.com.my for more details.

Contact: admin@eemm.com.my

Supported By EEPN

Nurturing and Incubating in Industry 4.0 (I4.0)

I4.0 Plugfests and Hackathons	No. of participants
Plugfest 1.0: Industrial Internet of Things (IIoT)	132 engineers from 67 companies (2018-2019)
Plugfest 2.0: AI-base Machine Vision System (AIoT)	45 engineers from 25 companies (Aug & Oct 2020)
Hackathon West Malaysia	32 university students from 8 teams (2019) 48 university students from 12 teams (10 Oct 2020)
Hackathon East Malaysia	52 university students from 13 teams (18 Oct 2020)

Penang (1/2018)
27~29 November 2018

Penang (1/2020)
24~28 August 2020

Penang (2/2020)
19~27 October 2020

Petaling Jaya (1/2019)
22~24 April 2019

Technology Park Malaysia (1/2019)
5~6 October 2019

Johor (2/2019)
22~24 July 2019

Johor (1/2020)
10 October 2020

Sarawak (3/2019)
19~21 September 2019

Sarawak (2/2020)
18 October 2020

Kangar
Kedah
George Town
Perak
Kelantan
Terengganu
Kuala Lumpur
Putrajaya
Pahang
Negeri Sembilan
Melaka
Johor
West Malaysia
East Malaysia
Sarawak
Sabah

Legend

Plugfest 1.0 (IIoT)
Industrial Internet of Thing

Plugfest 2.0 (AIoT)
AI-based Machine Vision

Hackathon

Establish Industry 4.0 (I4.0) Technology Centers in other states through collaboration
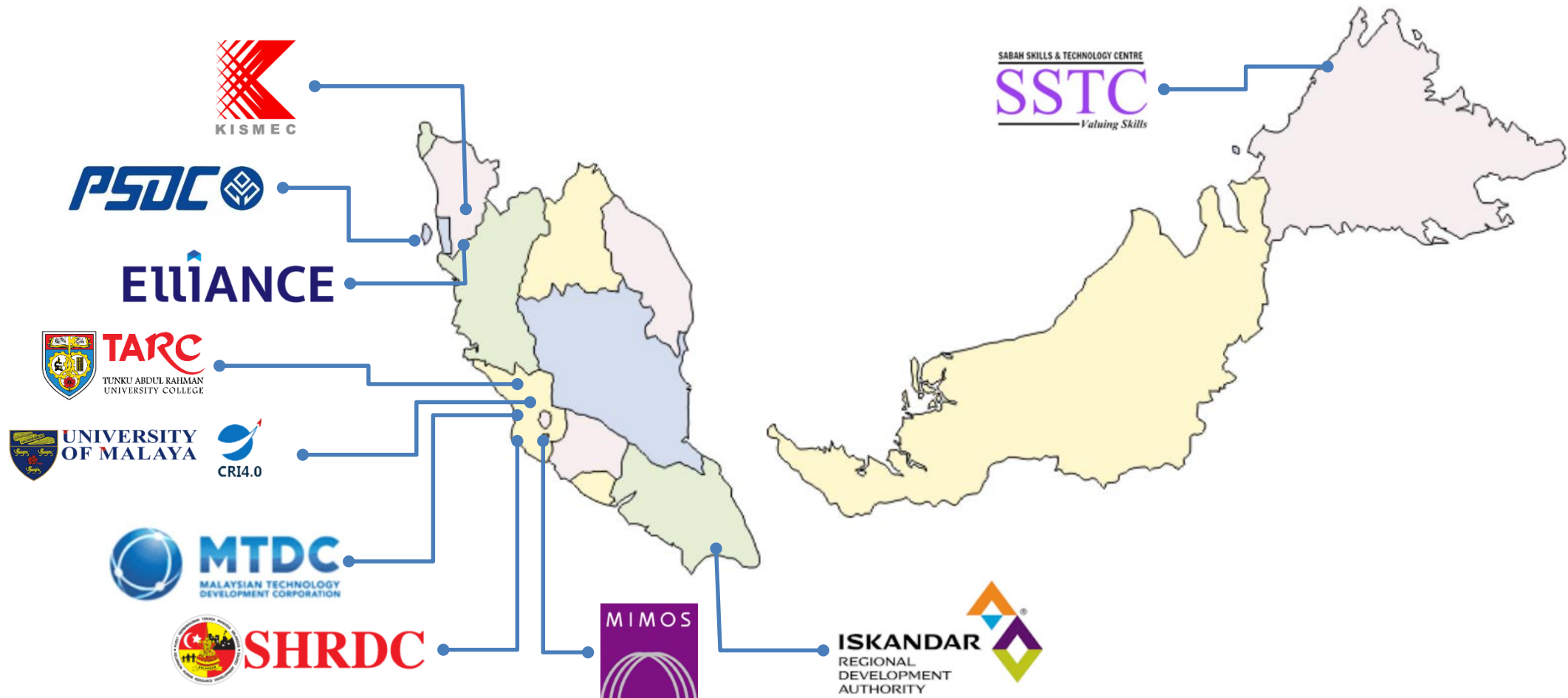
Reinforce 'Buy Local Products' policy - Inari Waterfall Effect
Unlock MNC & LLC opportunities
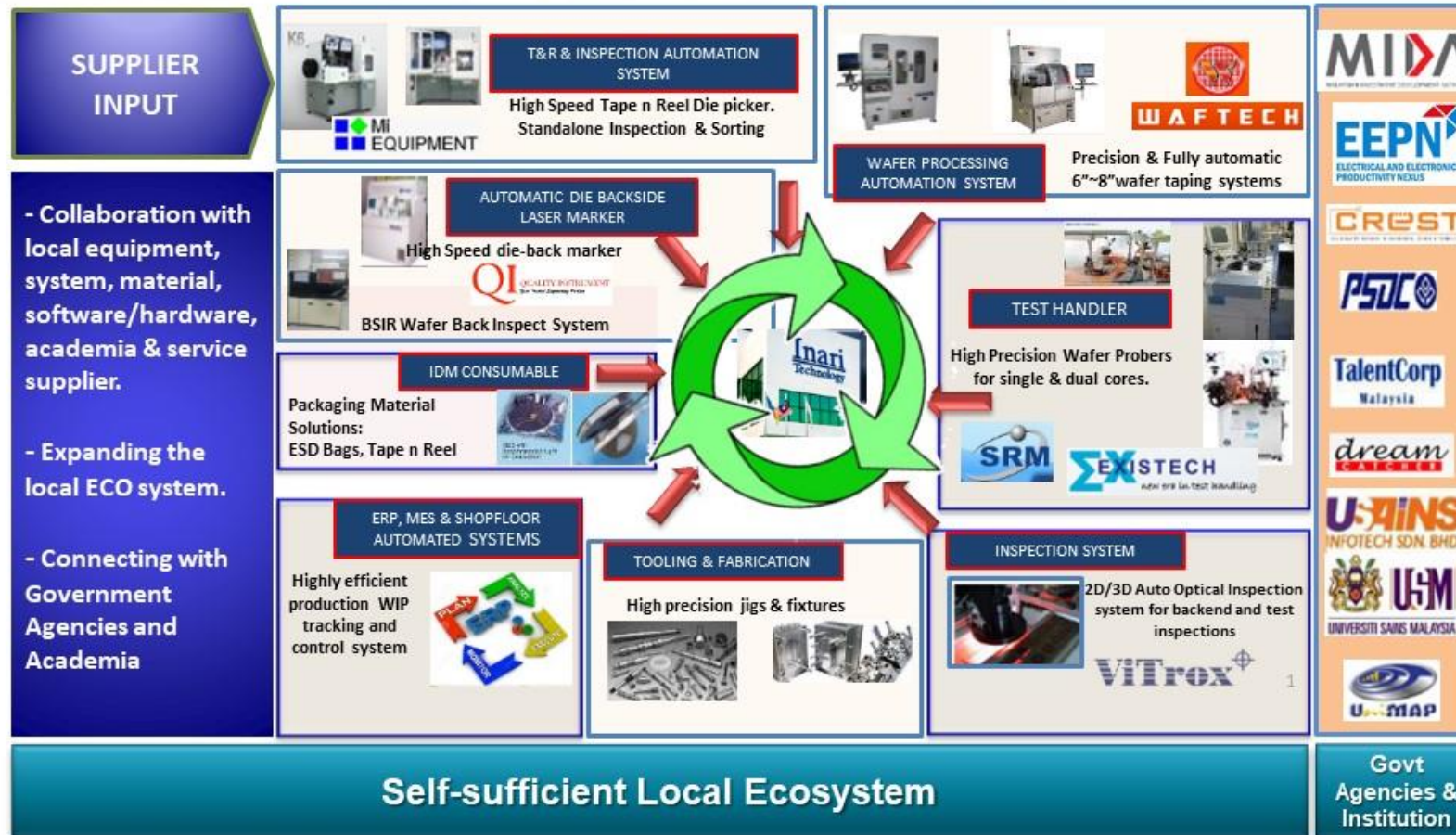
Promote the establishment of NCER Technology Innovation Centre (NTIC) to support start up, commercialization, technology acquisition & innovation
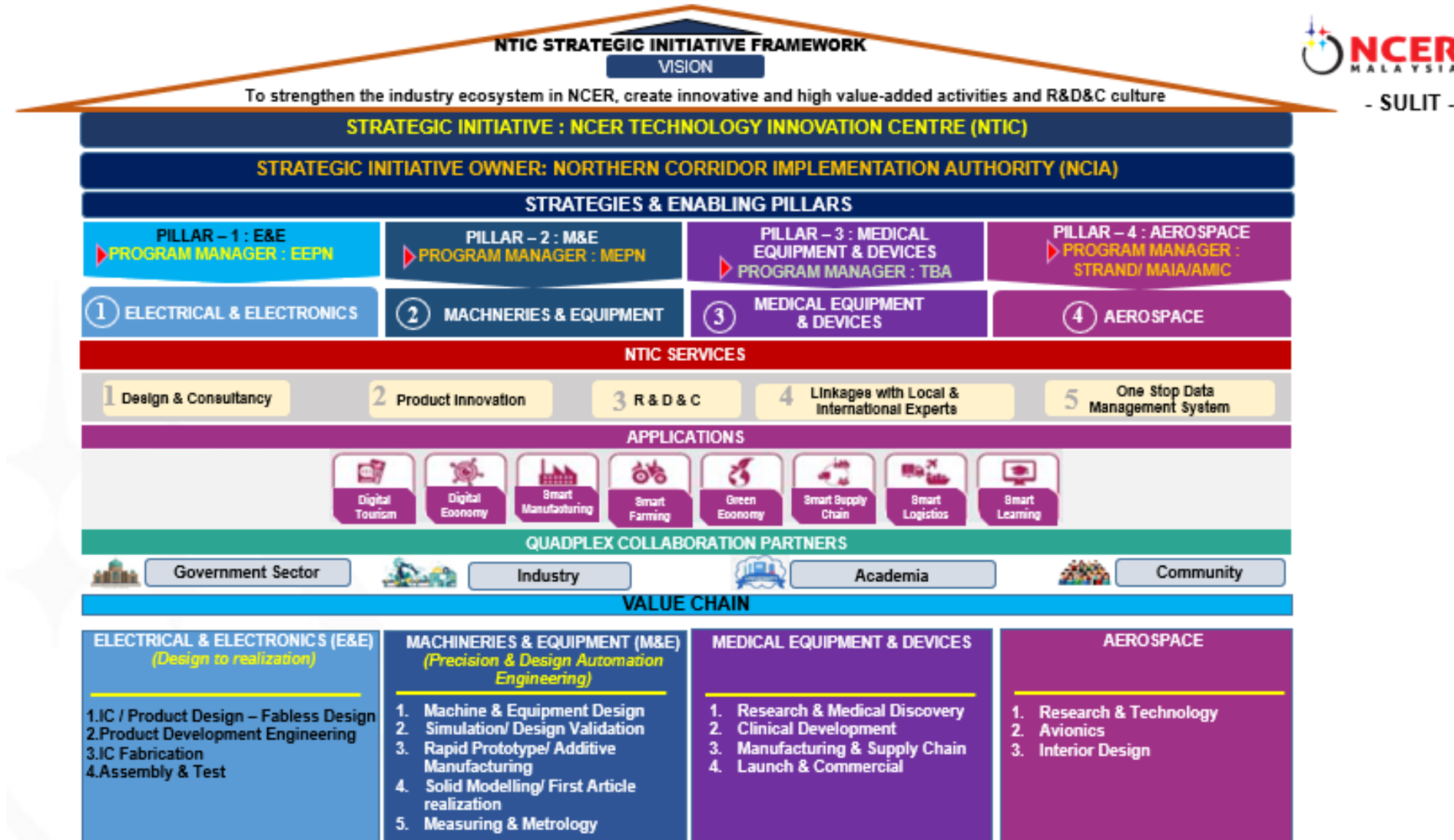
What are our strengths in E&E industry?

1. Diversified in manufacturing : Semicon assembly test and packaging, storage, EMS, medical devices, LED, solar, industrial electronics
2. Global Business Services
3. Automation for Semicon and E&E Industry (DDI)

What we have but not significant ?
(Malaysia companies' presence in the E&E ecosystem is not significant except for automation)
- IC design
- Embedded system design & development
- Industrial software
- AI/5G
- Wafer fab manufacturing
- Integration of robotic system
- Testing equipment

What we don't have?
We are not able to design :
- Vision cameras, robotic arms
- SMT equipment
- Wafer fab processing equipment e.g Diffusion, Lithography, Etching, Implant, Metallization
- Bonders
- Direct material for semicon and E&E manufacturing
- I4.0 development tool suites for Big Data Analytics, Machine Learning algorithms etc

Talent drives growth

Malaysia needs a strategy for talent development …

Holistic manpower planning for industry

- Encourage more students to pursue science and engineering
- Reskill and upskill workforce to enable new business models and operating models
- **Use other people's talent**
- Allow foreign engineering graduates to work locally
- Industrial upskilling for unemployed graduates
- Advanced skill enhancement in IC Design and Embedded Software development

China's Thousand Talents Program (TTP) 千人计划

- Established in 2008; to recognize and recruit leading international experts in scientific research, innovation, and entrepreneurship
- Three categories:
  1. Innovative 1000 talents plan - for Chinese scholars < 55 years old
  2. **Foreign 1000 talents plan** - for foreigners only < 55 years old
  3. Young scholar 1000 Talents plan or **Overseas Young Talents** Project of China < 40 years old

Patent Applications
In China   In the U.S.
Thousand Talents Program introduced
2000 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 2018
1.5m 1.0 0.5 0
Data: World Intellectual Property Organization
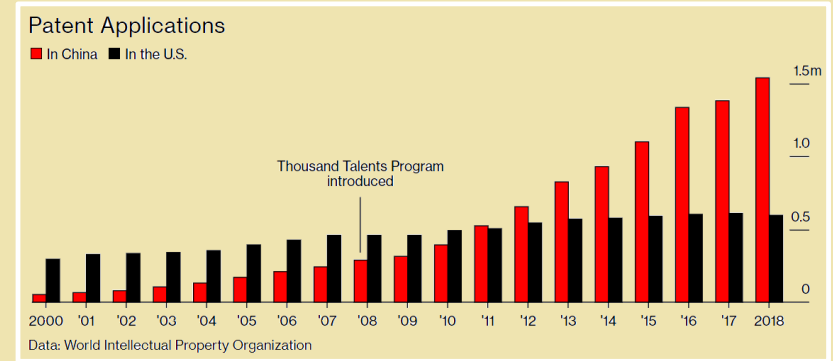
Year	Milestone
2008	TTP Launched
2017	TTP recruited 7,000 high-end professionals, including multiple Nobel laureates and top professors
2019	• ~ 300 senior engineers moved from Taiwan to China • To date, ~3,000 semicon engineers has left Taiwan for China (~ 10% of the island's talent pool)

Recommendations and Way Forward

1. Double-down on where we are successful and can compete

Continue to attract FDI and grow DDI

- Smart High Tech and High Value Manufacturing, State of the Art Technology, Semicon, EMS, Storage, Industrial & Automotive Electronics and Medical Devices

Establish Automation Hub

- Buy local – incentivize all MNCs and LLCs to buy local
- Adopt the Inari's waterfall effect model
- Grow more global champions in automation
- Assist in technology acquisition

Recommendations and Way Forward
2. Seize opportunity and invest in focused areas

- Establish a significant IC design industry

- Establish AI parks to expand AI industry capability and competency

- Establish industrial/embedded software parks

- Enable more local contents in our national 5G/6G roadmap

- Grow the medical device industry

- Attract FDI in wafer fabs to support semicon ecosystem

- Attract FDIs to improve the direct material supply chain

- Establish NCER Technology Innovation Centre (NTIC) to support start up, commercialization, technology acquisition & innovation

Recommendations and Way Forward

3. Invest in industrial parks and provide incentives for growth

- Establish more FIZ industrial parks, not just LMW
- Build affordable SMEs parks
- Provide incentives from 5 years to 10 years as a standard offering (for better long-term planning)
- Make incentives criteria more realistic (e.g. 40% value added, foreign workers requirement)
  - ✓ Focus on more impactful criteria (e.g high paying jobs and state-of-the-art technology)
- Customized incentives for local companies to encourage growth and innovation

Recommendations and Way Forward
4. Develop holistic talent strategy

- Inspire children and students to pursue Science & engineering
- Realign scholarship programme to support industry
- Establish academy to upskill engineers for industry
  - ✓ AI
  - ✓ IC design
  - ✓ Industrial software
  - ✓ Medical device
  - ✓ GBS
- Attract Malaysian talent in high technology to return home
- Encourage more engineers into D&D with 15% personal rate for 10 years
- Use other people's talent (strategies used by US, China, Singapore, etc.)
- Allow foreign engineering graduates studying in local universities to work in Malaysia

"Talent is the driver of technology acquisition and growth"

Malaysia – Be a leading E&E engine of the world

Summary

- Strong and established state-of-the-art manufacturing
- Growth in IC design and embedded system design industry
- Attract FDI in software and grow local capabilities in industrial software
- Attract FDI in wafer fabs to support semicon ecosystem
- Strong and growing medical device industry
- Improved E&E supply chain
- Supply of talent through holistic human resource strategy and using other people's talent

Effective Implementation and execution makes all the difference!!

Thank You

https://www.facebook.com/MPCHQ   @MPC_HQ   MPC TIP   @mpc_hq

EEPN's four Key Strategies (KS)

Phasing out …

KS#1: Enhance Higher Value-Added Activities
Dr. Hari Narayanan (VC, APU, former DM of Motorola)

KS#2: Nurture Talent Development
Dato' Seri Wong Siew Hai (Chairman of MAEI, AMCHAM)

KS#3: Creating Value towards I4.0 Ecosystem
Dr. Thomas Ooi (Senior Manager, IOT Group, Intel Corp)

KS#4: Strengthen SME Development
Mr. KC Lau (CEO, Inari-Amertron Berhad)

EEPN's five Strategic Initiatives (SI)

New!

EEPN Strategic Initiatives 2021 - 2025

SI 1 — **UNLOCK MNCs CONTRIBUTIONS TOWARDS MALAYSIA**
Chairman : Dr Hari Narayanan

SI 2 — **NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS**
Chairman : Mr Lau Kean Cheong

SI 3 — **BUILD TALENT AND LEADERSHIP DEVELOPMENT**
Chairman : YBhg Dato Seri Wong Siew Hai

SI 4 — **ENABLE AND FORGE A ROBUST E&E ECOSYSTEM**
Chairman : Dr Thomas Ooi Wei Min

SI 5 — **ESTABLISH GOVERNMENT POLICIES WHICH PROMOTE GROWTH**
Co-chair : MOSTI & MITI

Strategic Framework

E&E 2025

MNCs

LOCAL COMPANIES

TALENT

ECOSYSTEM

GOVERNMENT POLICIES

S1

S1: UNLOCK MNCs POTENTIAL CONTRIBUTIONS TOWARDS E&E IN MALAYSIA
S1.1 Retention of MNCs and transfer of knowledge & technology to Malaysian companies
S1.2 Support MNCs growth to create greater spillover effects / multiplier effects

S2

S2: NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS
S2.1 Facilitate local companies to embrace emerging technologies, design and innovation
S2.2 Grow Tier 1 local companies, and waterfall benefits to grow Tier 2 companies
S2.3 Enhance local companies' visibility through collaborations and partnerships

S3

S3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
S3.1 Develop talent to embark on high-value activities
S3.2 Increase talent pool to support industry growth
S3.3 Promote software engineering & programming skills to future-proof workforce
S3.4 Develop regional and global leaders
S3.5 Align public universities towards industry's requirements

S4

S4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
S4.1 Establish NCER Technology and Innovation Center (NTIC) to drive tech. development
S4.2 Promote adoption of I4.0 technology to improve global competitiveness
S4.3 Streamline and establish accountability of research institutions and COEs

S5

S5: ESTABLISH GOVERNMENT POLICIES WHICH PROMOTE E&E GROWTH
S5.1 Formulate a National E&E Policy and Roadmap
S5.2 Incentivize investments which are of strategic importance
S5.3 Establish a national-level strategy for workforce development

Agenda: EEPN GC Meeting 6/2020

Via EEPN Zoom | 5th November 2020 | 10:30am - 1:00pm

TIME	ITEM	AGENDA	PRESENTER
10:30am – 10:35am	1	Opening Remarks	The Chairman
10:35am – 11:10am	2	Update by EEPN Chairman • Malaysia Semiconductor Industry Association (MSIA) • E&E Forum • Brief Intro to EEPN's new 'Strategic Initiatives' format	The Chairman
11:10am – 12:30pm	3	Updates on KSs (20 minutes each) • Progress updates on 2020's Key Strategies • Update on 2021's Strategy Initiatives (SI)	All Strategy Initiatives (SI) chairpersons
12:30pm – 12:45pm	4	Presentation on MPC's Sectoral Productivity Level	MPC
12:45pm – 1:00pm	5	Other matters and next meeting	All

MALAYSIA PRODUCTIVITY CORPORATION

DRIVING PRODUCTIVITY OF THE NATION

KS#1 Update to GC Meeting 6/2020
Chair: Dr. Hari Narayanan
Co-chair: Mdm. Jasbir Kaur (Executive Director, MIDA)

Via EEPN Zoom | 5th November 2020 | 10:30am ~ 1:00pm

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EEPN - SULIT

IC DESIGN POST SCHOOL FINISHING (PSF)

MIDA JPPG Meeting (15 Sept 2020)

- MIMOS PMO presented Status Update on PSF project
- EPU requested further information and meeting to discuss results of PSF

EPU PSF Meeting (17 Sept 2020)

- MIMOS PMO and USAINS presented Status Update and PSF financial information

MIDA-MIMOS PSF Audit Meeting (20 Oct 2020)

- MIMOS PMO provided additional project information, claims and feedback on PSF

MIDA JPPG Meeting (24 Nov 2020)

- To approve funding claims by MIMOS PMO and USAINS

Discussion on a way forward to continue the PSF Program in the next OC Meeting (5 Nov 2020, 9am)

IC DESIGN POST SCHOOL FINISHING (PSF) SUMMARY DASHBOARD

Post School Finishing Trainees

Q4 Target: 750

104 still to be trained

	Q3'19	Q4'19	Q1'20	Q2'20	Q3'20	Q4'20
Actual Trainees	37	112	173	198	258	
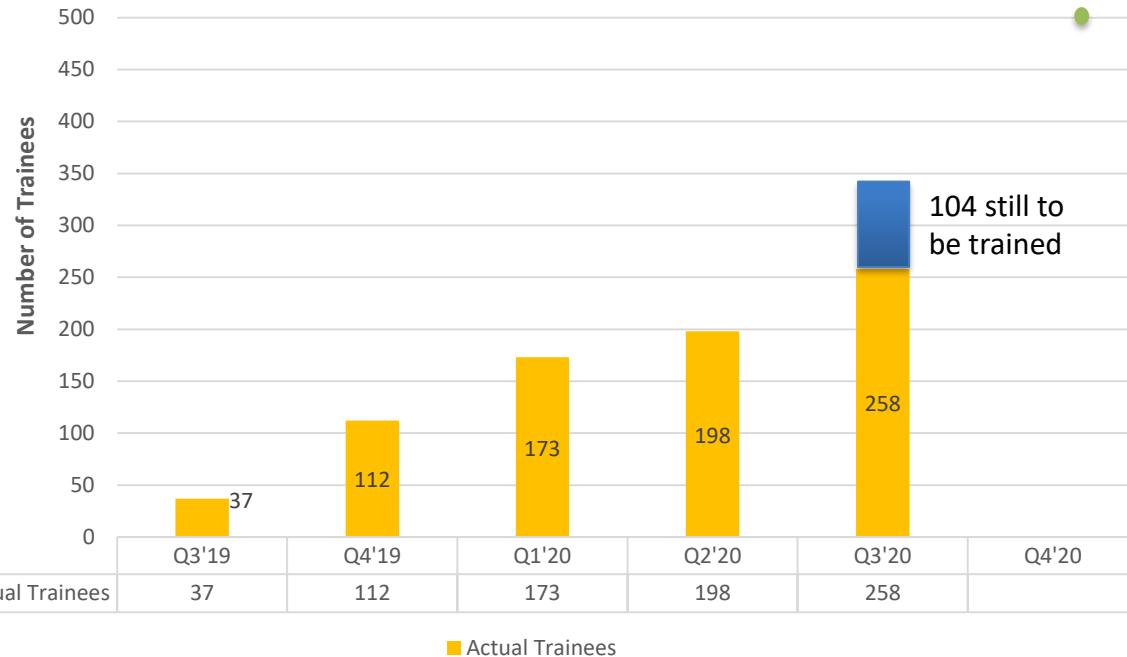
TRAINEE BREAKDOWN PER MODULE

Intro to IC Design, 187
Digital Front End, 112
Digital Back End, 42
Custom Layout, 35
Analog Design, 70
DFT, 84
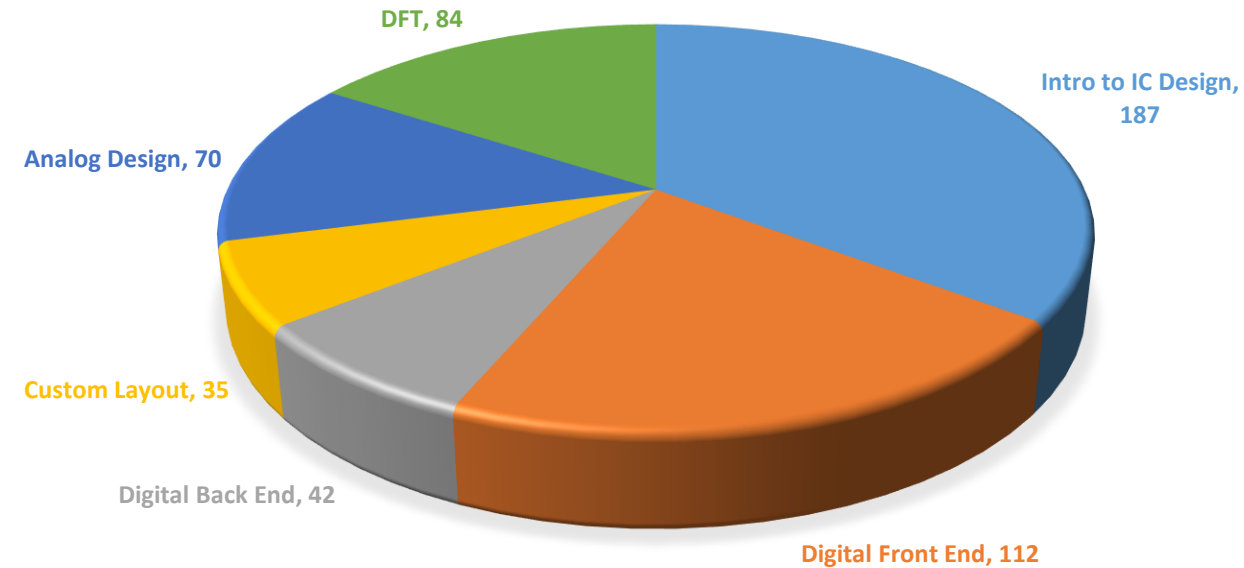
PSF INDIVIDUAL TRAINEE SUMMARY

	No	Companies	# of participants (As of Sep 2020)	Balance to be trained (by Q4 2020)
LOCAL/SME	1	Infinecs	20	1
	2	Oppstar	29	17
	3	Silterra	2	-
	4	Symmid	4	-
MNC	5	Intel	85	15
	6	Microchip	3	-
	7	Nexperia	2	-
	8	Microsemi	-	5
	9	SiTune	-	1
	10	Pixart	2	-
		TOTAL:	147	39

	No	Universities	# of participants (As of Sep 2020)	Balance to be trained (by Q4 2020)
Public	1	IIUM	4	1
	2	UITM PP	7	2
	3	UITM SA	10	12
	4	UITM Pagoh	2	
	5	UITM PG	2	-
	6	UNIMAP	8	2
	7	UPM	6	6
	8	UNIMAS	1	-
	9	UPNM	2	2
	10	USIM	5	6
	11	USM	3	3
	12	UTEM	11	9
	13	UTM	13	1
	14	UTHM	9	1
	15	UM	4	4
Private	16	Nottingham	1	-
	17	UTAR	2	5
	18	INTI	4	3
	19	Southampton	2	-
	20	UTP	5	-
	21	IUKL	2	-
	22	MJII	3	-
	23	UNIKL BMI	3	2
	24	UNIKL MIMET	1	3
	25	Monash	-	1
	26	First City College	-	1
	27	MMU	1	1
		TOTAL:	111	65

EDA TOOLS UPDATE

	Synopsys		Mentor			Cadence
	Front End	**Back End**	**Custom**	**Digital**	**DFT**	**Cadence**
New Licenses residing @ CEDEC	100	50	110	10	30	50
Number of Expected Users	221	115	274	55	40	124
Number of Actual Users	114	80	90	10	30	64
Participating Universities	UTM UPM UNIMAP UTHM UITM PP UiTM SA UPNM UNIMAS UMS USM Nottingham UTAR UTM KL	UTM UPM UNIMAP UTHM UITM PP UITM SA UMS USM UTM KL INTI	UM UTM UKM UPM UIA UNIMAP UMP UTHM UITM PP UITM SA USIM UTEM UNIMAS UMS USM Nottingham UTAR	UIA UMP UTHM UITM SA UPNM UNIMAS UMS	UTM UTHM UPM UNIMAP UTEM	UM UPM UNIMAP UTHM UITM PP UITM SA UTEM UNIMAS USM
	Feb 2020 – Feb 2022					June 2020 – June 2022

SIAP PROGRAM WITH MOE/MOHE

MOE/MOHE Meeting (15 Sept 2020)

- Reaffirm commitment and implementation from participating universities, which MOE/MOHE has agreed

MOE/MOHE Action Items:

- Coordinate Follow-up meeting between MPC, EEPN, MIMOS and 7 participating public universities to present the latest status of SIAP curriculum implementation (Scheduled for 6 Nov 2020)
- Setup discussion session with the Engineering Accreditation Council Malaysia (EAC) in identifying the conditions and requirements of the engineering program and curriculum to ensure program accreditation is met

- Coordinate meeting between MPC, EEPN, MIMOS and IPTS to introduce the implementation of the SIAP program – **Take up by MPC and EEPN**

IC DESIGN CONSORTIUM

- Agreement for METIC to consolidate consortium resource breakdown (**8 companies participating**), list of IP's and Products in order to market the consortium locally and internationally
- Signing of IC Design Consortium Agreement among 13 local companies – In Progress
- MIMOS is supporting **3 IC Design Companies** on MOSTI's National Sandbox Initiative to take part in the commercializing local products
- METIC YTD Activities:
  - 3 overseas success
  - 1 local success
  - 7 dropped
  - 2 new opportunities

MECHANICAL ENGINEERING/DESIGN - MCAD

Collaboration with NCIA (Northern Corridor)
- NCIA is interested to partner with EEPN, and fund the MCAD tools for 2020.
- Program to be expanded to RMK12 as part of Single Window Initiative for NCER.

9th March 2020 Update
- NCIA has submitted for RMK-12
- NCIA will table with their NCIA's Technical Innovation Center (NTIC) as potential for jobs creation, entrepreneurship and/or talent enhancement program.

15th April 2020 Update
- Due to MCO, the pr...entation.

15th June 2020 Update
- **NCIA informed no allocation available to support this initiative in 2020.**
- **MCAD to be included under NTIC (NCIA Technical Innovation Center) project as a subcomponent for RMK12.**

Other Updates
MIMOS RMK12 Funding Request
- MIMOS has submitted RMK12 additional proposal for the above program spanning from 2021-2025
- Final Proposal was presented to EPU on 5th June 2020.

EMBEDDED DESIGN ACTIVITY

- A 2nd survey to validate and rebase line talent needs from Industry (70+ companies) by MIDA E&E was sent beginning of September 2020

- Targeting companies in the following areas:
  - Product / System /IoT
  - Control / Manufacturing Automation
  - Test Development
  - Automation

- Low response from Industry (*5 companies*)

- Action Plan is to work with MIDA to actively encourage companies to take part in the survey (end Nov)
- Provide findings to S3 Team for further actions (mid Dec)

S1. UNLOCK MNCS CONTRIBUTIONS

S1: UNLOCK MNCs POTENTIAL CONTRIBUTIONS TOWARDS E&E IN MALAYSIA
S1.1 Increase knowledge, technology and retention of MNCs
S1.2 Support MNCs growth to create greater spillover effects / multiplier effects

S1.1

S1.1 Retention of MNCs and transfer of knowledge and technology to Malaysian companies
- Grow in tandem on global technology evolution with MNCs
- Creatively drive for higher local contents and supply chain (which still comply with WTO requirements)
- Well defined localization programs, with clear implementation deliverables
- Ensure local companies benefit from spill over effects

S1.2

S1.2 Support MNCs growth to create greater spillover effects / multiplier effects
- Expand on current MNCs' vendor development programs
- Leverage MNCs to strengthen our ecosystems and integrated supply chain solution
- Focus on high value jobs which can develop our talent competencies

TEAM

EX-EXISTECH COO   YL CHEW
FIRST SOLAR   SIVAKUMAR RAJENDRAN
GREATECH   EK TAN
INFINEON   SK TAN
INTEL   LEE KAM HENG
KEYSIGHT   ENG SU
MOTOROLA SOLUTIONS   SOLOMON LORTHU
ON SEMI   KK CHELLAPPA
OSRAM   DAVID LACEY

FOCUS AREAS

Focus Areas	Who	When	Status
Strengthening MNCs presence What need to happen ?	*TBD*		
Manufacturing TO Manufacturing + Design & Development Is this happening ? Hot spots ? What need to happen ?	SK Tan (Infineon)		
Increasing **the value-add spill over in** the local eco system Is this happening ? Who are the benchmarks ? Identify the best practices How do we measure the impact ? What need to happen to increase the spill over ?	*TBD*		
High content local vendor-based supply chain What is the current state ? What are the opportunity areas ? How do we enhance the current state ?	*TBD*		

Goal is to complete all activities and identify specific actions by end 2020

MALAYSIA PRODUCTIVITY CORPORATION

DRIVING PRODUCTIVITY OF THE NATION

KS#2 Update to GC Meeting 6/2020
Chair: Dato' Seri SH Wong
Co-Chair: MOHR

Via EEPN Zoom | 5th November 2020 | 10:30am ~ 1:00pm

Agenda

- KS#2 projects update for 2020
- Update on SI 3: Build Talent And Leadership Development
  - 2021 workplans

Agenda

- KS#2 projects update for 2020
- Update on SI 3: Build Talent And Leadership Development
  - 2021 workplans

EEPN I4.0 Webinar Series

In collaboration with Elliance

- ## Two sessions completed

Topic	EEPN I4.0 Webinar Series 1
Date/Time	6th April 2020 (Monday) 3:00pm
Online platform	GoToWebinar
Speaker	Mr. BS Cheng (CEO, Elliance Sdn. Bhd.)
Total attendees	161 participants

Topic	EEPN I4.0 Webinar Series 2
Date/Time	23rd April 2020 (Monday) 3:00pm
Online platform	GoToWebinar
Speaker	Mr. BS Cheng (CEO, Elliance Sdn. Bhd.)
Total attendees	168 participants

EEPN I4.0 Webinar Series
In collaboration with Steerix and Aachen University

- In partnership with Malaysian-German Chamber of Commerce and Industry

Topic	How to prepare & start out in difficult times
Date/Time	9th June 2020
Speaker	Dr. Max Hoffmann from Institute of Production Technology (IPT)

Topic	Machine2Machine and Cyber Physical Systems
Date/Time	10th June 2020
Speaker	Dr. Max Hoffmann from Institute of Production Technology (IPT)

EEPN I4.0 Webinar Series

In collaboration with Steerix and Aachen University

- In partnership with Malaysian-German Chamber of Commerce and Industry

Topic	Data Analytics – The Enabler of Change and Progress for your organization – How to Learn It and What are your benefits?
Date/Time	25th June 2020 / 1:30pm – 3:00pm
Speaker	Dr. Max Hoffmann from Institute of Production Technology (IPT)

Topic	Why is Machine Learning & Artificial Neural Network the Next Revolution in Industry – How can you apply it?
Date/Time	2nd July 2020 / 1:30pm – 3:00pm
Speaker	Dr. Max Hoffmann from Institute of Production Technology (IPT)

Graduate Training and Hiring Program

NSSDC in collaboration with Steerix, supported by EEPN

Background

- NSSDC in collaboration with Steerix Sdn. Bhd. (an authorized partner of RWTH Int. Academy, Germany) is organizing 2 months of graduate training program for unemployed/ fresh graduates.
- This program is fully funded by government.
- This program is for Engineering Graduates with a minimum CGPA of 2.80 & above.
- The participants will be interviewed before their application is approved.

Upon completion of programme:

- Guaranteed knowledge to perform data analytics in your working environment
- Participants will be able to develop real use case data analytics project ✓Receive a Certificate issued by Steerix GmbH, Germany

Program Summary

Programme Outline

Industry 4.0 Architecture

Methodology: Test/ Workshop

Programming for Data Analytics - Python

Methodology: Hands-on Practical/ Examination

Data Analytics for Cyber Physical Production System

Methodology: Hands-on Practical /Examination

Practical Case Study

Methodology: Practical Implementation / Real case study

Duration : 2 Months (November & December 2020)
Start Date : 9 November 2020
Venue : NSSDC, Negeri Sembilan

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Agenda

- KS#2 projects update for 2020
- Update on SI 3: Build Talent And Leadership Development
  - 2021 workplans

SI 3: Build Talent and Leadership Development

SI 3: BUILD TALENT TO DRIVE E&E GROWTH
SI 3.1 Develop talent to embark on high-value activities
SI 3.2 Increase talent pool to support Industry growth
SI 3.3 Promote software engineering & programming skills to future-proof workforce
SI 3.4 Develop regional and global leaders
SI 3.5 Align public universities towards industry's requirements

SI 3.1

SI 3.1 Develop talent to embark on high-value activities
- Post-School Finishing for niche areas
- PhD & MSc programs to compete globally
- Deepening our competencies in IC Design, embedded system design and solutioning, M&E design, test engineering

SI 3.5

SI 3.5 Align public universities towards industry's requirements
- Partner with MOE/MOHR to drive Universities curriculum enhancement and embedment
- Measure universities by their ability to produce Industry ready graduates
- Elite Universities: which specializes in certain faculty and areas of expertise, with dedicated experts
- Closer University and Industry collaboration e.g. University inside industry

SI 3.4

SI 3.4 Develop regional and global leaders
- Prepare senior managers to be regional and global leaders through transformational leadership development programs

SI 3.2

SI 3.2 Increase talent pool to support Industry growth
- Industrial Upskilling for yet-to-be employed graduates
- Advanced Upskilling Program for experienced engineers
- More TVET, dual training and learning programs for technicians for factory floor operations

SI 3.3

SI 3.3 Promote software engineering and programming skills to future-proof our workforce
- Establish software and AI academy to drive programming and software development to complement existing hardware-focused competencies e.g. software parks
- Focus on computer science, programming, algorithm etc

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.1 - Develop talent to embark on high value activities** 1. Post school finishing, 4 tracks proposed to MoHE for funding: • Digital IC Design • Embedded Systems & IoT • Product & Test Engineering • Industry 4.0 Target Group : Engineering graduates **Lead by MIMOS/USAINS, supported by EEPN & USM**	140	# of engineers trained & placed
	SI 3.1 - Develop talent to embark on high value activities 2. Master of Science (MSc), 3 programs proposed to HRDF for co-funding : • Electronics System Design Engineering • Embedded System Engineering • Microelectronics Engineering Target Group : Working engineers **Lead by USAINS, supported by EEPN, TalentCorp & USM, co-funded 50% by Industry**	100	# of engineers studied

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.1 - Develop talent to embark on high value activities** 3. Micro-Credentials Programme (under proposal) Micro-credentials offer a new way and innovative of which features the following benefits; flexible, skill-based, and shareable. • Introduction to Cloud Application using Public Cloud Services (16 hours/8 weeks) • Virtual Reality & Augmented Reality Experiences (18 hours/6 weeks) • Machine Vision with OpenCV (21 hours/6 weeks) • Sensors : IoT Design (16 hours/8 weeks) • Image Processing and Computer Vision (42 hours/12 weeks) Target Group : Engineering graduates **Lead by USAINS/APU, supported by EEPN**	100	# pax enrolled
	SI 3.1 - Develop talent to embark on high value activities 4. Graduate Training and Hiring Program Description: • 2 months of graduate training program for unemployed/ fresh graduates. • Guaranteed knowledge to perform data analytics in your working environment • Receive a Certificate issued by Steerix GmbH, Germany Target Group : This program is for Engineering Graduates with a minimum CGPA of 2.80 & above. **Lead by NSSDC and Steerix, supported by EEPN**	50	# of engineering graduates

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.2 - Increase talent pool to support Industry growth** 1. Industrial Upskilling, 4 tracks proposed to HRDF for co-funding: • Digital IC Design • Embedded Systems & IoT • Product & Test Engineering • Automotive Electronics Target Group : Fresh graduates **Lead by USAINS, supported by EEPN & TalentCorp, co-funded 50% by Industry**	80	# of engineers trained & placed
	SI 3.2 - Increase talent pool to support Industry growth 2. Supply Chain Management Upskilling Program, 1 program proposed to MoHE for funding): • 30days Upskilling Program Target Group : Unemployed graduates in Management / Supply Chain field **Lead by USAINS & Le NouveauPro, supported by EEPN**	105	# of engineers trained

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.2 - Increase talent pool to support Industry growth** 3. E&E Mentoring for Industry 4.0 (EEMI4.0) program <u>Description</u> • 6-hours mentoring program • Driven through our I4.0 Technology Center <u>Programs objectives</u> • Self assessment prior to actual Readiness Assessment (RA) • Better preparation for RA to ensure higher scorings • Formulate I4.0 Implementation Blueprint (specifically for each SMEs) Target Group : SMEs, particularly those which have not completed Industry4WRD Readiness Assessment (RA) **Lead by Technology Centres, supported by EEPN**	100 50	# companies participate in EEMI4.0 Mentoring program # companies apply for RA

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.3 - Promote software engineering & programming skills to future-proof our workforce** 1. Post school finishing, 1 track proposed to MoHE for funding : • Software Engineering Discussion The needs to focus more on Industry4.0 and the need to hire software programmer in automation Target Group : Unemployed graduates **Lead by USAINS, supported by EEPN**	35	# of engineers trained & placed
	SI 3.3 - Promote software engineering & programming skills to future-proof our workforce 2. Industrial Upskilling, 1 track proposed to HRDF for co-funding: • Software Engineering Target Group : Fresh graduates **Lead by USAINS, supported by EEPN & TalentCorp, co-funded 50% by Industry**	20	# of engineers trained & placed

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure
BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.4 - Develop regional and global leaders** 1. Develop and conduct regional and global leadership programs. Description: • Tentatively 8 topics over a 4-months training period, and additional 2-months of coaching • Define the necessary training modules and program • Partner with experts to bring in talents and experts, and share knowledge on selected subjects Target group : Senior managers **Lead by USAINS/Le Nouveau Pro, supported by EEPN, co funded by HRDF**	25	# of senior managers trained
25	**SI 3.4 - Develop regional and global leaders** 2. SME Leadership Development Programs Description**:** • Make the SME Leadership Development modules' as part of HRDF approved program • Explore converting selective modules of SME Leadership program to be webinar-based (as a pre-request to actual classroom training) • Introduce business coaching programmes to SMEs • SMEs revenue from RM3-10m **Lead by EEPN, supported by MPC**	25	# of C level attendees

SI3: BUILD TALENT AND LEADERSHIP DEVELOPMENT
Workplans

Strategic Initiative	Action Items	KPI 2021	Measure

BUILD TALENT AND LEADERSHIP DEVELOPMENT	**SI 3.5 - Align public universities towards industry's requirements**
	1. Drive universities curriculum embedment for SIAP Program for IC design
	• Six training modules have been finalized by the Industry
	    • Introduction to Design
	    • Digital frontend
	    • Digital backend
	    • Design for Testability (DFT)
	    • Analog
	    • Circuit Layout
	
	Target group : Undergraduates
	Lead by Dr. Hari, supported by EEPN
		5	# pilot universities participated

MALAYSIA PRODUCTIVITY CORPORATION

DRIVING PRODUCTIVITY OF THE NATION

KS#3 Update to GC Meeting 6/2020
Chair: Dr. Thomas Ooi (Manager, Intel Corp)
Co-Chair: Vimala Murugan (Director, MITI)

Via EEPN Zoom | 5th November 2020 | 10:30am ~ 1:00pm

Agenda

- KS#3 projects update for 2020
- Update on SI 4: Enable And Forge A Robust E&E ecosystem
  - 2021 workplans

I4.0 Regional Conference

Successfully organized via on-line!

- 29th and 30th June 2020 (2-days conference)
- Theme is 'Synergizing AI, Engineering and Economy towards I4.0'
- Targeted audience: Researchers (Industry and Academic), Professors and Lecturers
- Total Attendees/Participants = **239**
  Total Number of papers presented = **66**

Track #	Track Title	Track Chair
1	AI and Computer Science	Prof. Rosni School of Computer Science, USM
2	Engineering and Implementation	Prof. Ali Prof. Zulhasni School of Engineering, UTM
3	Business/Management	Prof. Hooy School of Management, USM

Welcoming Remarks by YBhg. Dato' Seri Wong Siew Hai, Champion of EEPN

Opening Remarks by YBhg. Dato' Wei Chuan Beng, Champion of DPN

i4RC 2020 – Day 1 Opening Ceremony (29 June 2020)

Keynote speaker 1: Dr. Khoh Soo Beng

Keynote speaker 2: Asso. Prof. Wong Chin Yong

Keynote speaker 3: Dr Mazlan Abbas
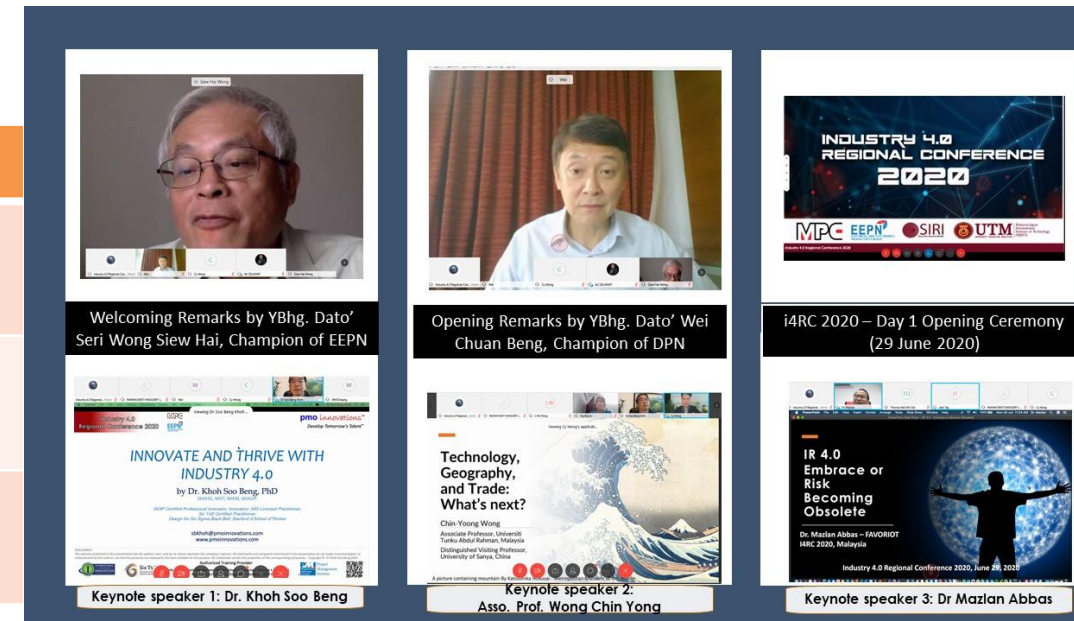
I4.0 Regional Conference

Industry 4.0 Regional Conference (29 -30 June 2020)

I4.0 Regional Conference 2020 (I4RC2020)
Best Paper awards by tracks

Category		Presenters Team / University	Paper # / Title of Paper
Best Paper awards	Business and Operation	• Tajul Ariffin Masron and Yogeeswari Subramaniam **(USM)** • Siew Chean Chee, Wei Chien Ng, Ping Chow Teoh and Sin Yin The **(UM)** • Chee Hong Lee, Yu Qing Soong, Ping Chow Teoh and Sin Yin The **(USM)**	• # 64: The Impact of Digitalization On Food Security of Developing Countries • # 27: Factor Affecting the Implementation of Industry 4.0 In Manufacturing Small and Medium-Sized Enterprise (SMEs) • # 42: The Effect of Industry 4.0 Technologies On Competitive Advantage in Manufacturing Companies
	AI & Computer science	• Uzma Batool and Mohd Ibrahim Shapiai **(UTM)** • Fazliaty Edora Fadzli, Ameer Safuan Muhd Kahiri, Ajune Wanis Ismail, Mohamad Yahya Fekri Aladin and Muhammad Nur Affendy Nor'a **(UTM)** • Esraa Faisal Malik, Khai Wah Khaw and Xinying Chew **(USM)**	• #34: Imbalanced data resampling in convolutional neural network for wafer map defect classification • #63: User interaction technique with holographic projection in mixed reality environment • #2: Fraud detection by machine learning techniques
	Engineering & Technology	• Mohd Shamsuri Khalid, Mohd Nazri Mat Jarid, Ezzarhan Abdullah and Salina Tukimin **(UTM)** • Mohd Aidy Faizal Johari, Saiful Amri Mazlan and Nur Azmah Nordin **(UTM)** • Kuheli Mondal, Aminudin Bin Hj. Abu, Hoong Thiam Toh, Saurav Das, Saikat Das and Akij Ahmad **(UTM)**	• # 5: Forensic Engineering Investigation on Storage Tank's Fire and Explosion Catastrophic: A Lesson Learn • # 28: Magnetorheological Elastomers: Effect of Structure Arrangement and Particle Fraction • # 7: Comparison of a Novel All Pass Filtered x Least Mean Square With Traditional ANCs

I4.0 Regional Conference 2020 (I4RC2020)
Overall Best Impact and Best Presenter Awards

Category		Presenters Team / University	Paper # / Title of Paper
Overall Best Impact Award		Siew Chean Chee, Wei Chien Ng, Ping Chow Teoh and Sin Yin The **(UM)**	# 27: Factor Affecting the Implementation of Industry 4.0 In Manufacturing Small and Medium-Sized Enterprise (SMEs)
Best Presenter Award	Business and Operation	Teoh Kok Ban and Kee Daisy Mui Hung **(USM)**	#50: Psychosocial safety climate and burnout among Malaysian educators: the implications of COVID-19
	AI & Computer science	Kang Xiaoxi, Dini Oktarina and Sanath Sukumaran **(IIUM)**	#10: Brain waves control devices with Brain Computer Interface (BCI): implications on security and privacy
	Engineering & Technology	Alhussain Alsuraihi and Norailis Ab. Wahab **(USIM)**	#56: Paper review on the impact of green supply chain management practices on firm's technological innovation

Hackathon West and East Malaysia

West Malaysia (10 Oct 2020)
East Malaysia (18 Oct 2020)

Background

- First ever virtual hackathon organized by EEPN
- Features an Artificial intelligence (AI) based machine vision system.
- Hardware and software suite is based on INTEL OpenVINO™ toolkit, running off any computers

Delivery Partner

- West Malaysia – IRDA and UTM
- East Malaysia – MPC Sarawak, Curtin University, MCMC, Misi4.0, and Serba Dinamik

Problem Statements

The participants may choose one of the case studies listed to be solved by using INTEL OpenVINO™ Software

	Case Study
1	Electronics Manufacturing Services (EMS) industry
2	Manufacturer in Glove Industry
3	Machinery & Equipment Fabrication Industry
4	Flexible Printed Circuits (FPC) and Printed Circuits Board (PCB) Manufacturing Industry
5	Wafer Fabrication Industry
6	Cargo Port Operator (Logistic Industry)
7	Automotive industry
8	Airline industry
9	Agrofood/Pet Food Industry
10	Electronics Manufacturing Services (EMS) Industry

Hackathon West and East Malaysia

West Malaysia (10 Oct 2020)

Background

- Conducted via online
- Delivery partner – IRDA and UTM
- Opening Speech by **CEO IRDA, Dato Ismail Ibrahim**
- Closing remarks by **Dato Seri Wong Siew Hai, EEPN Champion**
- 32 teams registered, 12 teams make it to Live Pitching session

	Team	Universities
Champion	Deep Port Vision	Universiti Teknologi Malaysia
1st Runner up	Infinitea	Universiti Teknologi Malaysia
2nd runner up	AI Dream Teams	Universiti Teknologi Malaysia
Consolation	Nox	Unversity of Nottingham
Consolation	Anomally	Universiti Teknologi Malaysia
Consolation	Far Ahead	Universiti Teknologi Malaysia
Consolation	Eagle Eye	Universiti Sains Malaysia
Consolation	4.0 The Future	University of Nottingham
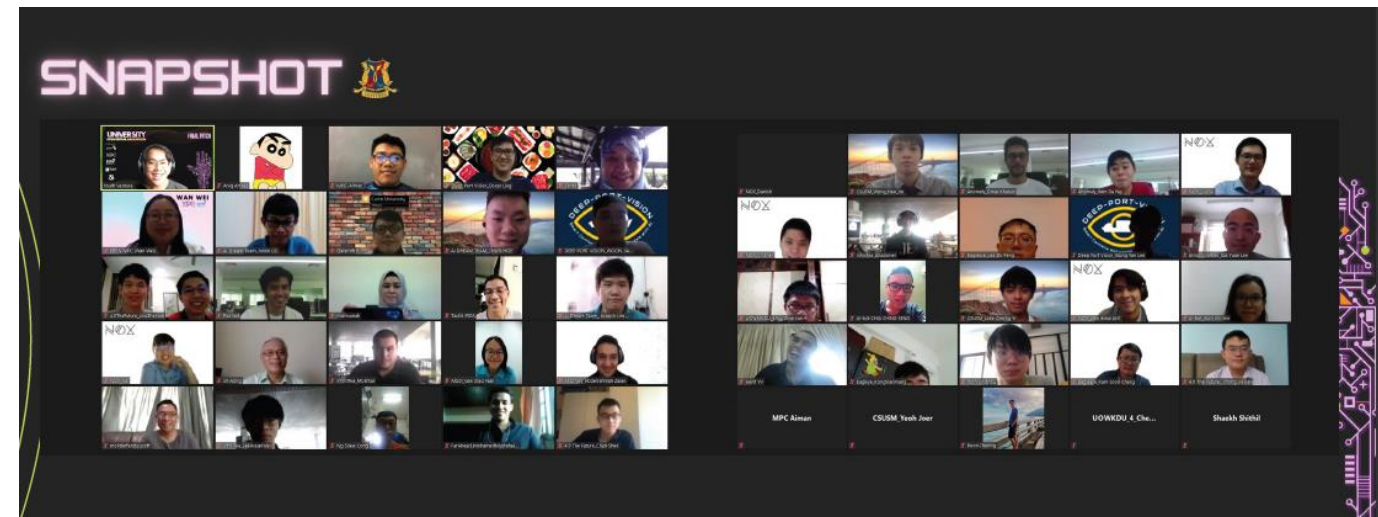
Hackathon West and East Malaysia

East Malaysia (18 Oct 2020)

Background

- Conducted via online platform and live at Serba Dinamik, Virtual Park, Sarawak
- Delivery partner – MPC Sarawak, MCMC, Curtin Uni, Misi4.0
- Opening Speech by **Dato Abdul Latif bin Haji Abu Seman, Director General of MPC**
- Closing remarks by **Yang Berhormat Datuk Snowdan Anak Donald Lawan, Assistant Minister For Youth And Sports In The Cabinet Of Sarawak**
- 13 teams make it to Live Pitching session
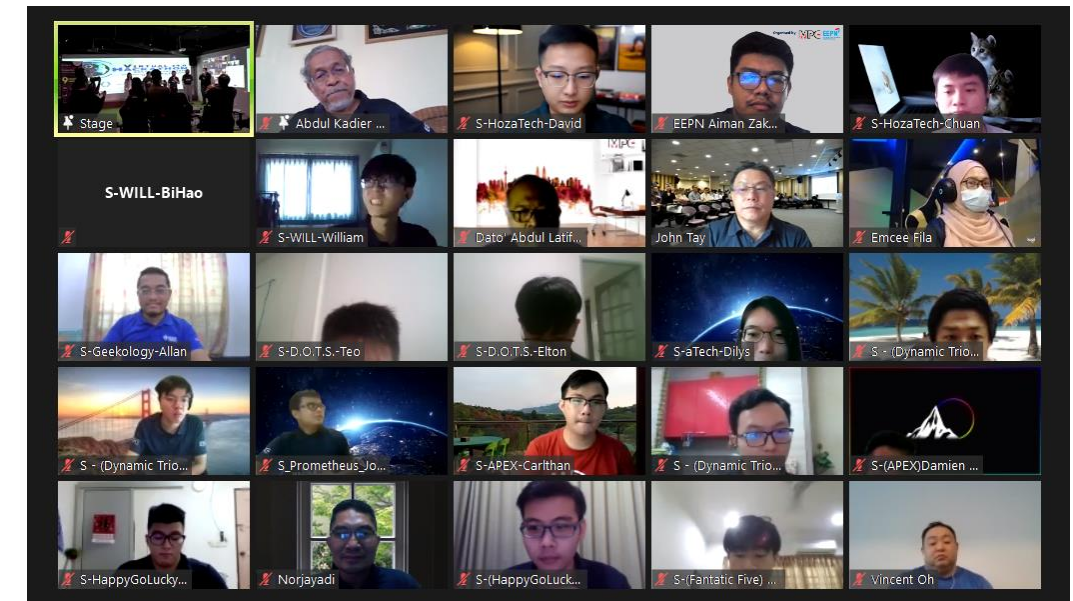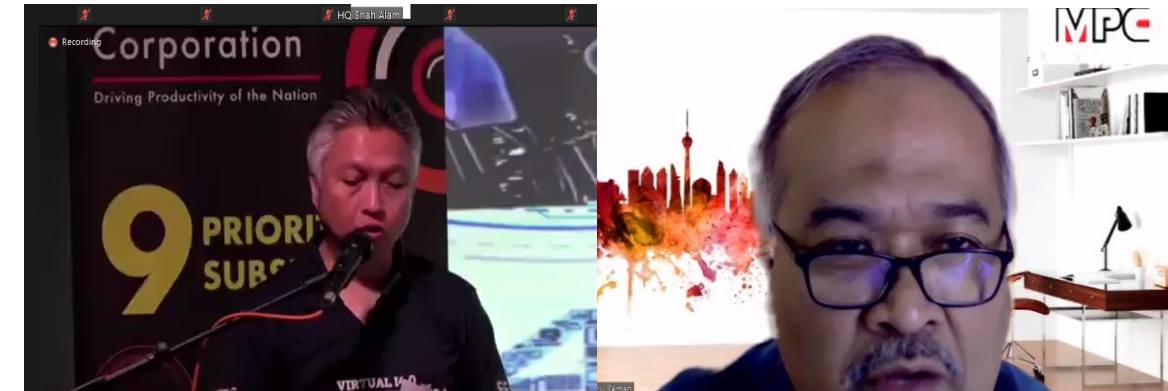
Rank	Team	Universities
Champion	Happy Go Lucky	Universiti Malaysia Sabah
1st Runner up	Hozatech	University College of Technology Sarawak
2nd runner up	Will	University College of Technology Sarawak
Consolation	Centexs	Universiti Malaysia Sarawak
Consolation	DOT	University College of Technology Sarawak
Consolation	Fantastic Five	Curtin University
Consolation	Geekology	Curtin University
Consolation	Prometheus	Unimas

Plugfest 2.0 (AIOT)

Workshop #1: 24 – 28 August 2020 (Repeat sessions on 3-4 Sep 2020)
Workshop #2: 19 – 22 Oct, 26-27 Oct 2020

Background

- AI-based Machine Vision system
- Delivery via live online platform
- Half-day sessions over 7-day period (24th - 28th Aug & 3rd -4th Sep) and 6-day period (19th - 22nd, 26th & 27th Oct 2020)
- Participants are expected to complete a Proof of Concept (POC) within 3~6 months of event

Participants

- 25 companies, 2 pax per company over the two workshops

Delivery Partner

- PSDC, Penang
- Supported by Intel Malaysia and Axiomtek Taiwan

Plugfest 1.0 (IIOT – Training of Trainers)

Workshop : 17-19 November 2020

Background

- conduct training for technology centres
- to proliferate certified and competent trainers in IIoT 3-day face-to-face sessions on 17-19 November 2020
- the expected outcomes and deliverables from the participating technology centres are to schedule and conduct trainings on IIoT for companies in 2021-2022

Participants

- Targeted 25 technology centres all over Malaysia

Delivery Partner

- PSDC, Penang
- Supported by Intel Malaysia and Axiomtek Taiwan

News coverage on Industry4.0

News coverage on Industry4.0

Seizing Opportunities by Embarking Industry 4.0 Journey in this New Normal

By implementing Industry 4.0 can help to improve the competitive advantage of a manufacturing company in this COVID-19 situation.

The E&E Productivity Nexus (EEPN) established under MPC has driven many initiatives over the years and is an example of a good partnership where the private and public sector work together to drive change. One of the key strategies is "Creating Value towards Industry 4.0 Ecosystem".

Unlock value of I4.0 by Accelerate adoption of I4.0 & Focus on Artificial Intelligence (AI) Technology to help SMEs to develop capabilities and strategies on how to grow their business using Industry 4.0.

SI 4: Enabling Ecosystem

SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations
SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness
SI 4.3 Collaborate with research institutions and COEs by helping to bring the latest technology to SMEs for commercialisation

SI 4.3

SI 4.3 Collaborate with research institutions and COEs by helping to bring the latest technology to SMEs for commercialization
- Help to evaluate R&D outcome from local research institutions and COEs by working with CREST, MOHE etc.
- Help SMEs to develop new products and services (areas of applications), leveraging on technologies made available by local research institutions

SI 4.1

SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations
- Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations
- Assist the growth of the E&E Industry
- Provide strategic guidance and support to local companies and high-tech start-ups
- Be a strategic think tank for the future of Malaysia's E&E industry
- Facilitate shared labs and tools to lower the cost of D&D's barrier to entry e.g. EDA and M-CAD tools

SI 4.2

SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness
- Drive I4.0 related technologies e.g. data analytics. machine learning, AI etc
- Establish Malaysia's E&E as an Advanced Manufacturing Hub
- Strengthen I4.0 technology centers to accelerate implementation of I4.0 initiatives
- Continue to assist SMEs to jumpstart I4.0 journey e.g Plugfests
- Nurture local I4.0 solution providers to innovate and develop local I.40 solutions

Strategic Initiative	Action Items	KPI 2021	Measure
ENABLE AND FORGE A ROBUST E&E ECOSYSTEM	**SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM** **SI 4.1 Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations** **Description:** • Establish NCER Technology and Innovation Center (NTIC) to drive technology development & innovations • Facilitate start ups and commercialization and growth of E&E companies • Collaborate and provide input to E&E industry strategies and roadmaps • Facilitate shared labs and tools to lower the cost of D&D's barrier to entry e.g. EDA and M-CAD tools **Programmes/Activities** • To advise on the overall framework and strategies. • To be involved in the definitions of the details of programs and business planning. • To provide inputs and feedback on requirements of E&E industry (technical and non-technical expertise) • To participate in nurturing local companies to be global champions, by providing the necessary eco-systems • To partner in promotional programs, out-reach and referrals programs • To assist in creating a talent pool to support industry's growth **Lead by NCIA, supported by EEPN**		To be aligned with NCIA KPI for 2021 later

SI4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
Workplans for 2021

Strategic Initiative	Action Items	KPI 2021	Measure
ENABLE AND FORGE A ROBUST E&E ECOSYSTEM	**SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM** **SI 4.2 Promote adoption of I4.0 technology to improve global competitiveness** **Description** • Drive I4.0 related technologies e.g. data analytics, machine learning, AI etc • Strengthen I4.0 technology centers to accelerate implementation of I4.0 initiatives • Continue to assist SMEs to jumpstart I4.0 journey e.g Plugfests • Work with global technology companies to help local solution providers to innovate and develop I4.0 solutions **Programmes** 1. Organise a series of AI Webinar 2. Organise Plugfest, conducted by technology centres for local companies 3. Organise Hackathon for university and college students (East and West Malaysia) 4. Global technology companies to help local solution providers to innovate and develop I4.0 solutions **Lead by EEPN, supported by universities and industry players**	4 5 2 1 25	# series of AI Webinars # plugfest / training on I4.0 conducted # hackathon (East and West Malaysia) # global technology company identified # local solutions providers get help

SI4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM
Workplans for 2021

Strategic Initiative	Action Items	KPI 2021	Measure
ENABLE AND FORGE A ROBUST E&E ECOSYSTEM	**SI 4: ENABLE AND FORGE A ROBUST E&E ECOSYSTEM** **SI 4.3 Collaborate with research institutions and COEs by helping to bring the latest technology to SMEs for commercialization** **Description** • Help to evaluate R&D outcome from local research institutions and COEs by working with CREST, MOHE etc. • Help SMEs to develop new products and services (areas of applications), leveraging on technologies made available by local research institutions • Examples: advanced packaging, batteries for electric cars, applications based on 5G technologies etc **Workplan for Research Centers** • Focus on 'Applied Research' rather than 'Fundamental Research', to shorten commercialization turn-around cycle • Seek SMEs' feedback on their problem statements and future focus; and channel these challenges to Research Centers • Enroll universities researchers to be inside Industry for ~ 1 year to kick start research projects. Researchers can continue with projects when they return back to universities **Lead by EEPN, supported by research centres**	2	# Number of research institutes identified and in partnership

MALAYSIA PRODUCTIVITY CORPORATION

DRIVING PRODUCTIVITY
OF THE NATION

KS#4 Update to GC Meeting 6/2020
Chair: Mr. KC Lau (Inari Amertron)
Co-Chair: En. Zaky Moh (SME Corp)

Via EEPN Zoom | 5th November 2020 | 10:30am ~ 1:00pm

KS#4 Work Plan 2020 (realigned)
Strengthening SME Development

Key Strategies	Action Items	KPI 2020	Measure
Strengthening SME Development	1. Original is 'Preparing SMEs towards public listing exercise". Re-aligned focus to support SMEs COVID-19 recovery. <u>Business Recovery Webinars</u> to help SMEs get back on their feet Status: 3 Webinars organized • Rethink, Reinvent, Revitalize In The New Normal (13 May 2020) • Making The Climb Towards Recovery (18 May 2020) • Growing Business Against The Tides of Disruption (28 May 2020) Next Steps: • Will plan for virtual seminar on public listing, once situation is normalized **Lead by EEPN with Private Sector**	3	# of Webinars organized **① COMPLETED Business Recover Webinars**
	2. Organize <u>E&E Virtual Advisory Clinics (EEVAC)</u>. Dedicated one-on-one virtual consultation sessions (clinics) to diagnose companies' challenges and to explore strategies and recommend action plans Description: • Free clinic sessions, 'first come first serve' basis • Four areas of focus: Business Operations and HR challenges, Factory Operations & I4.0, Financial Challenges, and Export Opportunities Status & Next Steps: • EEVAC was launched by Dato' Seri SH Wong on 28th May 2020 • Applicants filtering process, and matching with Industry Advisors pool, in progress **Lead by EEPN, supported by MPC**	100	# of applicants served **② Virtual Advisory Clinics (EEVAC) 16 sessions completed. Program closed for now**

KS#4 Work Plan 2020 (realigned)
Strengthening SME Development

Key Strategies	Action Items	KPI 2020	Measure
Strengthening SME Development	3. Nurture local I4.0 SME solution providers to provide <u>E&E Mentoring for Industry 4.0</u> (EEMI4.0) to SMEs in the I4.0 journey; and to create an ecosystem to assist local companies **③** Description**:** • Local SMEs to be '<u>creators</u>' of I4.0 technologies (rather than being a '<u>user</u>' of I4.0) • Encourage SMEs to design and develop their local 'product suites' (solution system) Status & Next Steps: • Expand from Elliance's assistance of 4 local companies • Next step is to collaborate with two more local I4.0 solution providers to assist local companies **Lead by EEPN, supported by MPC**	**E&E Mentoring for Industry 4.0 (EEMI4.0) On-going** 20	# off business coached
	4. Establish a <u>Virtual Market Place Project (VMPP)</u> to promote Malaysian E&E suppliers to overseas companies **④** Description: • VMPP is crowd-funded by the local E&E Industry, as founding sponsors • Appoint a Solution Provider to develop and maintain VMPP, as turnkey project Status & Next Steps • 100% completion as of today (VMPP Go-Live by Q4 2020) • Fund raising exercise and suppliers' registration is still in progress • It will be known as E&E Marketplace Malaysia (EEMM) moving forward **Lead by EEPN and Private Sector**	**Virtual Marketplace On-going** 1	Establish portal for virtual marketplace by 1H 2020

2 MPC's Business Virtual Advisory Services Model

feedback

Business Recovery Webinars
1

1

2 E&E Virtual Advisory Clinics (EEVAC)

2

3

3 E&E Mentoring for Industry 4.0 (EEMI4.0)

4 Virtual Marketplace & Networking

4

5

Productivity Training & Measurement

feedback
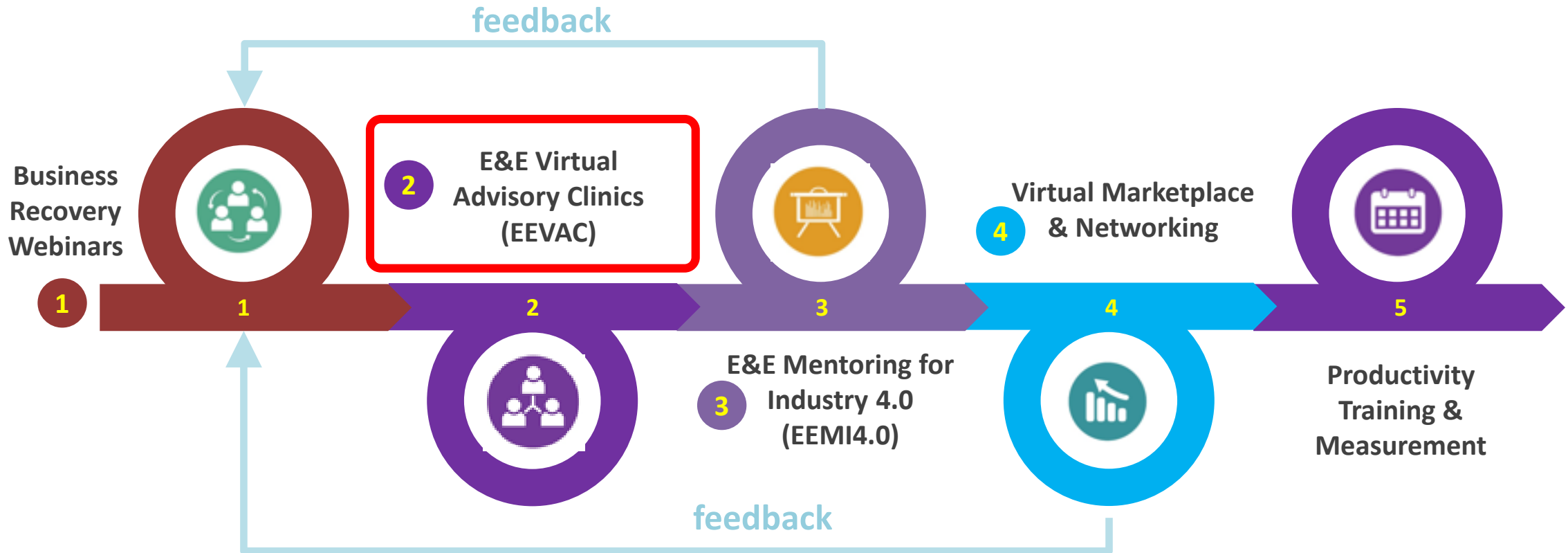
KS#4's adoption of MPC's Business Virtual Advisory Services Model

Summary of EEVAC sessions

Summary of applications & sessions

- Total successful applications = 16 companies (15 SMEs & 1 MNC)
- Total completed sessions = 16 companies

Summary of EEVAC sessions

Screen shots of sessions
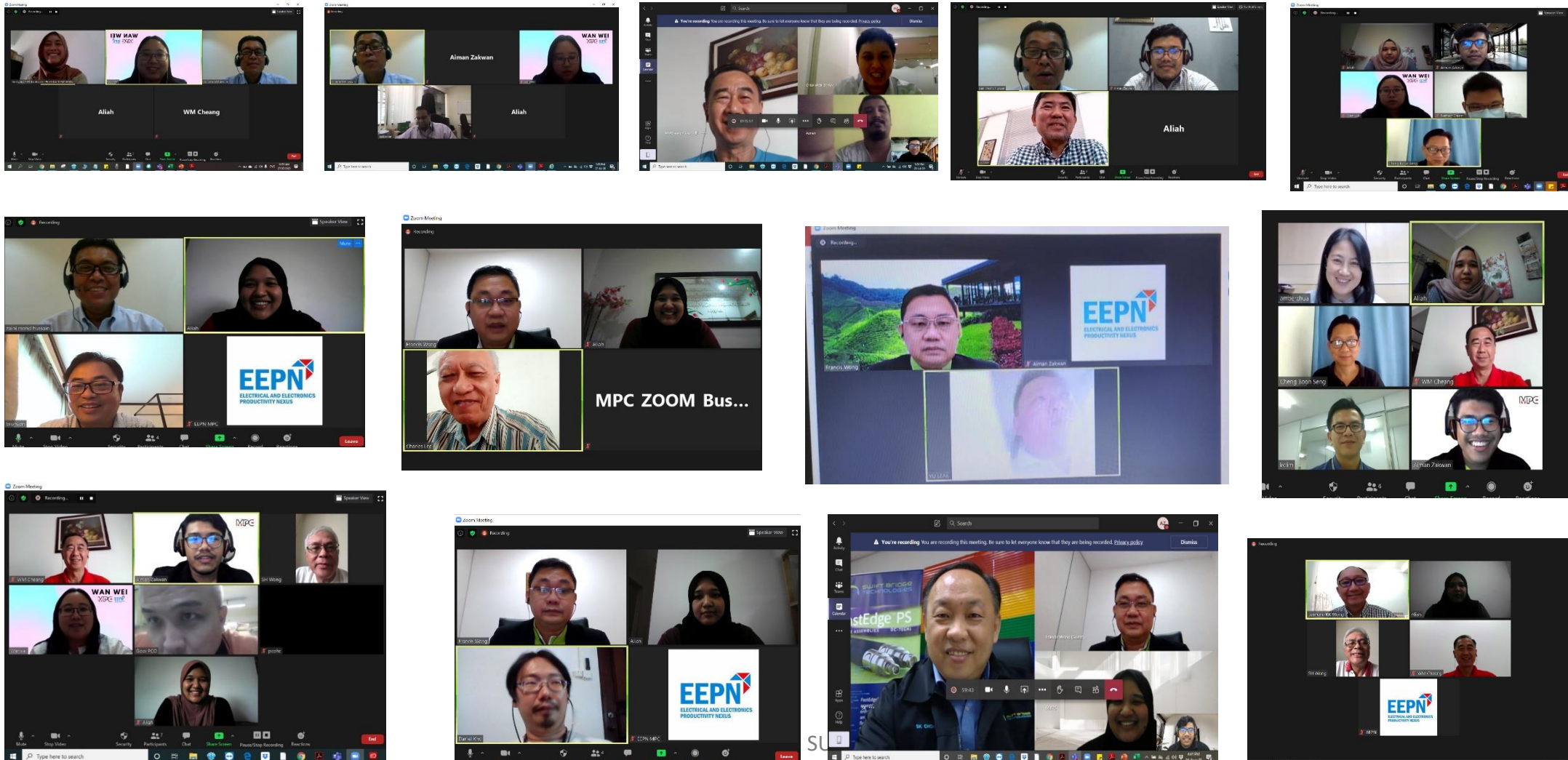
Virtual Market Place Portal (VMPP)
Will be known as EEMM
④ Features

- Search engine based on multiple keywords search (can be > 3 keywords) Pattern Matching
- Filters available to further fine-tune search results
- Users need to register if they want addition information (need to comply with data protection act)

- Single portal with database for all main E&E categories e.g. Semicon, EMS, LED, Solar, Industrial Electronics, Automation, IOT etc.
- Plus sub-categories breakdown
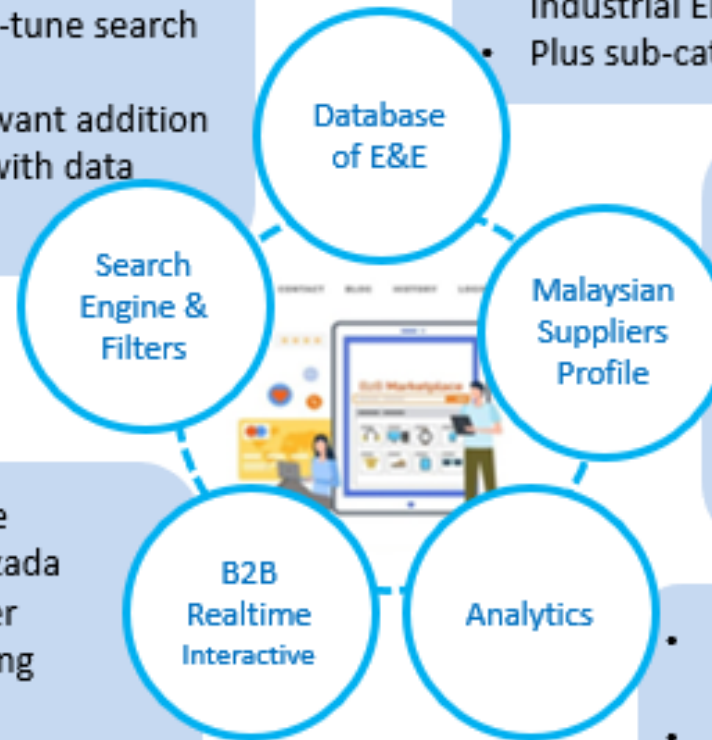
- Each Malaysian supplier can showcase their core products and services and focused areas.
- Can upload supporting slides, pictures and graphics
- 'View Contact Details' button to ease overseas companies to contact Malaysian supplier

- B2B solution with Realtime interactive e.g. Grab or Lazada
- Auto-notification whenever Malaysian supplier are being searched or viewed
- Not a gateway for payment transactions

- Data analytics of searches conducted by overseas companies
- Providing market intelligence to Malaysian government.

Database of E&E

Search Engine & Filters

Malaysian Suppliers Profile

B2B Realtime Interactive

Analytics

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Virtual Market Place Portal (VMPP)

④ Working Committee & Fund raising update

VMPP Working Committee

- 5 working Committee meetings held since June 2020
- Advisor: Dato' Seri Wong Siew Hai
- Chairperson: Mr. Noorazidi Che Azib (Inari Technology)
- Members:
    1. Mr. Zaky Moh (SME Corp)
    2. Mr. Mohd Mazlan Mokhtar (MIDA)
    3. Mr. Farid Wajidi Mat Yusoff (USAINS Holding)
    4. Ms. Lee Wan Wei (MPC)
    5. Mr. WM Cheang (EEPN Rep)

- Other government agencies in attendance
    1. Matrade
    2. MDEC

Funding raising update (as at 19th October 2020)

- 100% Industry funded; RM10K per company
- Companies confirmed sponsorship = 27 companies

EEMM
ELECTRICAL AND ELECTRONICS
MARKETPLACE MALAYSIA

www.eemm.com.my

Virtual Market Place Portal (VMPP)

4 Portal screenshots samples
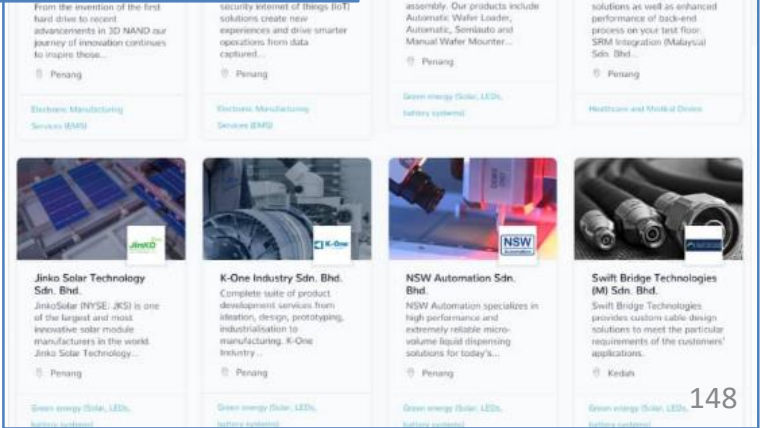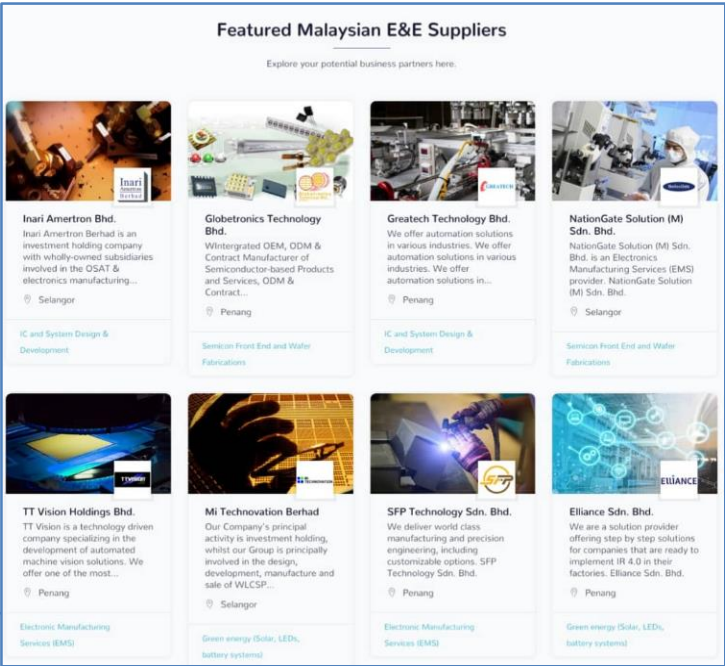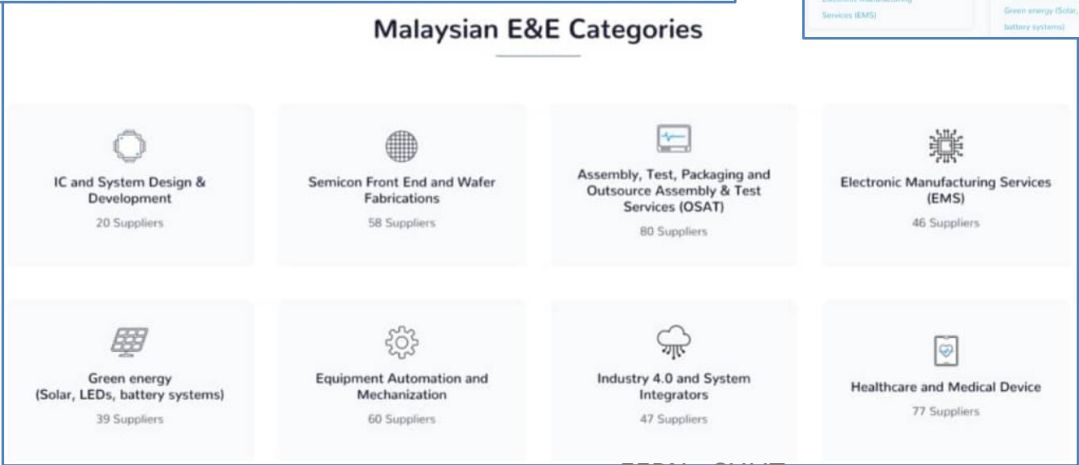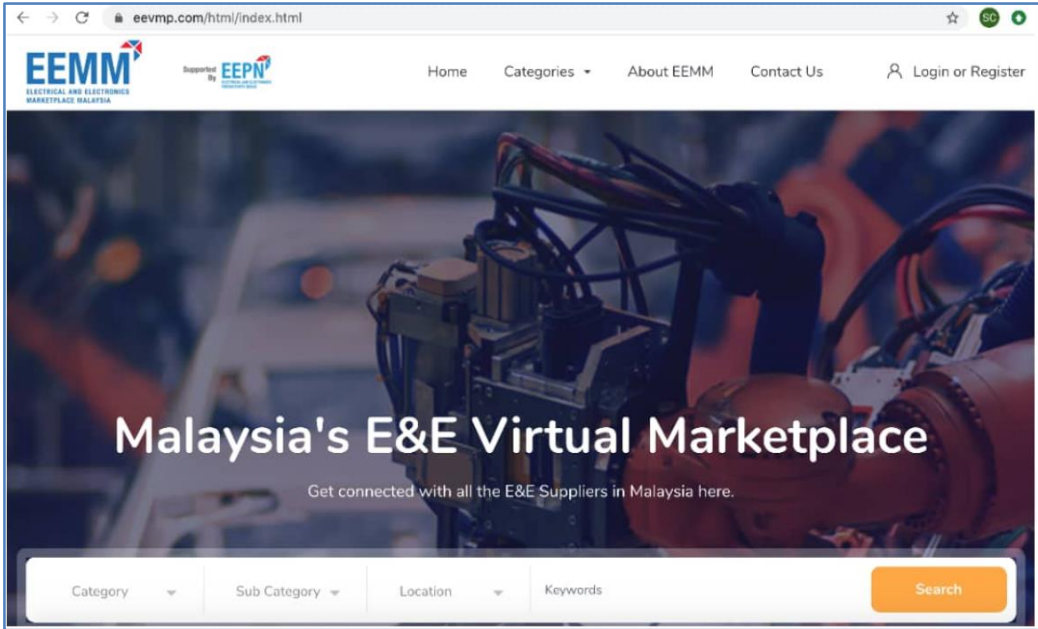
4 Timelines & Go-Live date
Milestone-based progressive payment

4th payment approved on 19th October 2020

TASK NAME	START DATE	END DATE	DURATION (WORK DAYS)	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 16	WEEK 17	WEEK 18	WEEK 19
Design and Setup																
Planning	6/1	6/5	5													
DB Design	6/5	6/9	3													
DB Setup	6/8	6/9	2													
Project Setup	6/9	6/10	2													
Backend API Development																
Develop API Server	6/10	6/12	3													
Data Analytic data collection setup	7/20	7/24	5													
Testing	6/12	6/12	1													
Frontend Development																
User Interface (UI) Designing	6/8	6/28	21													
Login Page	6/29	6/29	1													
Sign up Page	6/30	6/30	1													
Home Page	7/1	7/2	2													
Supplier Profile Page	7/3	7/6	2													
Supplier Dashboard Page	7/7	7/9	3													
Contact Page	7/10	7/10	1													
Visitor Profile Page	7/13	7/13	1													
Search Function	7/14	7/17	4													
Intranet - Email Blasting Function	7/20	7/23	3													
Intranet - Profile Approval	7/24	7/27	2													
Big Data Collection Function	9/21	10/5	10													
Intranet- Data Analytics Report	10/6	10/16	10													
Testing																
System Testing	7/27	10/16	56													
System Debugging	7/27	10/16	56													

1st payment - RM14,400 (30%)
Upon signing agreement

2nd payment - RM14,400 (30%)
50% project completion

3rd payment - RM16,800 (35%)
75% project completion

4th payment, RM2400 (5%)
100% project completion

Go Live! Q4 2020

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SI2: NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS
Workplans for 2021

Strategic Initiative	Action Items	KPI 2021	Measure
NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS	**SI 2.1 Facilitate local companies to embrace emerging technologies, design and innovation** <u>Descriptions</u> • Lower the risks for local companies to invest in emerging technologies • Local company's mindset with 'buy local' with respect to design, products, equipment and services ✓ How to ensure sustainability • Promote the creation of complementary product/services **Lead by EEPN with Private Sector**	5	# companies showcasing their D&D activities

Strategic Initiative	Action Items	KPI 2021	Measure

NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS	**SI 2.2 Expand the waterfall (spillover) model to more tier 1 local companies, and to spillover to tier 2 companies**
	
	Description
	• Preparing SMEs towards Public Listing exercise. Using the SME development waterfall model, hand-holding short-listed SMEs
	• To identify the 4 potential companies in the IPO pipeline
	• Conduct gap analysis on potential Tier 2 companies
	• Implement new enablers
	  ✓ Strengthening the financial position of local companies
	  ✓ Facilitating affordable SME parks at strategic locations
	
	Co-lead by EEPN and Private Sector
	
	MNCs
	Tier 1 Local Companies
	Tier 2 Local Companies
		4	# tier 2 companies in the pipeline for listing

SI2: NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS
Workplans for 2021

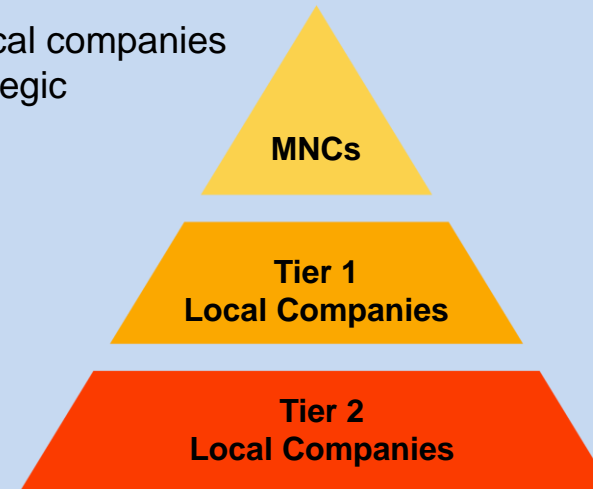| Strategic Initiative	Action Items	KPI 2021	Measure

NURTURE LOCAL COMPANIES TO BE GLOBAL CHAMPIONS	**SI 2.3 Enhance local companies' global visibility through collaborations and partnerships**
	
	(i) Assist local companies to assess global market by developing a EEMM (E&E Marketplace Malaysia portal which is the Virtual Market to promote Malaysian E&E suppliers to overseas;
	
	<u>Descriptions</u>
	
	- Go live on November 2020
	- Focus on marketing and promotion in 2020/2021
	- Leverage MATRADE trade commissioners, independent market linkers and investment consultants to expand market outreach
	    - US – Penny from BigWau
	    - China – leveraging through market linkers and consultants
	    - Europe - tbd
	
	Lead by EEPN and execute by EEMM committee
		500	# of companies enrolled in EEMM

KS#4: Growing existing investors
Challenges and Opportunities

> " It is cheaper to retain an existing investor than to win a new one "

Investment Promotion

Investment Start-up
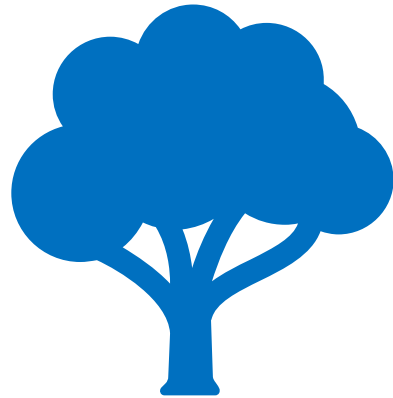
Investor Ramp-Up X10 times

Challenges:
- Need to assist investors to scale up
- Need a support mechanism, with authorities

Possible Focus Areas:
- Bridging fund for expansion
- Land
  – Free land for first 5 years?
  – After 5 year (IPO?), pay nominal cost with terms and conditions
  – With commitment to build on near-by land
- Building
  – Build and Lease, with conditions
  – More SME parks
- Infrastructures and Utilities
- Supply Chain ecosystem
- etc

PRODUCTIVITY

EEPN NGC Meeting@5 Nov 2020

ELECTRICAL & ELECTRONICS contribution to the Economic Growth

GDP
(Gross Domestic Products)
(2019: RM1,421,454 million)

- **Agriculture** *(7.1%)*
- **Mining & Quarrying** *(7.1%)*
- **Manufacturing** *(22.3%)*
- **Construction** *(4.7%)*
- **Services** *(57.7%)*

Manufacturing breakdown:

- **Vegetable and animal oils & fats and food processing** *(9.6%)*
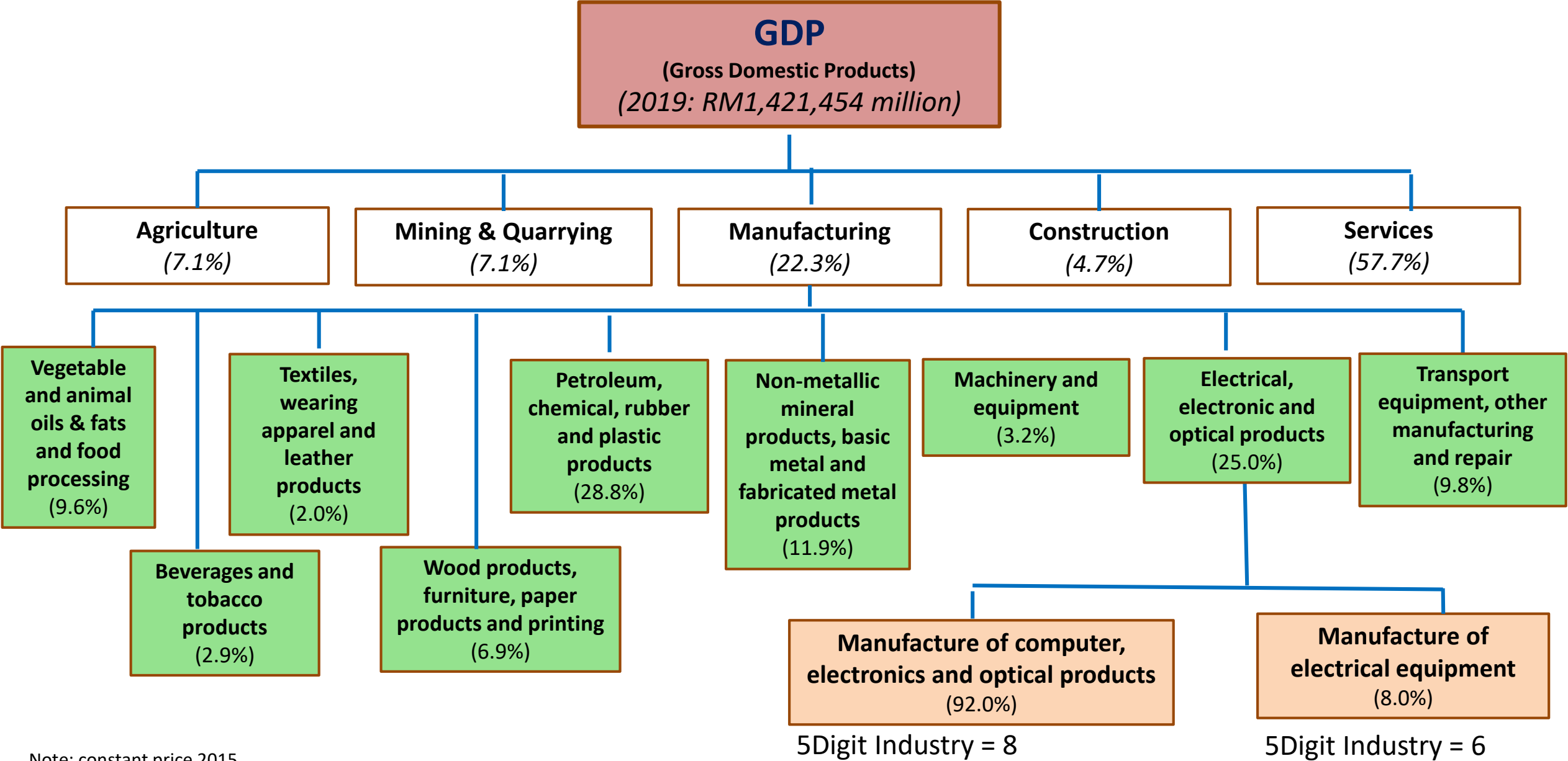- **Textiles, wearing apparel and leather products** *(2.0%)*
- **Beverages and tobacco products** *(2.9%)*
- **Wood products, furniture, paper products and printing** *(6.9%)*
- **Petroleum, chemical, rubber and plastic products** *(28.8%)*
- **Non-metallic mineral products, basic metal and fabricated metal products** *(11.9%)*
- **Machinery and equipment** *(3.2%)*
- **Electrical, electronic and optical products** *(25.0%)*
- **Transport equipment, other manufacturing and repair** *(9.8%)*

Electrical, electronic and optical products breakdown:

- **Manufacture of computer, electronics and optical products** *(92.0%)*
  5Digit Industry = 8
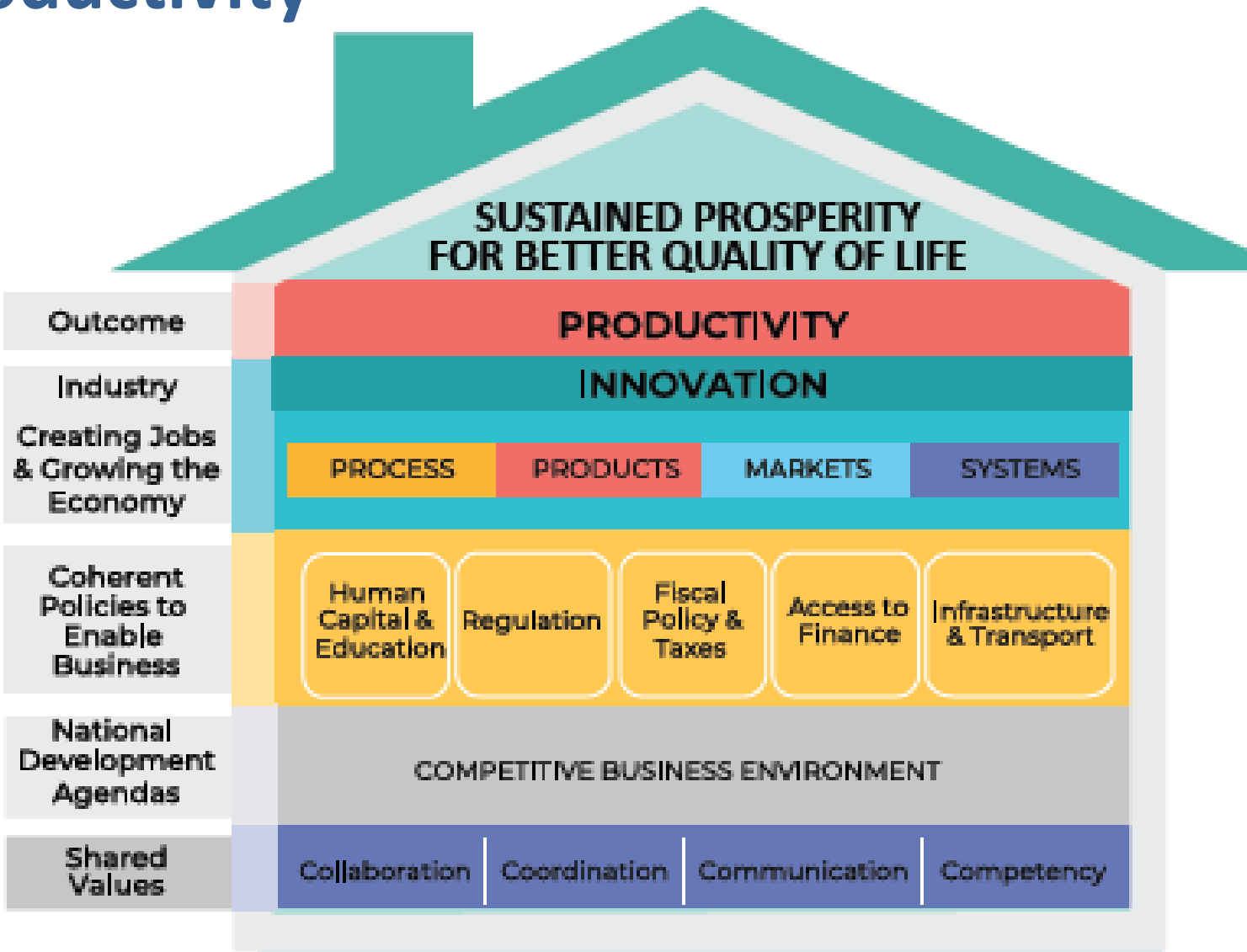- **Manufacture of electrical equipment** *(8.0%)*
  5Digit Industry = 6

Note: constant price 2015
Source: Labour Productivity Second Quarter Report 2020, Annual GDP 2019, DOSM

Productivity
Concept

Gross Domestic Product

Employment

Productivity

Labour Productivity (LP)

$$LP = \frac{\text{Added Value}}{\text{No of Employee or hours worked}}$$

Capital Intensity (CI)

$$CI = \frac{\text{Fixed Asset}}{\text{Added Value}}$$

Capital Intensity

Multi-factor Productivity

Multi-factor Productivity (MFP)

MFP = Added Value – change in combine inputs (capital, labour, energy, intermediate input)

Private Investment Growth

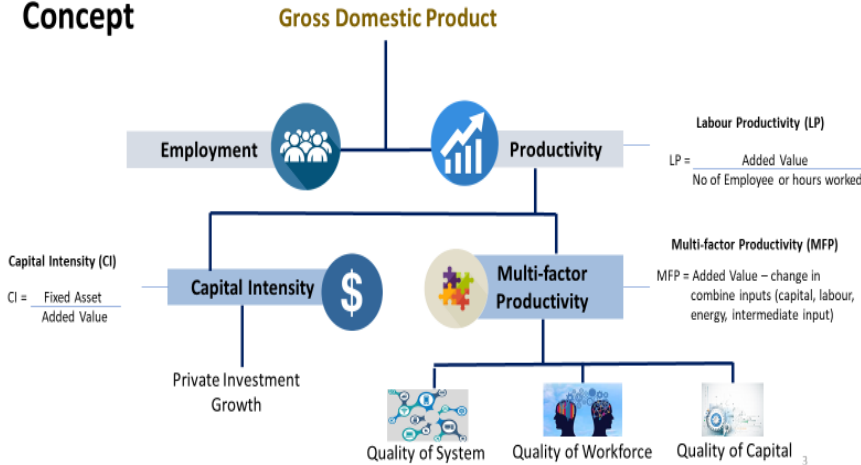Quality of System

Quality of Workforce

Quality of Capital

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House of Productivity

Productivity Concept

MPB / MP Productivity Nexus - EEPN

Manufacture of computer, electronics and optical products

Manufacture of electronic components and boards

Manufacture of computers and peripheral equipment

Manufacture of communication equipment

Manufacture of consumer electronics

Manufacture of measuring, testing, navigating and control equipment; watches and clocks

Manufacture of irradiation, electromedical and electrotherapeutic equipment

Manufacture of optical instruments and photographic equipment

Manufacture of magnetic and optical media

Manufacture of electrical equipment

Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus

Manufacture of batteries and accumulators

Manufacture of wiring and wiring devices

Manufacture of electric lighting equipment

Manufacture of domestic appliances

Manufacture of other electrical equipment

Thank You

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 MPC TIP

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