

ENGINEERS BOARD OF KENYA

REPORT ON BENCHMARKING VISIT TO MALAYSIA

MAY 2023

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LIST OF ACRONYMS/ ABBREVIATIONS

AAET ASEAN Academy of Engineering & Technology

BEM Board of Engineers Malaysia

EAC Engineering Accreditation Council

EAD Engineering Accreditation Department

EBK Engineers Board of Kenya

ETAC Engineering Technologists Accreditation Council

IEM Institution of Engineers Malaysia

OBE Outcomes Based Engineering Education

PHB Proton Holdings Berhad

SETM Success Electronics & Transformer Manufacturer Sdn. Bhd.

UM Universiti Malaysa

WA Washington Accord

FOREWORD

An eight-member delegation from the Engineers Board of Kenya embarked on a

benchmarking visit to the Board Engineers of Malaysia from 22nd – 26th May 2023.

The main objectives of this visit was to establish the standards of accreditation of

engineering programmes in preparation for acceding to the Washington Accord.

The visit was hosted by the Board of Engineers Malaysia and the High Commission of the

Republic of Kenya to Malaysia with various organizations and university visited during the

tour.

The Board would like to acknowledge the following organizations for contributing to the

success of the trip: - High Commission of the Republic of Kenya, Board of Engineers Malaysia,

Engineering Accreditation Council, Proton Holdings Berhad (PHB), ASEAN Academy of

Engineering and Technology, Universiti Malaya, IKRAM Construction and Success

Electronics & Transformer Manufacturer Sdn Bhd.

This report outlines key activities of the visit and highlights the key outcomes and lessons

learnt. A key outcome of the visit is that the Board aligned the accreditation of engineering

programs towards acceding to Washington Accord based on the Board of Engineers

Malaysia policies, governance structures and procedures. The Board commits to

implement the Bottom-up Economic Transformation Agenda by the Government to

leverage engineering capability for socio-economic transformation.

Eng. Margaret N. Ogai, CE, FIEK

REGISTRAR/CHIEF EXECUTIVE OFFICER

ENGINEERS BOARD OF KENYA

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ACKNOWLDGEMENTS

The Board extends its sincere appreciation to the Government of Kenya through the Cabinet Secretary, Ministry of Roads and Transport and the Principal Secretary, State Department for Roads for the continued support and for facilitating the benchmarking visit.

Our special thanks to H.E. the Ambassador of Kenya to Malaysia, Amb Francis Muhoro and the High Commission Staff for providing us with logistical support during the visit.

We owe our deep gratitude to the Board of Engineers Malaysia (BEM) and the Republic of Kenya High Commission to Malaysia for organizing and hosting the benchmarking visit. They both contributed substantially to the success of our visit, and we thank them most sincerely for the gracious hospitality and welcome extended to us.

The Board appreciates Ir. Prof. Abdul Aziz, assigned mentor by BEM, for taking his time to attend the meetings and accepting the invitation to come to Kenya to carry out training of the Board's appointed assessors in June 2023.

Finally, the Board extends its appreciation to the Engineering Accreditation Council, Engineering Technology Accreditation Council, Proton Holdings Berhad, ASEAN Academy of Engineering and Technology, Universiti Malaya, IKRAM Construction, Success Electronics & Transformer Manufacturer Sdn Bhd for receiving us and making the benchmarking visit a success.

EXECUTIVE SUMMARY

The Engineers Board of Kenya embarked on a benchmarking visit to Malaysia from 22nd – 26th May 2023. The main objectives of the visit was to establish the standards of accreditation of engineering programmes in preparation for acceding to the Washington Accord.

This report summarizes key activities, outcomes, lessons learnt and next steps in the six organizations visited during the benchmarking tour.

As highlighted in this report, the benchmarking visit to Malaysia was a success. The five days of knowledge sharing meetings in Kuala Lumpur, were highly informative and valuable to the members of the EBK delegation. The visit fostered cooperation and knowledge sharing between Kenya and Malaysia.

Further, the benchmarking visit provided a unique opportunity for EBK to look closer at the greater progress Malaysia has made to achieve global success anchored on excellence in engineering and the document lessons that Kenya can borrow from this journey.

Highlighted below is a summary of key outcomes from the visit.

- Partnerships and Collaborations with BEM: EBK and BEM jointly agreed to further discuss areas of mutual collaboration that would culminate into signing of an MOU.
- Washington Accord: As the Board progresses in the journey to attain provisional signatory status to the Washington Accord, the Engineering Accreditation Council of Malaysia has committed to supporting the Board's bid for provisional signatory status by 2024 by providing mentorship, training, standards and guidelines. EAC is the competent authority on matters accreditation in Malaysia.
- Engineering Education: Universities offering engineering education in Malaysia have all transitioned to OBE and are all accredited by the EAD. The EAD has a good working relationship with the universities.
- Accreditation of Engineering Programmes: The Board needs to establish an EAC
 and put in place structures, processes, systems and documentation that support
 the accreditation function. All accreditation systems and process should be
 automated to ensure the procedures are seamless. Continuous training for the

team of assessors is critical in keeping up with the WA standards for engineering education.

- Regulator-Academia Linkages and Collaborations: The delegation noted the importance of collaboration between the Regulator and Academia. This relationship serves to ensure there is quality in the engineering pipeline, from engineering education to practice.
- **Technology:** ICT and digital technologies are becoming increasingly important for achieving rapid industrial transformation.

1.0. CHAPTER ONE: INTRODUCTION

1.1. Background of the Benchmarking Visit

Hosted by the Board of Engineers Malaysia (BEM), an eight-member delegation of the Engineers Board of Kenya undertook a benchmarking visit to Malaysia from 22nd to 26th May 2023.

1.2. Rationale for Benchmarking Destination

Malaysia has, in a relatively short period of time, transformed its economy integrating engineering, technology and innovation into every aspect of their development trajectory. It is a signatory to the Washington Accord and has transformed its engineering education to Outcome Based Education. Malaysia's attributes this success to good leadership and governance strategies and continuous improvement.

It is against this background that the country was considered the best destination for the accreditation benchmark visit.

1.3. Objectives of the Benchmarking Visit

The purpose of the benchmarking visit was to establish the standards of accreditation of engineering programmes in preparation for acceding to the Washington Accord.

1.4. Visiting Team Delegation

The visiting team was drawn from the Board and the Senior Management of the Engineers Board of Kenya and comprised of:

| 1. | Eng. Erastus Mwongera, RCE, FIEK, CBS | Board Chairman |
|----|---------------------------------------|-------------------------------|
| 2. | Eng. Julia Ondeyo, PE | Board Member |
| 3. | Eng. Prof. Sylvester Abuodha, CE | Board Member |
| 4. | Mr. Daniel Mutua | Board Member |
| 5. | Mr. Evans Atambo | Board Member |
| 6. | Eng. Nicholas Musuni, CE | Head, Quality Assurance, SDOR |
| 7 | Eng. Margaret Ogai, CE | Registrar/CEO |
| 8. | Eng. Grace Onyango, PE | Director, Capacity Building & |
| | | Accreditation |

1.5 Arrival in Malaysia

The delegation arrived at Malaysia's Kuala Lumpur International Airport on 21st May 2023. The delegation stayed at Sunway Putra Hotel for the entire duration of the visit.

1.6. Itinerary of the Benchmarking Visit

The itinerary for the five-day benchmarking visit was as follows:

Day 1: | Monday, 22nd May 2023

- Courtesy Call to Board of Engineers Malaysia (BEM)
- Courtesy call to High Commission of the Republic of Kenya in Kuala Lumpur, Malaysia

Day 2: | Tuesday, 23rd May 2023

Courtesy call to Engineering Accreditation Council (EAC) and Engineering Technology
 Accreditation Council (ETAC)

Day 3: | Wednesday, 24th May 2023

- Site visit to Proton Holdings Berhad (BHD)
- Courtesy call to ASEAN Academy of Engineering and Technology

Day 4: | Thursday, 25th May 2023

- Visit to University Malaya (UM)
- IKRAM (Construction)

Day 5: | Friday, 26th May 2023

- Site visit to Success Electronics & Transformer Manufacturer Sdn Bhd
- Wrap up meeting with Board of Engineers Malaysia (BEM)

2.0. CHAPTER TWO: DETAILS OF THE BENCHMARKING VISIT

The programme was discussed and developed jointly by the Republic of Kenya High Commission in Kuala Lumpur, Malaysia, EBM and EBK. Eight organizations were visited during the benchmarking visit.

This Chapter highlights the key activities undertaken in each of the organization visited.

2.1. Monday, 22nd May 2023

2.1.1. Courtesy Call to Board of Engineers Malaysia (BEM)

The delegation was received at the Board of Engineers Malaysia by a Board Member, YBhg. Datuk Ir. Mohd Adnan bin Mohd Nor.

In his introductory remarks, Ir. Adnan welcomed the Board to Malaysia and expressed the Board's delight to host the EBK and committed to ensuring that the visit was a success. The Chairman of EBK introduced the delegation and highlighted the objectives of th visit. He commended the BEM for their warm welcome and assured them of the Board's commitment to working with the BEM in various areas of collaboration.

In the meeting, the following was discussed: -

- The mandate of the EBK by the Registrar/CEO
- The roles and functions of BEM
- The disciplinary processes and procedures of BEM which included the amendment of laws, formation of committees (Investigation Committee and the Disciplinary Committee in which the superintendent of the police sits in) and the appeals board (which a judge sits in).
- BEM's journey to acceding to the Washington Accord i.e. the challenges, key success factors and buy-in from universities
- The Engineering Accreditation Council (EAC) and its relationship with the BEM
- Accredited checkers whose role is limited to structures and geotechnical designs and whose is role is enshrined in the Land & Drainage Act
- Bridging program for technologists and technicians
 - Gaps of knowledge

BEM Gap Programme

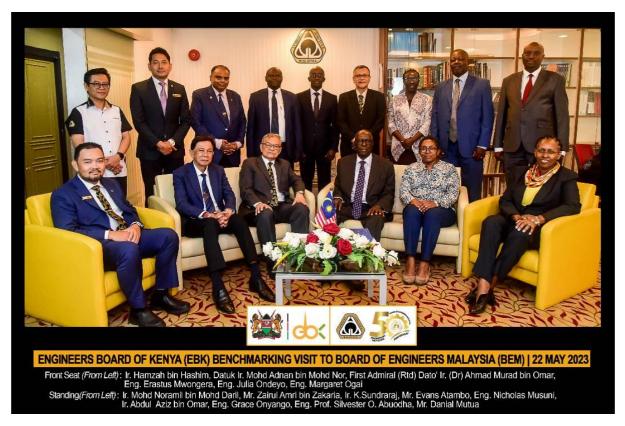


Figure 1: Visit to BEM

2.1.2. Courtesy call to High Commission of the Republic of Kenya in Kuala Lumpur, Malaysia

The delegation was received at by H. E. Amd. Francis N. Muhoro and some of the staff from the Embassy who were key in preparation of the programme of the visit.

Amb. Francis Muhoro welcomed the Board to Malaysia and made a presentation that covered the following: -

- Diplomatic relations between Kenya and Malaysia
- Overview of Malaysia's economy
- Investment opportunities
- Manufacturing and tourism sectors

He concluded by commending the Board for involving the High Commission during the planning of the visit and also for making the courtesy call.

The Chairman of EBK thanked the Ambassador for the warm welcome and gave remarks
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that covered the following: -

- Overview of the EBK Mandate, Governance Structure, Functions
- Laws in place that govern the engineering profession
- Mutual Recognition Agreements
- Trade in Services
- Journey to Washington Accord

The Registrar/CEO thanked the Ambassador for welcoming the Board and commended the staff from the High Commission for connecting the Board with various organizations of interest for the Board to visit during the week long benchmark visit.

She highlighted the objectives of the visit to the Ambassador.

The meeting concluded with the Ambassador challenging the Board to ensure that engineers are good global citizens and to create legacies for graduate engineers.

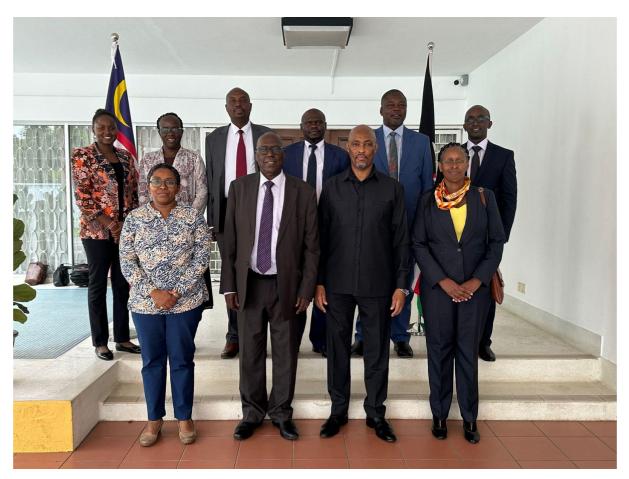


Figure 2: EBK Delegation at the Kenya High Commission in Kuala Lumpur, Malaysia

2.2 Tuesday, 23rd May 2023

2.2.1 Courtesy call to Engineering Accreditation Council (EAC) and Engineering Technology Accreditation Council (ETAC)

The delegation was received at the Engineering Accreditation Council by a team from the Engineering Accreditation Department led by the Director, Ir. Zairul Amri Zakaria and a Manager, Ms Norhaniza Mohd Noor.

The EAD oversees accreditation of both engineering and technologist education programmes and are therefore report to both the EAC and ETAC.

The presentation from EAD covered the following areas: -

- An overview of Malaysia
- An organogram showing the relationship between BEM and the EAC and ETAC and positioning of the EAD
- BEM Statutory Role according to the Engineers Act 1967 which is to protect the
 public by legislative control so that the practice of engineering, which has a bearing
 on public safety, health and welfare, can only be carried out by registered persons
 i.e. engineers, engineering technologists and inspectors of works.
- Pathways to professional registration
- Engineering Accreditation Council organogram, vision, mission, standards and guidelines, qualifying criteria for accreditation of OBE engineering education programmes, list of accredited programmes
- Engineering Technology Accreditation Council
- Demonstration of the Engineering Accreditation Management System the entire process of accreditation, from receiving the request of accreditation to the decision.
- Composition of the accreditation visiting teams
- Focus of the EAC during accreditation when making decisions
 - Engineering education level is maintained (breadth and depth) with complex engineering problems demonstrable
 - Outcome-based Engineering Education
 - Quality Management System
 - Continual Quality Improvement

- Accreditation Criteria which includes: -
 - Programme Educational Objectives
 - Programme Outcomes
 - o Academic Curriculum
 - Students
 - Academic and Support Staff
 - Facilities
 - o Quality Management Systems
- Consistency of decision making

Throughout the presentation, members discussed the similarities and differences between the two organizations. It was especially noted the thorough processes and procedures that are in place for conducting the accreditation visits. The delegation was informed that all the processes and procedures including the documentation were as per the Washington Accord standards.

It was noted that the EAD had a strong monitoring and evaluation framework which is part of the automated process.

The Director EAD informed members that though Malaysia through the BEM is a signatory to the Washington Accord, there is a periodic review that is done by a team of assessors from the International Engineering Alliance who visit every six years to ensure that the WA standards are being adhered to.

It was agreed that EAD would share the standards, guidelines and other documentation with the delegation.

The Director EAD reiterated the EAD's support to EBK in its journey to acceding to the Washington Accord.



Figure 3: Courtesy call to the Engineering Accreditation Department

2.3 Wednesday 24th May 2023

2.3.1 Site Visit to Proton Holdings Berhad (BHD)

The delegation visited Proton Holdings Berhad (BHD) and after a presentation and some discussions, the delegation was taken to the manufacturing plant for a tour.

Proton Holdings Berhad is a Malaysian automotive company and corporation active in automobile design, manufacturing, distribution, and sales. Proton was established in 1983 as Malaysia's sole national badged car company until the advent of Perodua in 1993. The company is headquartered in Shah Alam, Selangor, and operates additional facilities in Proton City, Perak.

When Proton began manufacturing cars, it elevated Malaysia as the 11th country in the world with the capability to design cars from the ground up. Since the 2000s, Proton has produced a mix of locally engineered and badge-engineered vehicles.

As of 2023, Proton has an overseas presence in Bangladesh, Bermuda, Brunei, Egypt, Iraq, Jordan, Kenya, Mauritius, Mozambique, Nepal, Pakistan, Papua New Guinea, Sri Lanka, South Africa and Zimbabwe. In Kenya, it partners with Simba Corp on Mombasa Road to produce the CKD.

Key to note from the discussion is that PHB is a major employer of engineers in the manufacturing sector and also have programmes to ensure that women engineers are able to join. The organization has also established a university whose main mandate is research and development.



Figure 4: Site Visit to Proton Holdings Sdn Berhad

2.3.2 Courtesy call to ASEAN Academy of Engineering and Technology

The delegation was received at the ASEAN Academy of Engineering and Technology (AAET) by the President Ir Prof. Dato Dr Ewe Hong Tat, members of the Board and Dr. Fok who coordinates the activities of the AAET.

AAET was founded in 2004 and registered with the ASEAN Secretariat as an ASEAN Secretariat-affiliated Civil Society Organization (CSO) in 2007.

AAET's main objective is to contribute combined intellect and experience of its members in academia, government and industry for the economic advancement of the ASEAN region and its people in sustainable manner.

The members of AAET are eminent engineers and technologists from the ten ASEAN member states.

In the past few years, AAET had initiated various programs and activities to increase the awareness on the importance of science, technology and innovation (STI) in the ASEAN region, as well as assisting in promoting the socio-economic development and enhancing the competitiveness of the ASEAN member states. These programs or activities include:

- International Energy Conference (IEC),
- Annual AAET-NAEK Engineering Forum and Roundtable Meeting;
- Annual Green Award:
- Quarterly Distinguished Lecture on promoting the young Technopreneurship and regional sustainable development;
- Annual Engineering, Science, Technology & Innovation (ESTI) Design/Essay
 Competition;
- Annual Kuala Lumpur Engineering Science Fair (KLESF);
- Creating an innovative culture for the young generation in ASEAN region.

The President of the AAET shared with the delegation a publication for young children on Science, Technology and Innovation that can be used to pique their interest in the field and the Constitution of the AAET.



Figure 5: Visit to ASEAN Academy of Engineering & Technology

2.4 Thursday, 25th May 2023

2.4.1. Visit to Universiti Malaya

The delegation visited Universiti Malaya (UM) and were received by the Dean, School of Engineering, Prof. Ir. Dr. Kaharudin Dimyat and the Deputy Dean, Undergraduate Studies, AP. Ir. Dr. Norazura Bunnor.

The Chairman of the Board was given an opportunity to give an overview of the Board and the Dean gave an overview of the Universiti Malaya, Faculty of Management.

A presentation was made to the Board by AP. Ir. Dr. Norazura Bunnor which covered the following: -

 The Faculty of Management has 5 departments – Civil Engineering, Biomedical Engineering, Electrical Engineering, Chemical Engineering and Mechanical Engineering.

- Rankings of UM 70th in world university rankings, 3rd in South East Asia university rankings and 50th in green metric ranking
- The focus and approach in EAC accreditation and the qualifying requirements
- Design of OBE which begins from the vision and mission of the university
- Conducting of employer and alumni surveys to trace graduates from the engineering programmes
- Programme Educational Objectives which includes elements of professionalism,
 continuous personal development and societal engagement
- Design of programme outcomes that align to the graduate attributes of the WA
- The philosophy behind the design of engineering curriculum whose key elements include industrial engagement, structured curriculum and student empowerment
- Appropriate staff to student ration that allows for academic advisor and student interventions where necessary
- High rate of student mobility (inbound and outbound)
- Efforts towards ensuring lecturers transition to professional engineers which include professional registration embedded in promotion criteria, mentorship and industry sabbatical

Discussions during the presentation included: -

- Training provided by BEM, EAC and IEM on transitioning to OBE
- Driving the engineering education through strong industry linkages
- Ensuring graduating students are registered by BEM
- Carrying out research to support teaching pedagogy of engineering programmes

The visit concluded with tour of the Biomedical Engineering laboratory facilities where the delegation experienced first hand production of prosthetics for various body parts.



Figure 6: Visit to Universiti Malaya

2.4.2 Visit to IKRAM Construction

The delegation was received at Ikram Construction by the CEO, Dato' Ts. Hj. Mohd Taufik and members of management team.

IKRAM was started and established as an Engineering & Construction Laboratory for Penang Airport Project in 1952. It subsequently became the research, development and training centre for Malaysian Public Works Department until its privatisation in 1997 and known as KUMPULAN IKRAM SDN BHD (IKRAM) wholly owned subsidiary of Protasco Berhad. With more than 20years experience, IKRAM has grown steadily through diversification towards making IKRAM a global industry player.

It is a one stop center for the following services: -

- · Geo-technical and geo-environmental engineering
- Pavement highway and transportation engineering
- Structural assessment and forensic engineering
- Construction engineering
- Certification of product
- Professional and technical training

IKRAM has long term contracts for investigations on accidents/collapses of infrastructure and advises Governments and advises on policy development. It also runs a University.

The delegation visited IKRAM's facilities and laboratories following the presentation.



Figure 7: Delegation at IKRAM Construction

2.5 Friday, 26th May 2023

2.5.1 Site visit to Success Electronics & Transformer Manufacturer Sdn Bhd

The delegation was received by the Management team of the organization and there was a brief discussion on what the company does. This was followed by a tour of their facilities where the delegation appreciated the use of technology to design state of the art lighting systems for homes and cities.

Success Electronics & Transformer Manufacturer Sdn. Bhd. (SETM) was first established in 1980. SETM is first of its kind to be listed on the Main Board of Malaysia's securities exchange, Bursa Malaysia. SETM manufactures the most comprehensive range of low voltage transformers in Malaysia and supplies large volumes of industrial lighting to both domestic and international markets. The company's portfolio includes LED range of industrial lighting products such as floodlights, streetlights, highbays and HID lighting.

SETM has done projects in Eastern Africa. In Kenya, the company supplied the street lights that have been installed on Valley Road.



Figure 8: Delegation at SETM

2.5.2 Wrap up meeting with Board of Engineers Malaysia (BEM)

Following the successful completion of the visits, the delegation held a wrap up meeting with the BEM to share the experiences.

The Chairman of the Board appreciated the BEM for coordinating the visit. In his remarks the Chairman highlighted some of the key lessons to be taken back. as: -

- The resources and commitment required to accede to the Washington Accord. We appreciate the mentorship being accorded by Board of Engineers Malaysia.
- The training that needs to implemented for the Board's accreditation assessors and universities in June 2023.
- Review of EBK's legal and operational tools to enhance administrative justice and efficiency in its disciplinary procedures.
- Establishment of the Engineering Accreditation Council in Kenya by adopting EAC Malaysia's model i.e. the constitution, funding model, accreditation guidelines, standards, procedures, processes and the accreditation management system.
- Supporting the manufacturing sector to create employment and enabling innovation.
- The benefits of having engineering education being OBE based.
- Enhancement of efficiency by privatizing some government operations such as public works and partnership with academia to enhance service delivery.



Figure 9: Wrap-up Meeting with BEM

Following the successful wrapup meeting, the delegation left for Kuala Lumpur International Airport for the flight back home to Kenya.

3.0. CHAPTER THREE: KEY OUTCOMES, LESSONS LEARNT AND NEXT STEPS

The five days of benchmarking and knowledge sharing were highly informative and valuable to members of EBK delegation. This visit advanced the ongoing cooperation and knowledge sharing efforts between Kenya and Malaysia.

This Chapter highlights the key outcomes of the visit, lessons learnt and next steps.

3.1. Key Outcomes of the Benchmarking Visit:

- 1. Establishment of the EAC of Kenya Having interacted with the EAD, the Board had a clear roadmap of establishing the EAC. The EAD agreed to support the Board as it sets up the EAC.
- Continued Mentorship towards the Board's Bid to Accede to the Washington Accord
 BEM reiterated its commitment to supporting the Board in its journey to accede to the Washington Accord.
- 3. **Exchange Programs:** All the organisations visited by the delegation expressed a strong desire to further expand the collaboration efforts on professional training and exchange of information.

3.2. Lessons Learnt from the Benchmarking Visit:

- 1. **Engineering Education**: Universities offering engineering education in Malaysia have all transitioned to OBE and are all accredited by the EAD. The EAD has a good working relationship with the universities.
- 2. Accreditation of Engineering Programmes: The EAC needs to put in place structures, processes, systems and documentation that support the accreditation function. All accreditation systems and process should be automated to ensure the procedures are seamless. Continuous training for the team of assessors is critical in keeping up with the WA standards for engineering education.
- 3. **Regulator-Academia Linkages and Collaborations**: The delegation noted the importance of collaboration between the Regulator and Academia. This relationship serves to ensure there is quality in the engineering value chain, from engineering education to practice.
- 4. **Technology:** ICT and digital technologies are becoming increasingly important for achieving rapid industrial transformation.

5. **Manufacturing:** The manufacturing sector is a key contributor to the GDP of any economy. The Board needs to advise Government on the need to accelerate manufacturing and also to lobby for the employment of engineers.

3.3. Next Steps

- 1. Preparation of instruments for the establishment of the EAC.
- 2. Preparation of training on OBE for EBK assessors to be held on 12th and 13th June 2023.
- 3. Invitation of IKRAM and SETM to the EPC 2023.
- 4. Continued mentorship of the Board by BEM in its journey to accede to Washington Accord by 2024

Eng. Margaret N. Ogai, CE, FIEK

REGISTRAR/CHIEF EXECUTIVE OFFICER

ENGINEERS BOARD OF KENYA

Annex 1: Benchmarking Program

BENCHMARK VISIT TO MALAYSIA BY ENGINEERS BOARD OF KENYA DRAFT PROGRAM (RE-PROPOSED BY BEM) (22.5.2023)

| DAYS OF WEEK | | ACTIVITY | REMARKS |
|---|----------------------|---|-----------------|
| | | Arrival of Delegates | |
| Day 1 | Morning | Courtesy call to Board of Engineers Malaysia (BEM) Introductory meeting; Governance Structures, Regulatory & Institutional Framework; Journey to Washington Accord | |
| | Afternoon | Courtesy call to High Commission of the Republic of Kenya in Kuala Lumpur, Malaysia Introductory meeting and Visit Expectations | |
| Day 2 | Morning Afternoon | Courtesy call to Engineering Accreditation Council (EAC) Introductory meeting; EAC Constitution; Accreditation Standards; and Accreditation Framework. Courtesy call to Engineering Technology Accreditation Council (ETAC) Introductory meeting; ETAC Constitution; Accreditation Framework. | 18.2 km (25min) |
| Site visit to Proton Holdings Berhad (PHB) Morning Organization overview; Plant site visit | | 68 km (1hr 30min) | |

| DAYS OF WEEK | | ACTIVITY | REMARKS |
|-----------------|-----------|--|-----------------|
| Day 3 Afternoon | | Courtesy call to ASEAN Academy of Engineering and Technology Organizational overview & Governance | , , |
| | Arternoon | Structure; • Achievements; and ongoing projects | |
| | | Visit to Universiti Malaya (UM) | |
| | | Organization overview; | |
| | Morning | Accreditation | |
| | | OBE program | |
| Day 4 | | Visit to: | |
| | Afternoon | | 29.3 km (37min) |
| | | IKRAM (Construction) | |
| | Morning | Site visit to Success Electronics & Transformer Manufacturer Sdn. Bhd • Organization overview; | 13.6 km (20min) |
| Day 5 | | Plant site visit | |
| | Afternoon | Wrap up meeting with Board of Engineers Malaysia (BEM) | |
| | | Wrap up meeting with BEM | |

Annex 2: Photo Gallery





Tour of Universiti Malaya's Biomedical Laboratories (production of prosthetics)





Demonstration of Using Robotics for Welding at Universiti Malaya





Tour of Material Testing Laboratories and Demonstration of Field Investigation Vehicle

Annex 3: List of People Visited

| S/N | Organization | Name | Contacts |
|-----|-----------------------------|------------------------|-----------------------------------|
| 1 | High Commission of the | Lucy Kiute | <u>lkiute@kenyahighcom.org.my</u> |
| | Republic of Kenya in Kuala | | +60 16-617 4024 |
| | Lumpur, Malaysia | | |
| 2 | Board of Engineers Malaysia | Nik Kamaliah Nik Abdul | nikkamalia@bem.org.my |
| | | Rahman | +60 19-282 8016 |
| 3. | Engineering Accreditation | Nor Athira | athira@bem.org.my |
| | Council | | +60 13-682 4323 |
| | | | |
| 4. | Proton Holdings Berhad | Clemence | +60 12-941 1337 |
| 5. | ASEAN Academy of | Kuk Fai Fok | fokkf@utar.edu.my |
| | Engineering and Technology | | +60 12-378 7687 |
| 6. | Universiti Malaya | Yusniza Binti Awang | yusz@um.edu.my |
| | | Ahmad Muhamed | +60 17-905 1853 |
| | | | |
| 7. | IKRAM COnstruction | Farhan | farhan@ikram.co.my |
| | | | +60 17-274 3050 |
| 8. | Success Electronics & | Ms. Christina Teh | ses@success.com.my |
| | Transformer Manufacturer | | +6 012 - 3825809 |
| | Sdn Bhd | | |

Annex 4: Presentations

Link to the presentations is as follows: -

https://drive.google.com/drive/folders/1EUcBvPNNImGB1DnusOoeU1cUAw22hUXv?usp=drive_link