THE INSTITUTION OF ENGINEERS, MALAYSIA
57th PRESIDENTIAL ADDRESS

“Rejuvenation of the Institution for Long-Term Sustainability”

Ir. TAN YEAN CHIN
PRESIDENT
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Ir. Tan Yean Chin is the President of The Institution of Engineers, Malaysia (IEM) and Board member of the Board of Engineers, Malaysia (BEM). Ir. Tan also holds the position of Secretary General of the Federation of Engineering Institutions of Asia and the Pacific (FEIAP), an independent umbrella organisation for the engineering institutions in the Asia and the Pacific region.

Ir. Tan Yean Chin obtained his Bachelor Degree in Civil Engineering with First Class Honours from University Technology Malaysia (UTM) in 1992. He later obtained his Masters Degree in Geotechnical Engineering and The Chin Fung Kee Prize for outstanding academic performance from Asian Institute of Technology (AIT), Bangkok in 1994.

Ir. Tan is a Professional Engineer and an Accredited Checker (Geotechnical) registered with the BEM. A registered ASEAN Chartered Professional Engineer (ACPE) as well as in the APEC and International Professional Engineers registers, Ir. Tan is also an Honorary Fellow of the ASEAN Federation of Engineering Organisations (AFEO), Fellow of IEM and Fellow of ASEAN Academy of Engineering & Technology (AAET). Ir. Tan had served in IEM for the following positions:

1) Deputy President (2014 - 2016)
2) Vice President (2005-2009, 2012 - 2014)
3) Honorary Treasurer (2009/2010)
5) Chairman of Finance Committee (2014-2016)
6) Chairman of Position Paper Committee (2014-2016)
7) Chairman of Standing Committee on Professional Practice (2005-2007)
8) Chairman of Standing Committee on Corporate Affairs (2007-2009)
9) Chairman of Geotechnical Engineering Technical Division (2004-2006)
10) Member of Graduate and Student Section (1995-1998)

He holds the position of Senior Director in G&P Professionals Sdn Bhd, a multi disciplines engineering consulting firm. Ir. Tan has published more than 70 technical papers on geotechnical engineering in local and overseas conferences and seminars.

Other positions :-

In Malaysia:
- Board member of the Board of Architects, Malaysia (BAM) (2008)
- Member of the Expert Panel to Review Malaysian Construction Industry Practices appointed by the Minister of Works (2013-2014)
- Chairman of the Committee on Professional Practice at Board of Engineers, Malaysia (BEM) (2009-2012, 2013-2016)
- Chairman of the CIDB Working Group on Temporary Works in Construction (2015-2016)

Overseas:
- Secretary General of ASEAN Federation of Engineering Organisations (AFEO) (2007-2009)

Ir. Tan is married to Madam Lian Poh Hoon and they have two sons.
Respected Past Presidents, Immediate Past President, the newly elected Deputy President, Council Members and fellow engineers.

I am greatly honoured to present the Presidential Address at this Annual General Meeting adhering to our Institution’s traditions. The President has to present his vision and action plan for the beloved Institution which is a challenging task because the topic selected must be close to my heart, has to be for the betterment of institution, and of interest to the majority of our members. After considerable thought, I have selected the topic “Rejuvenation of the Institution for Long Term Sustainability”

1. **Composition of IEM Membership**

Since its formation in 1959, IEM has grown to be one of the largest learned civil society organisations in Malaysia with about 34,000 members from all grades of membership. Possessing a vast pool of engineering expertise, IEM can claim recognition as the voice of engineers in Malaysia that plays a pivotal role in promoting and upholding our professional status and image at national and international levels.

To plan and chart a course for IEM, we have to examine the growth of membership which is an important indicator of the sustainability of the Institution. The breakdown of IEM membership grades into ‘Corporate’ and ‘Non-Corporate’ over the last twelve years are shown in Chart 1 below.

According to IEM Constitution and Bylaws, ‘Fellow’ and ‘Members’ are ‘Corporate’ Members of IEM who have the right to vote, requisite meetings and be elected to the Council. While ‘Graduate’ and ‘Student’ members are ‘Non-corporate’ Members who do not have these rights.
As shown in Chart 1, membership of IEM has shown steady growth from approximately 15,000 in year 2004 to about 40,000 in year 2015. However, the chart shows a clear trend that the growth of ‘Non-Corporate’ members has overtaken the growth of ‘Corporate’ members. The growth of IEM ‘Corporate’ Members in the last decade has been slow. In fact, in 2015, there was only an increase of less than 200, constituting about 1.1% of the total ‘Corporate’ membership. On the other hand, the number of ‘Non-Corporate’ members increased by about 15% in year 2015, adding about 4,000 members. Therefore, the total number of members increased by about 4,000 in year 2015 alone which indicates about 11% growth. However, as of 2015, there are more than 98,000 engineers registered with the Board of Engineers, Malaysia (BEM) while we have only about 40,000 members. Hence, we still have a big margin for improvement.

Chart 2 illustrates the number of membership from the 4 major categories. The number of ‘Student’ Members which jumped by more than one-third in year 2015 compared to year 2014 is the key reason for the substantial increase in ‘Non-Corporate’ Members. Despite being the largest group based on numbers, the subscription fee paid by ‘Student’ Members does not have major direct positive impact on the financial condition of IEM. However, it is vital to continue the effort of recruiting more ‘Student’ Members as by introducing them to IEM during their undergraduate study, they will understand the role and functions of the Institution better and will be more likely to join IEM after they have graduated.

In order to continue the healthy growth of Graduate Members, IEM has been taking proactive action to encourage ‘Student’ Members to join IEM upon graduation as Graduate Members through bulk registration effort. Nevertheless, the continuity and strengthening of this effort is of utmost importance, and more is to be done.
Despite the increase in overall number of IEM members, there was a significant drop in the ‘Graduate Member’ grade. It is hoped that this trend does not continue into the following years as these members contribute a major portion of the IEM income compared to ‘Student’ Members. These ‘Graduate Member’ would also be forming IEM’s future ‘Corporate Members’.

Chart 2 : Breakdown of Different Categories of IEM Membership from Year 2004 to 2015.

Membership data indicates that for IEM members who are engineers (excluding ‘Student’ Member), the ‘Member’ grade is still the largest group followed closely by ‘Graduate’. The ratio of ‘Graduate’ Members to ‘Corporate’ Members ranged from 0.65 to 1.0 for the last 12 years. Despite a decline in 2015, the combined ‘Graduate’ and ‘Companion’ grade membership of more than 9,000 still constitute 23% of the overall membership. Therefore, it is a right time to re-evaluate the role and responsibility of these two grades of members in IEM.

2. Rejuvenation and Sustainability

“Every living faith must have within itself the power of rejuvenation if it is to live”
- Mahatma Gandhi

In order to ensure a bright and prominent future for IEM, we need to strategize, plan and take the necessary steps and changes to ensure its relevance and sustainability in the future. Our learned institution has been successful in providing benefits to our members in
the form of technical talks, short courses, seminars, conferences, site visits and other welfare and social events; but the key challenge ahead is to remain relevant in an ever complex and changing world. In the early years of IEM, from 1960s to 1980s, most of the founding office bearers and members of the institution were mainly from a few traditional engineering disciplines namely Civil, Mechanical, Electrical and Chemical. They worked in traditional engineering sectors such as Government Service, Education, Construction, Power and Consultancy that played key roles in the building of the young nation of Malaysia. Currently the ‘Corporate’ Members of IEM are still mainly from these traditional engineering disciplines as these engineers are more likely to pursue Professional Engineer status due to the requirements of their career compared with engineers from non-traditional engineering disciplines (such as electronics, computer, process, etc) who work mostly in factories, manufacturing, process, R&D, oil & gas, IT and other non-traditional engineering sectors that may not require Professional Engineer status for career advancement.

With impending changes and development of more engineering disciplines as we forge ahead, it is important that IEM evolves and stays relevant with the ever changing landscape of engineering in Malaysia. IEM cannot continue to rely solely on the few traditional engineering disciplines for membership. Understanding that there is a big pool of engineers who are working in non-traditional engineering sectors, IEM shall also target them for membership and to cater for their needs. The ‘Companion’ grade of membership was created to cater for this group of engineers and we shall continue to encourage these engineers to join IEM.

From the breakdown of different membership grades as shown in Chart 1, the trend is clear that ‘Graduate’ Members are becoming one of the largest composition of IEM membership. However based on current IEM Constitution and Bylaws, ‘Graduate’ Members are ‘Non-Corporate’ grade and do not have the right to vote or to be elected to the Council. These ‘Graduate’ Members are engineers who had graduated with engineering degrees recognised by the Engineering Accreditation Council (EAC) of Malaysia and are practicing engineering in their own field and discipline.

The ‘Graduate’ Members should be the main force behind the rejuvenation of the Institution for long term sustainability. It will be a big mistake on our part for not recognising how important these ‘Graduate’ Members are to IEM and its future. We should encourage our ‘Graduate’ Members to be more active in IEM by giving them bigger and more important roles to play. Similarly, this change should also be applicable to the ‘Companion’ grade members who are academically qualified, have the necessary training, experience and exposure in the engineering profession. It is important to acknowledge that not all engineers wish or are able to be registered as ‘Corporate’ Members of IEM due to their job function, experiences and different needs for career development. The inability to fulfil the requirements set for Professional Interview in order to be granted ‘Corporate’
Membership does not make them lesser of an engineer compared to the ‘Corporate’ Members as they also possess recognised engineering degree qualifications. The difference is they may be practicing in the sectors that do not require them to develop skills and experiences targeted by the Professional Interview process. Therefore if IEM still holds on to the outdated and regressive belief that only ‘Corporate’ Members can play important roles in IEM, then the long term sustainability and survival of the Institution will be severely threatened.

The current Constitution and Bylaws should be amended to accommodate the ‘Graduate’ and ‘Companion’ grade Members by giving them the right to vote and to elect among themselves representatives into the Council, Branch Committees, Standing Committees and Technical Divisions. Hopefully with this change, we can convince them to volunteer and to help shape their institution and the profession at large. Majority of these members belong to younger age group of mostly below 40 years of age. With their participation in main committees of IEM, they will be able to rejuvenate and bring in new ideas to IEM. This will help IEM to attract and cater for the younger generation of engineers.

Many members may wish that IEM remained status quo, but the truth is, we cannot afford to be complacent based on false security in believing that the ways or methods which worked in the past in attracting new members and maintaining existing members will also work perfectly in the future. If IEM does not change now, soon we will find other organisations, either newly formed or already in existence, starting to attract more young engineers and even our Graduate Members to join them by making them feel more needed, appreciated, important and giving them a better platform to perform. With the awareness and acceptance of this threat, change will be necessary for IEM.

In the words of David Schlesinger, “Change is hard. Change is hardest on those caught by surprise. Change is hardest on those who have difficulty changing too. But change is natural; change is not new; change is important.” This quote was also used by Thomas Friedman in his book “The World is Flat” which also quoted “Even if you are on the right track, you will get run over if you just sit there”. I truly believe that nothing is permanent except change. Therefore, let us embrace the change necessary for the progress of our beloved Institution.

3. **Importance of promoting Science, Technology, Engineering and Mathematics (STEM)**

Students’ interest in science, technology, engineering and mathematics (STEM) has been declining globally and this trend will be detrimental to the development of a nation especially a developing nation like Malaysia. In 2012, the Ministry of Higher Education
Malaysia in their National Education Statistics of Higher Education Sector reported that less than 40% of graduates of public universities in Malaysia pursued courses in STEM fields compared to the targeted ratio of 60:40 of “STEM:Non-STEM students” set by the Malaysian Government for long term socio-economic growth of the country. Urgent and effective effort is needed to correct this deterioration of students’ interest in STEM.

With the reduction of graduates in STEM fields, the number of Malaysian engineering graduates will be adversely affected, thus reducing the number of potential IEM members in the long term. IEM should play an active role in helping the Government to promote STEM. The Kuala Lumpur Engineering and Science Fair (KLESF) programme (website http://www.klesf.net/klesf/index.jsp) is one of the few STEM promotion programmes in Malaysia. IEM is one of the initiators and serves in the Steering Committee of KLESF, which has been implemented in Malaysia to enhance the interest of school-age children and teenagers in science. Other initiators and Steering Committee members of KLESF are the National Science Centre, Malaysian Industry-Government Group for High Technology (MIGHT), ASEAN Academy of Engineering and Technology (AAET) and Universiti Tunku Abdul Rahman (UTAR). KLESF is also one of the key programmes under the “Science to Action (S2A)” initiative launched by the Prime Minister of Malaysia in 2013.

The KLESF programme comprises a series of activities that promote the importance of science, technology and innovation (STI), allow interaction of students with engineering and science professionals, complement the existing school STEM curriculum with more hands-on learning components, aid the outreaching of sciences to suburban and rural communities and the enhancement of science literacy among the general public. IEM and its many branches throughout Malaysia can play a more active role in KLESF to promote STEM throughout Malaysia to primary and secondary school students. In order for a proper continuity of the STEM effort in IEM, a Standing Committee headed by a Vice President will be identified to take charge of this effort.

4. Conclusion

To rejuvenate IEM, the full support of the volunteers to IEM, the members, the Council and the Executive Committee is needed to embrace the change. The IEM Constitution and Bylaws should be amended to accommodate the ‘Graduate’ and ‘Companion’ grade members and enable them to play a bigger role in the policy-making and operation of IEM to ensure sustainability of the Institution. We have to work hard to attract and recruit more new members to join the Institution and at the same time retain current members.
Recognising the deterioration of interest in STEM among Malaysian primary and secondary students, IEM and its many Branches should put in extra effort to promote STEM throughout Malaysia.

In closing, I wish to thank all of you for the trust you have placed in me and the incoming Council. We will work hard to make IEM an institution that can represent all engineers in Malaysia.

“You can accomplish anything in life, provided that you do not mind who gets the credit.”
- Harry S. Truman