

## Moving Forward To Greater Heights

**TO** many engineering graduates, Y. Bhg. Dato' Engr. Prof. Dr Chuah Hean Teik, FIEM, P. Eng. is not a stranger. From Universiti Malaya, to Multimedia University, and now Universiti Tunku Abdul Rahman, his contribution to the advancement of engineering education is well known.

Dato' Chuah is proud to declare that he is 100% educated in Malaysia, from his BEng (First Class Honours), to M. Eng. Sc. and PhD in electrical engineering. Although when he was young, his ambition was to become a teacher, he grew up being inspired to be an engineer. JURUTERA spoke to the Penang-born incoming president, Dr Chuah Hean Teik, on his vision for IEM.



### As the incoming President, what do you hope to achieve during your tenure?

The IEM presidency can only be held for a maximum of two terms, with the agreement of the Council for the second term. Two years is a short time; what is important now is to ask ourselves how we can make IEM more relevant, especially to engineers in the new era.

Many people have the misconception that IEM membership is only for civil and consultant engineers. This is not true as IEM membership is for all disciplines of engineers in Malaysia, including civil, electrical, mechanical, and even new branches of engineering such as biomedical engineering.

Members of IEM come from various sectors; we have members who are in the teaching profession, the public as well as the private sector. Thus, in the next two years, I hope we can make IEM even more relevant to young graduates so that they would feel proud to be its members.

Secondly, we should ask ourselves how we can serve our current members and retain them. We need to make the current members feel that it is worthwhile for them to continue becoming IEM members. This is easier said than done because, as I mentioned before, we have members coming from various disciplines and different sectors, and we need to cater to their needs. We need to find out what they want and not what we think they want. It is very important that IEM is made into a member-centric organisation.

In last two years, with the effort of various committee members, we have increased the membership from around 15,000 to nearly 25,000. With that, we are now the largest professional organisation. Although Malaysia has a total of 60,000 engineers, not many has joined IEM because they

think that IEM membership is only for those who want to become professional engineers. However, joining IEM does not only benefit professional engineers.

One of the main benefits of joining IEM is the networking opportunity that it presents. Even if you are not a professional engineer, you can still gain from such a large network. Human networking is something that we cannot learn in the classroom. By joining IEM and participating in its activities, you will get to meet other engineers who then become part of your human network and this can help get things done very easily. Often times, it is this personal touch that makes things happen.

IEM can also provide many training opportunities. Our strength is in our membership. We have members who are practising, members who are doing research, and members who are businessman or entrepreneurs. Thus, we have variety in our training courses. The knowledge that we acquire from university cannot last us a lifetime, especially in this fast moving times. Sometimes, we need to unlearn and relearn existing knowledge and IEM can provide a platform for that.

To generate more awareness on the benefits of IEM membership, we are planning to organise road shows and collaborate with institutions of higher learning to give exposure talks to the students. I believe we should approach them when they are still students. We are also targeting to give talks to big corporations and MNCs who employ many engineers.

For the past two years, our efforts have been moving in the right direction. We have been recognised by several state governments as well as the respective state government agencies. They have begun to appoint IEM members to join Technical Committees at the state and

national level. That is a major step forward. The best example here would be China, where many of their senior ministers are engineers by profession.

Engineers are trained to think in a logical manner. With our analytical mind, we are trained to solve problems, contribute to building infrastructure and so on. It is about time that engineers in Malaysia become decision-makers and contribute to policymaking. To borrow a phrase from Y. Bhg. Dato' Paduka Engr. Hj. Keizrul bin Abdullah, 'We must progress from nation builders to nation movers'.

To support this effort, we have introduced subjects on the national land code, taxation and management accountancy to the syllabus, in addition to engineering subjects. Most of the work of an engineer in the first few years is usually very technical. However, as we move up the ranks, we become resource managers, managing various resources be it human, material, time and machines. We also deal with project management in addition to the technical work. Because of that, engineers need to be more versatile and not just focus on gaining knowledge in engineering subjects.

#### What is your vision for IEM?

IEM should not only be the largest, but also the most influential professional body in terms of policymaking. We should be the reference point for all government agencies and the industry when it comes to engineering. Currently, IEM has our system in place to achieve this, but we must continue to push forward. Give, for example, the position papers prepared by IEM. Once it is ready, we should bring our position papers to the attention of the government and decision-makers to exert our views on current issues.

#### In what areas do you feel that IEM can further improve on?

We need to push for more follow up action for our position papers. The most recent example is IEM's position paper on hill-slope development. We must present it to the related ministries, agencies and officers, and explain our views to them. We must do this professionally, by presenting facts

and data, and by including the input from all stakeholders, including the developers, contractors and consultants to give a balance view. In the past, although the effort is there, often the response from the relevant agencies is not so forthcoming. However, we should not give up.

Previously, although we had proposed the appointment of IEM nominated engineers by the local council many times, the effort did not bear any results until recently. Now a few local council have begun to appoint engineers, not because they are linked to any political party, but because they are nominated by IEM and they carry the view of the professional body. This is very important for us to move forward. We have seen some success of this in Perak, Penang, Negri Sembilan, Sabah and Sarawak. And that is something we will continue to pursue.

#### What do you hope to see IEM achieve in the next 50 years?

In the next 50 years, I would like to see IEM as an activity centre for all our members, as a place not only to network, but also as a resource centre. While I hope that 60%-70% of the engineers in Malaysia become members of IEM, more importantly, I want to see Malaysian engineers be prepared to compete globally. In the past, IEM has created many champions for various activities to bring Malaysian engineers to global market. Besides the Malaysian market, our engineers must be prepared to sell to other Asean countries, as well as Asia and the Middle East.

Three years ago, IEM had formed the IEM pro-ETI Bureau (Engineering Technology and Innovation Bureau). The objective of the bureau is to update our engineers on the Asean and Asia Pacific market so that they are more prepared to go international. As the Secretariat for the ASEAN Federation of Engineering Organisations (AFEO) and permanent Secretariat for the Federation of Engineering Institutions of South Asia and the Pacific (FEIAP), IEM is actually very highly regarded. Thus, we want to encourage our engineers to be more mobile and work with our counterparts in other countries. All these are important steps for IEM to move forward.



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### What is the biggest challenge for as an engineer today?

The biggest challenge would be globalisation. Gone are the days that we can remain ignorant of current issues and rely on local projects to survive. And when such projects are not forthcoming, we blame the government. Now, we have to continuously update our knowledge to be able to compete with engineers trained in other countries.

We can no longer afford to have the 'kampung boy' mentality. We have to go global, and to do so, we must make sure that we are at par, if not better than the competition. This is a big challenge for all engineers. We must expand our services overseas, and be more efficient and cost effective as we will be selected based on the quality of our work.

### As President of a leading local college, what is your opinion of the quality of student and graduate engineers today? What is your advice for them?

In the past, there were very few engineering students. So it was easier to focus on the small pool of students who were the cream of the crop. Now, with the democratisation of education and with more opportunities to study engineering, there is a much larger group of students to deal with. The challenge is to make sure the larger group of students performs just as well if not better.

Some quarters have questioned the quality of a local degree. In my personal observation, a local engineering degree is comparable to a degree from overseas. Within my own family, we have several engineers. My elder sister earned her first degree in UM, and her Master's and PhD from overseas, while my younger sister earned all her degrees overseas.

When we compared our syllabus, I found that, at the undergraduate level, our syllabus is about the same. The only difference is the exposure that they get, as well as the individual attitude. If we work hard and strive for greater exposure, we can be at par. The only problem is, many of us do not have the right attitude. We do not want to keep improving ourselves, and if we do not improve, others will eventually catch up and we will be left behind.

Many of my friends, who are managers at various MNCs and corporations, tell me that, at the entry level, locally trained engineers are technically competent. Some of them even believe that our syllabus is superior to those taught overseas. The only complaint they have is that our engineers are sometimes tongue tied and do not know how to express themselves. However, by and large, this is the Asian culture.

Within the Asian education system, teachers are usually very much respected. The general attitude is that we accept whatever they say as the truth, and as students, we just listen and usually do not ask any questions. Because of that, we do not learn how to speak properly and communicate well, and we do not challenge the norms.

When I give lectures in Malaysia, the scenario is the same. At the end of the lecture, when I open the floor for questions, all the students keep quiet. But when I am about to go, some will approach and surround me and start asking questions. Perhaps they feel uneasy asking their questions in public. However, in the United States, the situation is completely opposite. When my lecture has ended, without prompting, all the students will have questions to ask. Their kind of education system trains them to speak and communicate from young.

Although technically our syllabus is at par, the question is how do we train our students to communicate better be it through writing, impromptu speech or asking questions. These are some of the areas we have to improve, not only at the tertiary level, but right from the primary level. ■