

Speech of HKIE President Ir Aaron BOK at

Presidential Address 2022/2023

19 Oct 2022

HKIE – Time to Change

Commitment to Change – Boosting Professionalism

WE ARE PROUD TO BE ENGINEERS

香港工程師學會 - 專業維新

以工程師為傲

Honourable guests, Past Presidents, Fellow members, ladies and gentlemen,
good evening

It is truly a privilege to deliver this address as President of the Hong Kong Institution of Engineers for Session 2022/2023.

I am humbled to have been elected to lead the Institution just as we are about to enter a new era. I want to say thank you to my predecessors who have laid a strong foundation to ensure that the HKIE stands ready to overcome the challenges ahead; and a special mention to Immediate Past President, Ir Edwin CHUNG who spearheaded the development of the Time to Change Roadmap that will guide the HKIE for years to come.

Some of you might know that my second passion after engineering is mountain-biking. If you think about it, engineering and mountain-biking have a lot in common. Like engineering, mountain-biking requires a precise mix of technology, precision and know-how. And like mountain biking, getting over difficult obstacles in our work depends on the willpower of engineers.

Time to Change Roadmap

Our willpower will be put to the test as we address the fundamental issues revealed during the development of the *Time to Change Roadmap*. Launching the HKIE into a new era, the roadmap is an ambitious rejuvenation programme that will ensure the Institution is ready to embrace the future. A blueprint that reflects the collective wisdom of the thousands of people who participated in its creation, the roadmap features 45 initiatives to be implemented over five

years across five key areas: viz. Pursuing Digitalisation; Enhancing Services to Members; Facilitating Innovation; Boosting Professionalism; and Undertaking Governance Review. We expect that through this important exercise, the HKIE will always remain on par with its peers and be ready to tackle any challenges that may lie ahead.

Meanwhile, Hong Kong is also implementing a new roadmap. Incidentally, our Chief Executive just delivered his first policy address this morning. Among various initiatives, our new leadership shows determination in accelerating the launch of mega- projects like the Northern metropolis, the Harbour metropolis and new housing and land developments, together with supporting infrastructures. Furthermore, re-industrialisation and innovation-driven manufacturing are seen as new drivers of growth as part of Hong Kong's new role as Technology & Innovations Hub. All these translate into a strong call from the community for a better and more timely delivery of professional services from the engineering profession.

To meet these amazing opportunities and demanding challenges, the HKIE has also set an ambitious agenda for ourselves.

Commitment to Change – Boosting Professionalism

Last year, as we began our Time to Change journey, we devoted our efforts to building and strengthening our IT infrastructure to enhance the digitalisation and efficiency of the HKIE.

The next step of the roadmap is particularly close to my heart and was identified by our members as the most important among the five focus areas for change. Called

“HKIE – Time to Change

Commitment to Change – Boosting Professionalism

WE ARE PROUD TO BE ENGINEERS

香港工程師學會 - 專業維新

以工程師為傲”

it reflects my conviction that pride in our profession is the foundation of the theme of this Session. In my view, this begins with enhancing the visibility of the Institution and improving the image of the profession.

Proud to be an Engineer

But before looking forward, I want to reflect a bit on the past.

Like many of us, I was born in a modest family during a time of great hope for Hong Kong. Reading a HKIE journal about the proposed Tsing Ma bridge, I became fascinated by engineering. Turning my back on the handsome package that was on offer to take care of teeth as a dentist, I jumped on the opportunity to realise my dreams. Today, I want young people to experience that same feeling.

No matter in 1980's or 2020's, we too were facing a future full of challenges and uncertainty. To say we engineers did well would be an understatement. Working in a city hungry for success, we've built engineering wonders that have inspired the world and improved the lives of our fellow citizens. Indeed you would be hard pressed to find a city of seven million people that can match what we have done, from our airport and tunnels to the Hong Kong- Zhuhai- Macau bridge and the MTR system and from our world-class reliable power grid to the comprehensive 5G network covering almost every corner of Hong Kong.

Yet, despite all these world class engineering wonders, our profession is not getting the respect it deserves from the community. Why? My feeling is that, over the years, although our contributions are 99% perfect and reliable, a small number of isolated incidents fairly or unfairly attributed to engineers have generated a constant drumbeat of negativity that has tarnished our profession, especially in the eyes of the young generation.

I'll say more about this later but this is why I have been asking my fellow members to help build the HKIE Spirit Bomb, the 元氣彈 since they are the most appropriate ambassadors to pitch in and help boost our image. But they may only be willing to help out if they are proud of being engineers and feel respected. It is thus the Institution's mission to give engineers the tools they need to grow as professionals and hence they can in return help our profession's growth and succession. I thus appeal all members to participate in this important mission with this slogan (I hope you can all join me): -

We are Proud to be Engineers! We will:-

- Deliver our Services to the Community Professionally with Heart and Diligence;
- Tell Good Engineering Stories; and
- Nurture Talented Successors

To begin with, we must **Strive for Excellence 自強不息**. I urge all engineers to deliver their services professionally with heart and diligence. You may notice that I have insisted in my last President's message that we engineers must always refresh and reiterate our fundamental role and responsibilities and uphold our professional ethics regardless of the difficulties we are facing when performing our services. As engineers, we are well equipped with technical knowhow, but what I have learnt over time is that beyond technical expertise, success in engineering often depends on the willpower and determination of the individual person. So today, let me share with you my three key attitudes for enhancing the efficiency of team work (I believe some of you must have heard about my Three 3 Project Management Philosophy since 10 years ago) :

First, engineers should be passionate, which translates in having a **No Workers Mentality 不要抱打工仔心態**. Our profession is full of challenges and difficulties. I advocate engineers to treat project tasks as missions given by society; and to view themselves as problem owners. This means you have to assess the risks or problems ahead of time; and not just a week or next month, but six months or even two years ahead; and to take measures today to reduce their impact, if not eliminate them entirely. The earlier you address risks, the easier and cheaper it is. You need to own and follow through problems to eventually solve them professionally. You need to bring out the best of the project team to deliver the biggest benefit to the community. If all parties in a team have this attitude, that team will be a very very effective team. As the old saying goes, a stitch in time saves nine!

Second, **Collaboration**. Engineers must be good at working in teams. Unlike scientists working in the lab every day, we are on the grounds, dealing with projects involving many stakeholders, each representing the interests of their companies. As engineers, we know we must adapt to overcome natural obstacles. But I think it's even more important to learn how to respond to the human aspect of a project. There's no formula for it, but I advocate genuine

partnering. In my definition, “Collaboration” means standing in the shoes of your counterparts. See how you may adjust your position to accommodate the other sides’ need or difficulties. Doing so may invite them to adjusting theirs, thus creating a greater chance of reaching consensus. Understanding, respect, empathy and the ability to communicate are often more important than technical knowledge when it comes to solving multi-dimensional engineering problems.

Finally, engineers should **Embrace and Enjoy Challenges**. Solving difficult problems is what engineers do, so backing away from difficulties is never an option. In this respect, my motto has always been to face challenges with a happy mind because it’s much less stressful. Treat challenges as an opportunity to show your competence and capability. 遇-強-越-強 . Enjoy the process of solving difficult problems because by the time you solve them, the happiness and satisfaction you will get will be extremely rewarding. Leaders in the team should be caring leaders and take the lead in cultivating a supportive environment and lessen the pressure on their subordinates. With this attitude, your team won’t feel like being in a pressure cooker and will face challenges more easily. Trust me, a happy and enjoyable working environment can double the fighting power of your team!

No Workers Mentality; collaboration; and embracing and enjoying challenges. These three attitudes, among other attributes, will be much needed by the next generation of engineers as we enter a new golden age for our industry. Mega projects like Harbour Metropolis and the Northern Metropolis finally look ready to go. As per our estimates, construction expenditures may increase by 40 to 50% from their regular levels for the next 20 years to reach some HK\$350 billion per year. Meanwhile, Hong Kong’s integration with the Greater Bay Area and the Technology & Innovation Hub policy will offer new opportunities across all engineering disciplines, from manufacturing and automotive to aviation and Artificial Intelligence. What could be better than this golden age for becoming an engineer? We should remain humble, but there is no reason for us not to be proud.

Challenges to our Profession

But while the future looks bright, we are facing some big challenges. As mentioned above, a few incidents have impacted the reputation of our profession, especially amongst the non-engineering population, and this has

made engineering less attractive to young people. I believe these problems are two sides of the same coin.

In a way we are stuck in a vicious circle. Let me explain. While 99% of our good work, if not more, is taken for granted by the public, the 1% where something goes wrong always makes the frontpage. This often leads to the government introducing new regulations or administrative oversight. As more supervision is needed to enforce these new requirements, professionals transferring to these authorities are often mid-career or entry level engineers from the private sector. This forces junior engineers remaining in the private sector to take more responsibility too early. Meanwhile, as shown by the report “Review of Procurement Policy¹” that we submitted to the government in March, tenders are closed at bids that are sometime unrealistic. Firms have no choice but to cut costs anyway they can. Significantly low bids could affect project programme and trigger quality, health and safety issues that are not to the best interest of the community. In addition, the scarcity of senior engineers and the relentless cost pressure further increase the risk of incidents, which in turn will further damage the image of the profession, thus making engineering even less attractive for students.

Year Plan

We must break this vicious circle, and here comes the two other parts of my slogan about telling good engineering stories and nurturing successors:

First, we must stop shying away from being proud of our profession. Let’s never forget that whether it’s going to space or building bridges, engineering is the expression of humanity’s ability to make dreams come true. What we do is right at the heart of society’s advancement. Who could ever be ashamed of that? As an organisation of 33,000 members, it is indeed our responsibility to remind the public about the importance of engineering in our daily life and explain them “**Why it is a good career!**”.

By now, most of our members should have received a golden pin featuring the theme of the Session – **PROUD TO BE ENGINEERS**. I am humbly asking you to wear it as a symbol of your engineering pride and hope you are all doing this tonight! We are all in this together and it is our common responsibility to

¹ Research on Procurement Policy Review for Works and Consultancy Contracts.
https://www.hkie.org.hk/docs/research_procurement_policy.pdf

stand up for our profession, especially when engaging with people with little exposure to the engineering community.

Meanwhile, to improve our image, we are stepping up our efforts to make sure that the public gets the facts instead of misleading headlines. As a multidisciplinary Institution, we will continue to produce impactful research that can inform public policies while arousing the younger generation's interest in engineering. We will launch a task group dedicated to look into suggested initiatives or policies that can foster the re-industrialisation of the city, as this is an issue the HKIE is well positioned to lead. We will also invite Divisions and Committees to produce videos and write articles to showcase how engineers contribute to society, while using our YouTube channel to engage directly with the public.

Most importantly, we will host the “Hong Kong Engineers Week 2023” from 3 to 11 March next year. This signature event will be preceded by a roving exhibition that will be shown in various venues from January 2023 onward, as well as an innovation competition for the students. Themed “**Our Future We Engineer. 未來一同創造**”, the Engineers Week itself will feature public lectures, a carnival and a high-profile HKIE Conference. We will also hold a Grand Prize Award ceremony for infrastructure projects, industrial projects and student innovation projects, as well as a fundraising run and cycling sessions.

As we want this mega event to go a long way in enhancing our visibility and improving our image, we are targeting a wide audience ranging from engineers, students and international participants to NGOs, media and the general public. Please lend us your full support in making this event a success! In particular, I must appeal to the big bosses in this room tonight. Since the Engineers Week is self-financed, its success depends on your strong support and Sponsorship 希望大家又出力，又出錢！

Our second task is to make our voice heard in the public square. As mentioned earlier, we have often let interest groups seize the narrative about large projects. While I believe all voices should be heard, decisions need to be taken for the greater good of the city based on scientific and professional views. We are considering ways to step up our engagement with the media and present our side of the story before others capture the spotlight. In addition to being more pro-active in increasing their public exposure, our Officers and some specialists

from Divisions will receive media training to be ready to respond to incidents within hours.

As mentioned above, we have been urging the government to review its procurement policy to ensure that more reasonable bids get accepted. I am glad that the government has accepted some of the measures we've recommended in March and to see some signs of improvement recently. Besides ensuring that experienced engineers receive fairer packages and achieve a better work-life balance – both factors that will make the profession more attractive to the younger generation – this will also motivate engineers to be more creative, thereby improving productivity and reducing overall total cost. We shall also lobby the government to streamline the submission and approval process. On this front, we have submitted a report “Streamlining Building Works and Infrastructure Development Processes”² to the government last month containing recommendations about various aspects related to the design and construction stages of projects. It's apparent that the relevant authorities should be able to fulfil their regulatory duties while at the same time acting as facilitators when it comes to helping deliver projects at a faster pace. All that's needed is for this facilitation to be Fair and Open to all parties. Bureaux and Heads of Departments shall advise their colleagues suitably. This shall free government officers from their fear of being accused of collusion in future. A more efficient process in the supply of land and housing would in fact directly benefit the community at large.

Last but not least, we must address education. As shown in the report on “Research on Engineer Manpower Forecast”³ that we submitted to government in April, Hong Kong may soon face a significant shortage of engineers. Given the current problems of the industry, the increased complexity of the profession and the huge growth ahead, we need to attract the best and the brightest that Hong Kong has to offer. Too many talented secondary students who should have a natural affinity for our profession – such as those good in maths or interested in STEM – choose to stay away from engineering. Factors like bad publicity, peer pressure and the lack of exposure to engineering at school make other careers look trendier. That's why we must engage with parents, teachers and students to let them know about the exciting career opportunities that engineering offers.

² https://www.hkie.org.hk/docs/HKIE_streamline_processes.pdf

³ Research on Augmenting Engineer Manpower to Cope with the Foreseeable Surge in Demand. https://www.hkie.org.hk/docs/HKIE_Research_on_Manpower.pdf

In addition to expanding our School Ambassador Programme, we will introduce a Mother School Home Coming Initiative, or a “One School One Engineer” programme. I’m glad that the Education Bureau accepted it and termed it as 工程伴理行 to help promote STEM activities. We are going to engaging directly with teachers or school sponsoring bodies on a “train the trainers” concept while thinking of ways to support them with guidance about careers in engineering. As this is fundamental for our future, I am asking each of you; I stress - “Each - of - You” - to help. It’s simple. Either join as School Ambassador, or just talk more on the good work of yours and other engineers’ in the industry to your friends and relatives who may be teachers or have children who will soon have to decide about their future; re-connect with your secondary school and see whether they would like to work with us. Your pride of being an engineer will go a long way in winning the hearts and the minds of our future colleagues.

Final Remarks

It’s obvious that we have a lot of work to do. I know that we have the passion, determination and creativity to solve these problems, and I do hope we have the pride to do so. Beyond the future of our profession, it’s the fate of our city that’s in play. Ahead for so long, we seem to be stuck in the wrong gear. We need to get going because one thing is certain: the world won’t be waiting.

Since COVID-19 has disrupted the HKIE’s regular calendar, I will be your President for a shorter period than usual. Never mind.

As mountain-biking Olympic champion Julia Furtado said “the secret to mountain biking is pretty simple: The slower you go, the more likely it is that you will crash”. This time, we can’t afford to just cruise forward to keep balanced as Albert Einstein said hundred years ago; we have to go faster. And I am happy to embrace and enjoy the challenge of doing more faster, because I know that I can count on the collaboration of passionate engineers of the HKIE to form the most powerful 元氣彈 in Hong Kong. Together, we can help Hong Kong ride to the brightest future it deserves. For the benefit of Hong Kong and our Motherland!

Thank you!

[Words 3372]