

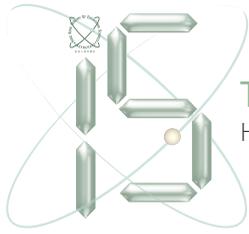
Appendix 1
President's Reports
1995–2008





(1) Session 1994-95, at 2nd Annual General Meeting

1. 1995 is the first full year for the Academy since its founding on 13 September 1994. The first tasks of the Academy during the year were to build up its membership and lay the foundation for future development.
2. At the 20th Annual Dinner of the Hong Kong Institution of Engineers, the President delivered a short speech propagating the establishment of the Academy. It was a good and timely occasion to inform the gathering of approximately one thousand professional engineers at the dinner about the reasons and objectives for the creation of the Academy in Hong Kong.
3. At the Second Extraordinary General Meeting held on 1 June, five new Fellows were elected making up the current roll of 18 Fellows. Following the procedure prescribed in the Memorandum and Articles of Association, the first New Members' Dinner was held on 25 September at the Hong Kong Club.
4. The President of the Chinese Academy of Engineering, Professor Zhu Guangya, was leading a delegation of the Chinese Association of Science and Technology to Hong Kong. Taking the opportunity, the Academy organized a dinner on 31 October for Professor Zhu and his delegation. Present at this function were also the President of the Hong Kong Institution of Engineers and some senior government officials connected with the engineering profession. There had been a good exchange of views at the function. It was agreed that at an opportune time the Hong Kong Academy would pay a visit to the Chinese Academy in Beijing.



The First Fifteen Years

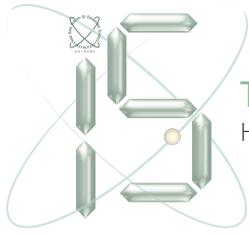
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5. Through the effective efforts of both the Honorary Treasurer and the Honorary Secretary, the Academy was granted exemption by the Commissioner of Inland Revenue from all taxes payable under Section 88 of the Inland Revenue Ordinance (Cap.112) with effect from 13 September 1994, the date of incorporation of the Academy. The Academy has therefore become a charitable organization, which should facilitate appeals for donation.
6. A major project jointly carried out with the Hong Kong Institution of Engineers is being undertaken. It is to publish a book depicting with words and photographs the engineering achievements in Hong Kong during the past 50 years. The target is to release the book in 1997 to commemorate the 50th anniversary of the Hong Kong Institution of Engineers and to mark the founding of the Hong Kong Academy of Engineering Sciences. Members will be kept timely informed on the progress of this joint venture.
7. During the year the Council has met quarterly and I would like to take this opportunity to express my appreciation to my colleagues at the Council for their co-operation and support.



(2) Session 1995-96, at 3rd Annual General Meeting

1. The Academy entered its second year in 1996 and spent most of its efforts in carrying out the major project of publishing the Book describing with both words and photographs the engineering contributions towards the economic and social developments in Hong Kong during the past fifty years. It is a joint venture between the Academy and the Hong Kong Institution of Engineers.
2. The publication of this Book is for three purposes and is timed at mid-1997. First, it is to mark the founding of the Hong Kong Academy of Engineering Sciences. Second, it is to celebrate the 50th Anniversary of the Hong Kong Institution of Engineers. Thirdly, it is to commemorate the peaceful transfer of sovereignty of Hong Kong from British to Chinese, which will be an unprecedented event in the modern world of politics.
3. Prior to the finalization of this project, an informal meeting with all the Fellows of the Academy was held on 11 May 1996. At this meeting, views and advice were heard and a general mandate to proceed was obtained from those present. Consequently, two special committees were formed in connection with this project. One is the Editorial Committee chaired by Professor Charles Kao, and the other the Financing Committee led by Mr. James Chiu.
4. In accordance with Articles 31(b) and 42 of the Academy's Articles of Association, the Council at its Ninth Meeting held on 20 May 1996 elected Mr. James Blake, Mr. James Chiu, Dr. Raymond Ho and Dr. R.M. Kennard as additional Council Members until the next Annual General Meeting.



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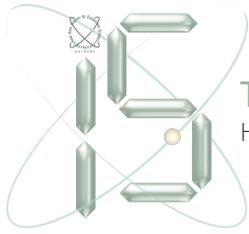
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5. The Membership Committee has met twice during the year and proposed five candidates to the Council for endorsement and recommendation to the Annual General Meeting for election to Fellowship.
6. Both the President and one of the Vice Presidents (Dr. N.K. Chan) were appointed by the Chinese government to the Preparatory Committee for the Hong Kong Special Administrative Region (HKSAR) formed in January 1996. The President is additionally acting as Co-convenor of the Selection Committee Working Committee and Dr. Chan as Co-convenor of the Infra-structural Working Group.
7. In response to the call by the Chinese government's Preparatory Committee for nomination of candidates for election to the Selection Committee of the HKSAR Government, two Fellows submitted their names through the Academy. One name is in Segment Two of the Selection Committee for "Professionals" and one in Segment Four for "Former Political Figures".
8. The Council has met three times during the year and I would like to take this opportunity to thank all my colleagues on the Council and other Committees for their co-operation and support.



(3) Session 1996-97, at 4th Annual General Meeting

1. 1996/97 is the third year of the Academy since its founding in September 1994. The Council together with the support of all Fellows have diligently pursued objectives of the Academy.
2. The major project jointly carried out with the Hong Kong Institution of Engineers of publishing a book, entitled *In Praise of Engineering — A Visible Achievement of Hong Kong during the Past 50 Years*, has made satisfactory progress. Chairman Professor Charles Kao and Members of the Editorial Committee have put in a lot of efforts for the project. It is expected that the book will be ready by the end of this calendar year.
3. A Financing Committee has been set up in parallel under the able chairmanship of Mr. James Chiu to seek donations from relevant corporations in Hong Kong for meeting the Academy's share of half of the production cost of the Book. Progress was also satisfactory.
4. At the last Annual General Meeting held on 17 September 1996, five new Fellows were elected. A New Members' Dinner was held on 11 November 1996. The current roll of membership is 20.
5. The Executive Vice President of the Chinese Academy of Engineering, Professor Zhu Gao-feng, led a delegation of three to visit HKAES on 7 January 1997. The Academy organized a dinner for Professor Zhu and his delegation.
6. Dr. Nicky Chan, Dr. Raymond Ho and Mr. James Chiu paid a visit to Chinese Academy of Engineering in Beijing in April 1997. It was agreed that a Symposium on "Commercialization of New and High



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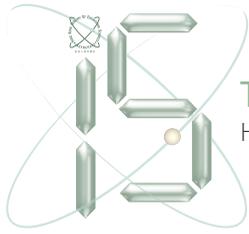
Technology” would be jointly organized by CAE and HKAES, to be held in Beijing around April 1998. Subsequently Professor Yao Fusheng and Mr. Feng Yingzhang of CAE returned a visit to HKAES on 29 July, to have further discussions on the Symposium. Dr. Raymond Ho was appointed to chair the Symposium Organizing Committee.

7. Those two Fellows applying through the Academy, had been successfully elected to become members of the Selection Committee of the Hong Kong Special Administrative Region.
8. The Academy had participated in a number of activities for the celebration of the return of Hong Kong’s sovereignty to China on 1 July.
9. The Academy hosted a lunch meeting with Professor Hans Forsberg, President of CAETS and Professor Sir David Davies, President of Royal Academy of Engineering on 21 September 1996.
10. It was very sad to note the sudden death of the Founding Fellow, Dr. Samuel Wong, on 4 June 1997. Dr. Wong had contributed a lot to the Academy’s development and we all missed him.
11. This is my third year to serve as Founding President and in accordance with the Articles of Association I shall retire at this Annual General Meeting and shall not be eligible for re-election. I would therefore like to thank all the Officers, Council Members and Fellows for their co-operation and support during my three-year term of office. I also wish my successor continued success.



(4) Session 1997-98, at 5th Annual General Meeting

1. At the end of the first year of my Presidency of the HKAES. I am glad to report that we have already made good progress. We completed with success two major projects initially proposed by Sir S.Y. Chung, my predecessor. The first is the book project and the second is organizing with the Chinese Academy of Engineering (CAE) the Symposium on “Commercialization of High Technology”. Other activities in the past year are listed below.
2. The Academy and The Hong Kong Institution of Engineers (HKIE) published the book *50 Years of Engineering Achievements* in spring 1998. A total number of 7,500 copies of this book have been printed. 3,502 copies were sent to HKIE while HKAES has kept 2,683 copies. There were thirteen sponsors supported the publishing of this book and as a token of our appreciation, 650 copies were distributed to the sponsors. We also received some advance orders of 250 copies while The Chinese University Press has kept 400 copies for sale.
3. The Academy and the CAE jointly organized the Symposium on “Commercialization of High Technology” in Beijing on 16–17 April 1998. The Symposium was attended by 50 delegates from Hong Kong and 150 delegates from the Mainland. They were government officials, academics, industrialists and venture capitalists. A copy of the “Consensus and Proposal” jointly announced by the two Special Administration Regions by Dr. Raymond Ho, Chairman of the Symposium Organizing Committee. It was also agreed that HKAES and CAE would jointly organize the 2nd Symposium on “Commercialization of High Technology” in Hong Kong in 2000.



The First Fifteen Years

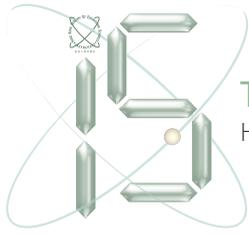
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4. At the last Annual General Meeting held on 3 October 1997, three new Fellows were elected. A New Members' Dinner was held on 28 November 1997. The current roll of membership is 23.
5. The Academy hosted a dinner in honour of the delegation from China Association for Science and Technology, led by Professor Zhou Guang Zhao on 5 November 1997.
6. The Academy hosted a lunch for Professor Kurt Ostlund, President and Mr. Enrico Deiaco, Academy Secretary of the Royal Swedish Academy of Engineering Sciences on 8 November 1997.
7. The Academy hosted a lunch in honour of Professor John Burland, EEng, FRS, on 22 November 1997.
8. The Academy hosted a dinner in honour of six members of the "Hong Kong-Macau Economics Study Group" on 28 May 1998.
9. The Academy decided that we should prepare a Green Paper on Policy on IT Development in Hong Kong and an Analytical Study of the Environmental Aspect of Transportation for submission to the HKSAR Government. The draft skeleton of the Green Paper has been sent out to experts in the IT field in Hong Kong. They are invited to give their inputs. Professor C.C. Chan and Dr. H.K. Cheng are working on the Analytical Study. It is expected that the submission to the government will be ready by the latter part of the 1998 calendar year.
10. The Academy has also been working on the establishment of a fund, tentatively named "Fund for Promotion of Commercialization of Hi-tech Projects". Our target is to raise about HK\$50 million as seed money of the fund.



(5) Session 1998-99, at 6th Annual General Meeting

1. The past year has been a fruitful year. Many of our projects have been progressing well. I would like to take this opportunity to thank Professor T.P. Leung for his valuable service to the Academy as its Honorary Secretary in the past four and a half years. Professor C.C. Chan has been elected to take the position starting from our 1999–2000 financial year. Below is a summary of the major activities of the Academy in the past year.
2. HKAES and CAE agreed that the 2nd Symposium on “Commercialization of High Technology” (now renamed as “Symposium on Commercialization of Innovative Technology”) would be held in Hong Kong on 9–10 October 2000.
3. The Academy had decided to go ahead with the formation of the Fund for Promotion of Commercialization of Hi-tech R&D (now renamed as Fund for Promotion and Advancement of Hi-Tech R&D). Suriya & Associates was appointed as our lawyer to help form this company limited by guarantee. In the meantime, we were applying for government recognition of the charity nature and taxes exemptions of this Fund.
4. The Academy co-hosted a dinner with The British Council in honour of Sir Tom Bundell, FRS of Cambridge University on 23 September 1998.
5. At the Fifth Annual General Meeting held on 17 July 1998, four new Fellows were elected. A New Members’ Dinner was held on 25 September 1998. Dr G.S. Crighton resigned from the Academy in May 1999. The current roll of membership is 26.



The First Fifteen Years

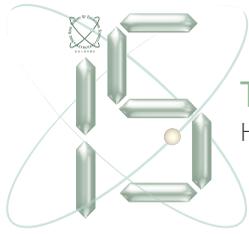
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6. On behalf of HKAES, Professor C.C. Chan and I attended the Second Round Table Meeting of Engineering Academies hosted by the Chinese Academy of Engineering on 18 and 19 November 1998 in Hangzhou, China.
7. HKAES accepted the invitation of the Chinese Academy of Engineering to be the co-organizer of the 1999 Beijing International Conference on Engineering Education (3–5 November 1999, Beijing). I would sit on the Advisory Committee of this Conference on behalf of HKAES.
8. The Academy Members hosted a lunch in honour of Professor J. Nanda, Member of the Governing Council of the Indian National Academy of Engineering (INAE) on 5 June 1999.
9. A Green Paper entitled “Building Hong Kong into an IT-City (Status, Business Model, Infrastructure, and Benefits)” was submitted to the Chief Executive of the HKSAR Government. This paper had been endorsed by the Hong Kong Institution of Engineers before sending out to the government for consideration and implementation.
10. Professor C.C. Chan and Dr. H.K. Cheng completed the preparation work of the Green Paper on “The Environmental Impact of Road Transportation with Special Reference to Electric Vehicles — Building Hong Kong into an Electric Vehicle City”. We had written to President of HKIE seeking endorsement before formal submission to the government.



(6) Session 1999-2000, at 7th Annual General Meeting

1. This is the third, and the last, of my President's report as the term of my presidency is expiring at this Annual General Meeting. I would like to thank all the Fellows for their kind support in the past three years. I would also like to thank Professor T.P. Leung and Professor C.C. Chan for their valuable service as Honorary Secretary of the Academy during my tenure. Dr. Nicky Chan has been elected to take up the next presidency. I am sure our Academy will achieve further successes under the leadership of Dr. Chan. Below is a summary of the major activities of the Academy in the past year.
2. HKAES and CAE confirmed that the 2nd Symposium on "Commercialization of High Technology" (eventually renamed as "Symposium on Commercialization of Innovation & Technology Com IT 2000") would be held in Hong Kong on 16–18 October 2000.
3. At the Sixth Annual General Meeting held on 12 July, three new Fellows were elected. A New Members' Dinner was held on 27 September 1999. The current roll of membership is 28.
4. HKAES accepted the invitation of the Hong Kong Institution of Engineers to sponsor the 1999 Mobile Multimedia Communications Design Contest without financial commitment.
5. Fellows of the Academy were invited by the Hong Kong Institution of Engineers to attend a special seminar on 25 April 2000 by Professor Eugene Wong, Representative of the US National Academy of Engineering, and Assistant Director of National Science Foundation.
6. Professor James Thorp, an authority in electric power engineering, was invited to give a lecture on the Reliability of Interconnection of Large Power on 31 July 2000.



(7) Session 2000-01, at 8th Annual General Meeting

1. This is a brief report for my year of Presidency of this Academy. I must thank the Council and all Fellows for their most active and kind support over the last year, and I look forward to the continued support of all in the future years.
2. At our Seventh Annual General Meeting held on 1 September 2000, we welcomed four new Fellows — Professor Peng Cheng, Dr. Choi Yu-leuk, Professor Allen Chwang and Professor William Gambling; the current roll has 33 Fellows.
3. We have now organized some Academy regalia, and the Fellowship Certificates are being distributed, and Fellowship ties are available.

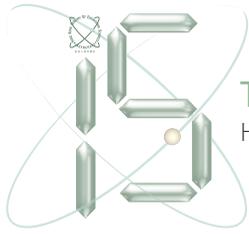
The President Medal is now available and the Past Presidents Medals have been ordered and will be ready for presentation soon.

4. The Fund Company, for promotion and advancement of high-tech R&D, has been formed and we have now appointed seven Directors from our Academy so it can operate legally and independently of the Academy. Hopefully we will receive funding from donors who supports this cause.
5. Ir Professor T.P. Leung led a team consisting of HKAES Fellows and HKIE senior members to carry out a study on the appropriate new technology for Hong Kong.
6. The Academy hosted a dinner to welcome Mr. Joseph Dwyer, FREng, President of The Institution of Civil Engineers on 29 March 2001. President Dwyer was accompanied by his Vice President, Doug



Oakervee, who knows Hong Kong extremely well, thanks to his previous involvement in various projects such as the Hong Kong Mass Transit Railway, Eastern Harbour Crossing and the Chek Lap Kok Airport.

7. A breakfast was held to receive Professor Wu Jieping, a Founding Member of the Chinese Academy of Medical Sciences, on 22 November 2000.
8. A dinner was held to receive the President of the Chinese Academy of Science, Professor Zhou Guangzhao, on 22 November 2000.
9. The Academy has also planned a joint conference with the City University to listen to a presentation by Professor Ludwik Finkelstein, FREng, who is a renowned expert on automatic control.
10. The accounts for the year are in good order, thanks to Ir James Chiu, our Hon Treasurer. We have a small surplus, despite some outstanding accounts with Fellows that have left Hong Kong but are officially still on the roll.



(8) Session 2001-02, at 9th Annual General Meeting

The Academy has a most successful year and made a lot of progress this year.

1. We have held three Council Meetings this year.

34th	10 September 2001
35th	7 January 2002
36th	10 May 2002
2. We have organized a briefing lunch by Prof Simon Wong of ASTRI to introduce and discuss with our Fellows on their role and their plans.

This was held on 21 February 2002.

3. Two officers from the China Academy of Engineering visited us in May 2002 to explore avenues of cooperation between CAE and HKAES.

This was followed up by a brief discussion in Beijing by James Chiu and Edmund Leung where it was suggested that we should try to work on real projects.

4. Professor Otto Lin organized an International Symposium on Economic Development through Commercialization of Science & Technology, held in March 2002 at HKUST and Nansha. Our President chaired the first session.
5. Our President assisted to organize a two-day Forum on Knowledge Economy in World Strategy and Vision on Development for HKSAR and Mainland on 24/25 May.



The President gave an opening speech and presided over the lunch meeting where the President of CAS, Professor Lu Yong Xiang gave a talk.

6. We received I Kralik from the Academy of Engineering of Hungary on 13 April 2002, accompanied by the Consul General of Hungary.

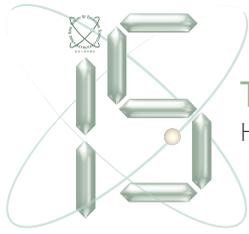
They extended an invitation for a delegation from HKAES which later became part of a delegation from the HK General Chamber of Commerce. HKAES have not yet taken up the offer.

7. Our President was admitted to the Academy of Science in Canada as FRSC.
8. Dr. H.K. Cheng was awarded Gold Medal by The Institution of Structural Engineers.
9. Two of our Fellows received honours on 1 July.

Professor H.K. Chang was awarded GBS.

Dr. T.L. Ng was awarded BBS.

10. We mourned the passing away of Dr. Edwin Tao in May 2002.
11. We record with thanks the retirement from Council of Professor T.P. Leung from SVP and Edmund Leung from Honorary Secretary.



(9) Session 2002–03, at 10th Annual General Meeting

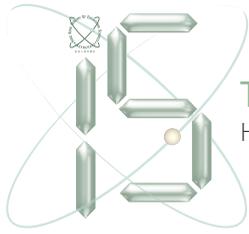
The Academy has a successful year in our conventional activities and has made much progress in strengthening our foundation for new activities.

1. We have held two Council meetings this year:

37th	20 December 2002
38th	18 August 2003
2. We have made a comprehensive review of the M&A in accordance with the Company Registry's latest guidelines. We have held an EGM on 20 March 2003 and have the revised M&A adopted by the Academy. The new M&A is being printed.
3. We have organized a dinner on 20 March 2003 following the EGM. Secretary for Environment, Transport and Works, Dr. Sarah Liao gave a briefing and discussed with Fellows on her policy areas.
4. We have convened a Working Group on Construction Industry with Dr. H.K. Cheng and the late Ir Dr. N.K. Chan as advisors and Ir Professor Y.L. Choi as convenor. A paper entitled "Framework for Construction Policy Study" was produced and submitted to the Secretary for Environment, Transport and Works at the Academy dinner.
5. We received I. Kralik from the Academy of Engineering of Hungary the second time on 13 October 2002 accompanied by the Consul General of Hungary. We have followed up with the Hungarian Academy, leading to a planned visit of Professor Laszlo Somlyody scheduled for December 2003 to be financially sponsored by HKU and jointly sponsored by HKIE and ICE HKA as well as the Academy.



6. Our President attended a ceremony on 22 November to be inducted to the Royal Society of Canada as newly elected Fellow. Later, he received the 2003 N.O. Myklestad Award from ASME.
7. Professor C.F. Lee was elected Fellow of Canadian Academy of Engineering in May 2003.
8. Members have commented on Professor C.C. Chan's paper on the status of high-tech and its commercialization in Hong Kong. The paper will form a section of the Chinese Academy of Engineering's report on the study of the role of engineering in economic development.
9. Professor C.C. Chan co-chaired a session of a high-tech forum in Shanghai held by the Royal Academy of Engineering of the U.K. in October 2002.
10. We have prepared and adopted a formal set of guidelines on 18 August for the election of new Fellows.
11. Three of our Fellows received honours during the year.
President Y.K. Cheung was awarded SBS, Ir Professor C.F. Lee was awarded J.P. and Ir Professor T.P. Leung was awarded BBS on 1 July.
12. We mourn the passing away of Immediate Past President Dr. N.K. Chan in May 2003.
13. We record with thanks the retirement from Council of
Ir James Blake, Senior Vice President
Ir Professor C.C. Chan, Vice President
Ir Dr. Raymond C.T. Ho



(10) Session 2003–04, at 11th Annual General Meeting

1. The Academy has further developed our on-going activities in the last year and continued to strengthen our foundation for new activities.
2. We have held three Council meetings this year:

39th	11 December 2003
40th	24 May 2004
41st	30 July 2004
3. We have held a meeting with the Financial Secretary Mr. Henry Tang on 20 September 2004. Fellows attended and appraised F.S. with the aim and objects of the Academy and the areas of public policies where our Fellows are prepared to offer advice. The need for coordination of policies relating to Pearl River Delta development was emphasized.
4. We followed up the issue of physical development with our response to government's Stage 3 Public Consultations on Hong Kong 2030 Study. A Discussion Group was convened by Ir Professor Y.L. Choi with Ir Dr. H.K. Cheng as Advisor. A paper entitled "Realizing Hong Kong's Development Vision" was prepared and submitted to Planning Department on 30 March 2004.
5. We received Professor Laszlo Somlyody of the Hungarian Academy of Engineering in May/June 2004. The dinner reception on 31 May 2004 was attended by two relevant senior government officials. Fellows exchanged views with the visitor and guests on issues of the role of engineering in public policies.

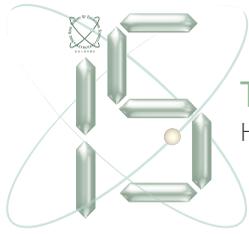


6. We co-sponsored Professor Somlyody's Public Lecture on 3 June 2004 in conjunction with HKU, HKIE, IAWM. The event attracted a large audience.
7. We welcome four new Fellows at the annual New Fellows Dinner in December 2003.
8. We have updated the membership profile and discussed its use in the election of new Fellows and the planning of Academy activities. We have set up a new supplementary mechanism for identifying potential candidates for election to Academy membership.
9. One of our Fellows received honours during the year 2003.

On 15 October 2003, Professor Cheung was awarded the Medal of Excellence in Engineering Education by the World Federation of Engineering Organizations during their General Assembly in Tunis. This was followed by the award of the First Gold Medal of The Hong Kong Institution of Engineers in March 2004.

10. We have distributed printed copies of the new M&A of the Academy to all Fellows. We have also made certain arrangements to reduce administrative cost.
11. We record with thanks the retirement from Council of

Ir Professor Y.K. Cheung, President
Ir Professor Otto Lin, Vice President
Ir Professor H.K. Chang
Ir Professor W.S. Leung



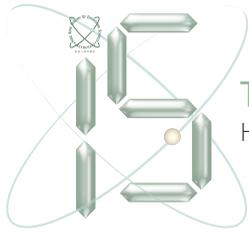
(11) Session 2004–05, at 12th Annual General Meeting

1. The Academy has had another fruitful year of activities building upon the solid foundation laid in the past 10 years.
2. We held four Council meetings and one special meeting this year:

42nd	30 September 2004
43rd	13 December 2004
44th	24 May 2004
45th	29 July 2005
Special meeting	10 June 2005
3. We received the Presidential delegation of the Hungarian Academy of Engineering in October 2004. The Consul General of Hungary to Hong Kong and the delegation attended the dinner reception on 28 October 2004. Thirteen Fellows attended and exchanged views with the visitors on engineering education, professional activities and business relationship between Hungary and Hong Kong. We arranged for the visitors to visit HKU and HKUST. We signed a Cooperation Agreement with HAE, which is the Academy's first such event.
4. We acted as co-organizer of a seminar on project management in November 2004 in conjunction with the Chinese Academy of Engineering and HKIE. Our Immediate Past President and the President respectively delivered Opening and Closing Addresses at the Seminar.
5. We have arranged for one of our Fellows to be invited as a speaker when the government arranges the next series of public lectures by the Chinese Academy of Sciences and Chinese Academy of Engineering.



6. We visited South China University of Science and Technology on 28 May 2005 and held discussions with President Li of the University and Professor Wang Zhong Tuo of CAE. Eight Fellows participated in the discussions. Jointly with the hosts, we identified topics for further exploration as possible collaborative projects.
7. We welcome four new Fellows at the annual New Fellows Dinner in September 2004.
8. We continued to systematize the practice on nomination of candidates for election as new Fellows, taking account of the membership profile and Academy's planned activities as well as the requirement of high standard of engineering excellence.
9. One Fellow received honours in the year. Professor C.F. Lee was elected Fulbright Distinguished Scholar in April 2005 and Silver Bauhinia Star on 1 July 2005.
10. We record with thanks the retirement from Council of Ir James Blake as Chairman of the Membership Committee for the session 2004–05.



(12) Session 2005–06, at 13th Annual General Meeting

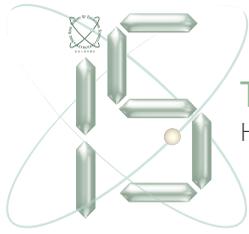
1. The Academy has had another fruitful year of activities and beginning to see the results of our past work.
2. We held three Council meetings and two special meetings this year:

46th	16 November 2005
47th	10 April 2006
48th	19 September 2006
Special meeting	1 September 2005
Special meeting	23 March 2006
3. We co-organized a Forum with CAE-Management Division on Engineering Management Education held in South China University of Technology on 12 September 2005. Seven Fellows attended and disseminated Hong Kong's experience in the development of urban development management and academic course on engineering management.
4. We visited SCUT on 15 March 2006 and held discussion on the organizing of two joint seminars, respectively on PRD logistics and water resources management. The first seminar was held on 30 May 2006 with two Fellows giving presentations.
5. We received two visitors: Professor Mauricio Porraz from the Mexican Academy of Engineering in March 2006, and Professor Wang Zhongtuo of the Chinese Academy of Engineering in May 2006.
6. We co-organized the Academician's Consultative Forum on Port Development at the invitation of Dalian Municipal Government and the Chinese Academy of Engineering (Management Division). Eight



Fellows participated in the Forum on 10 and 11 July 2006, giving presentations and discussions.

7. We accepted the government's formal invitation to nominate a speaker for the 2006 lectures of LCSD's Distinguished Chinese Scientists' Lecture Series to be held in November 2006.
8. We welcome two new Fellows at the annual New Fellows Dinner in September 2005.
9. One Fellow received honours in the year. Ir Russell Black was elected Fellow of the Royal Academy of Engineering in July 2006.
10. We record with thanks the retirement of Professor Allan Chwang as Chairman of Membership Committee for the session 2005–06.



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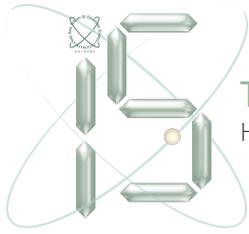
(13) Session 2006–07, at 14th Annual General Meeting

1. At the 13th Annual general Meeting held on 19 September 2006, two new Fellows were elected. A New Fellows Dinner was held on 11 December 2006.
2. We held three Council meetings this year:

49th	11 December 2006
50th	15 June 2007
51st	23 October 2007
3. We spent most of our efforts in preparing for the publication of the first handbook of our Academy and in organizing a Symposium entitled “Urgency of Sustainable Development for Hong Kong”.
4. The handbook will serve three purposes. First, it summarizes the Academy's achievements in the 13 years since its formal establishment. Second, it publishes the full list of Fellows with contact information. Third, the publication is to commemorate the 10th Anniversary of Hong Kong's return to her motherland. It is expected that the handbook will be ready in the early part of 2008.
5. The Symposium is a follow-up to our on-going activities of contributing to public policy and collaboration with sister academies. The symposium aims to clarify our current knowledge of air pollution in Hong Kong and to identify what needs to be done to enable the rational formulation of an effective policy. In addition to local speakers and participants, speakers will be invited from Chinese Academy of Engineering and Chinese Academy of Sciences to address the regional aspects of the issues.



6. We mourn the passing away of Professor Allen Chwang and Professor T.P. Leung.
7. One Fellow received honours in the year. Professor C.F. Lee received an Honorary Doctor of Science degree from the University of Western Ontario, Canada on 5 November 2006.
8. We record with thanks the retirement of Ir C.K. Chow and Ir H.S. Kwong from the Council, Ir James Chiu retiring as Honorary Treasurer and Professor Y.L. Choi as Honorary Secretary, and Professor Y.K. Cheung retiring as Immediate Past President. I will retire as President having served my three-year term after this AGM.



(14) Session 2007–08, at 15th Annual General Meeting

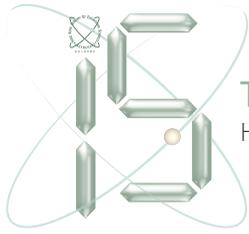
1. At the 14th Annual General Meeting held on 23 October 2007, no new Fellows were elected as no nomination was received.
2. Three Council Meetings were held during the session:

52nd	8 January 2008
53rd	7 July 2008
54th	23 October 2008
3. The Symposium on “Sustainability on Hong Kong: Air Quality”, originally scheduled to held on 25 February 2008, was deferred to a later date due to the fact that the topic was getting less critical as the government has become more forthcoming in its policy towards air pollution control. Since then, the Organizing Sub-committee put their heads together and proposed that the next Symposium should focus on the area of “the impact of industrial management, urban management and engineering management to the change of the social systems in the PRD, South-east Asian nations, etc.”. Another topic would be on how to help rebuild Sichuan. Professor Y.L. Choi will contact Professor Wang Zhongtuo (a CAE member) to explore the possibility of a joint project.
4. The organizing of HKAES Lectures was under progress led by Professor J.H.W. Lee. The objective and guidelines of the Lecture are as follows:
 - (i) The lecture series was originally planned to acquaint newly elected Fellows with other Fellows and to promote the public image of HKAES.
 - (ii) The speaker for the first Lecture should preferably be a HKAES Fellow.



Several recent Fellows had indicated agreement to give a lecture at the time of their election.

5. With the help of Professor Y.L. Choi, the draft of the first handbook has been finalized, and is ready for publication. We are now looking for a printer. The handbook will be ready in 2009.
6. Professor William A. Gambling has left Hong Kong after his retirement from HKUST. He resigns from the Council as he will not be able to attend the meetings.
7. Professor Yiu-wing Mai recently becomes a Fellow of the Royal Society of the UK (FRS).



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(15) Session 2008–09, at 16th Annual General Meeting



Appendix 2
Council,
Membership Committee
and Ad hoc Committees





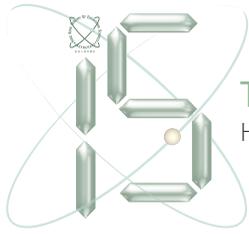
(A) Officers and Council Members

(1) Session 1994-95

<i>President:</i>	Sir Sze-yuen Chung
<i>Senior Vice President:</i>	Ir Professor Charles Kuen Kao
<i>Vice Presidents:</i>	Ir Dr. Kenneth Nai-keong Chan Ir David Austin Morris
<i>Honorary Treasurer:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Honorary Secretary:</i>	Ir Professor Charles Kuen Kao
<i>Members:</i>	Ir Professor Yau-kai Cheung Ir Dr. Samuel Ping-wai Wong Ir Bengt Delaryd Ir Stewart Morris John

(2) Session 1995-96

<i>President:</i>	Sir Sze-yuen Chung
<i>Senior Vice President:</i>	Ir Professor Charles Kuen Kao
<i>Vice Presidents:</i>	Ir Dr. Kenneth Nai-keong Chan Ir David Austin Morris
<i>Honorary Treasurer:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Honorary Secretary:</i>	Ir Professor Tin-pui Leung
<i>Members:</i>	Ir Professor Yau-kai Cheung Ir Professor Leroy L. Chang Ir Dr. Samuel Ping-wai Wong Ir Bengt Delaryd Ir Niels Anthony Kraunsoe



(3) Session 1996–97

<i>President:</i>	Sir Sze-yuen Chung
<i>Senior Vice President:</i>	Ir Professor Charles Kuen Kao
<i>Vice Presidents:</i>	Ir Dr. Kenneth Nai-keong Chan Ir David Austin Morris
<i>Honorary Treasurer:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Honorary Secretary:</i>	Ir Professor Tin-pui Leung
<i>Members:</i>	Ir Ronald James Blake Ir Professor Yau-kai Cheung Ir Professor Leroy L. Chang Ir James Chiu Ir Dr. Samuel Ping-wai Wong Ir Dr. Raymond Chung-tai Ho Ir Bengt Delaryd Ir Niels Anthony Kraunsoe Ir Robert Moir Kennard

(4) Session 1997–98

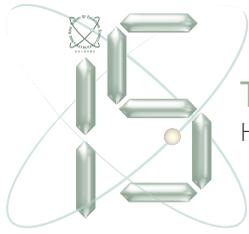
<i>President:</i>	Ir Professor Charles Kuen Kao
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<i>Vice Presidents:</i>	Ir David Austin Morris Ir Professor Tin-pui Leung
<i>Honorary Treasurer:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Honorary Secretary:</i>	Ir Professor Tin-pui Leung
<i>Members:</i>	Ir Ronald James Blake Ir Professor Yau-kai Cheung Ir Professor Leroy L. Chang Ir James Chiu Ir Dr. Samuel Ping-wai Wong



Ir Dr. Raymond Chung-tai Ho
 Ir Bengt Delaryd
 Ir Robert Moir Kennard
 Ir Niels Anthony Kraunsoe
 Ir Professor Ching Chuen Chan
 Ir Hon-kwan Cheng
 Ir Edwin Hsueh Chi Tao

(5) Session 1998–99

President: Ir Professor Charles Kuen Kao
Senior Vice President: Ir Dr. Kenneth Nai-keong Chan
Vice Presidents: Ir David Austin Morris
 Ir Professor Tin-pui Leung
Honorary Treasurer: Ir James Chiu
Honorary Secretary: Ir Professor Tin-pui Leung
Members: Sir Sze-yuen Chung
 Ir Ronald James Blake
 Ir Professor Yau-kai Cheung
 Ir Professor Leroy L. Chang
 Ir Dr. Raymond Chung-tai Ho
 Ir Robert Moir Kennard
 Ir Niels Anthony Kraunsoe
 Ir Professor Ching Chuen Chan
 Ir Hon-kwan Cheng
 Ir Edwin Hsueh Chi Tao



(6) Session 1999–00

<i>President:</i>	Ir Professor Charles Kuen Kao
<i>Immediate Past President:</i>	Sir Sze-yuen Chung
<i>Senior Vice President:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Vice Presidents:</i>	Ir David Austin Morris Ir Professor Tin-pui Leung
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Professor Ching Chuen Chan
<i>Members:</i>	Ir Ronald James Blake Ir Professor Yau-kai Cheung Ir Professor Leroy L. Chang Ir Dr. Raymond Chung-tai Ho Ir Robert Moir Kennard Ir Dr. Hon-kwan Cheng Ir Edwin Hsueh Chi Tao Ir Edmund Kwong Ho Leung

(7) Session 2000–01

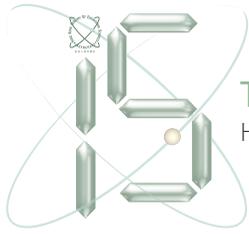
<i>President:</i>	Ir Dr. Kenneth Nai-keong Chan
<i>Immediate Past President:</i>	Ir Professor Charles Kuen Kao
<i>Senior Vice President:</i>	Ir Professor Tin-pui Leung
<i>Vice Presidents:</i>	Ir Professor Ching Chuen Chan Ir Professor Yau-kai Cheung
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Edmund Kwong Ho Leung
<i>Members:</i>	Ir Ronald James Blake Ir Dr. Raymond Chung-tai Ho Ir Dr. Robert Moir Kennard Ir Professor Hsin Kang Chang



Ir Dr. Edwin Hsueh Chi Tao
Ir Professor Otto Chui Chau Lin
Ir Professor Wai Sun Leung

(8) Session 2001–02

President: Ir Professor Yau-kai Cheung
Senior Vice President: Ir Professor Tin-pui Leung
Vice Presidents: Ir Professor Ching Chuen Chan
Ir Ronald James Blake
Honorary Treasurer: Ir James Chiu
Honorary Secretary: Ir Edmund Kwong Ho Leung
Members: Ir Dr. Raymond Chung-tai Ho
Ir Robert Moir Kennard
Ir Dr. Edwin Hsueh Chi Tao
Ir Professor Hsin Kang Chang
Ir Professor Wai Sun Leung
Ir Professor Otto Chui Chau Lin
Ir Professor William A. Gambling
Ir Professor Che King Chow
Ir Professor Ping Cheng
Ir Hon Sang Kwong



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(9) Session 2002–03

<i>President:</i>	Ir Professor Yau-kai Cheung
<i>Immediate Past President:</i>	Ir Dr. Kenneth Nai Keong Chan
<i>Senior Vice President:</i>	Ir Roland James Blake
<i>Vice Presidents:</i>	Ir Professor Ching Chuen Chan Ir Professor Chack-fan Lee
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Yu-leuk Choi
<i>Members:</i>	Ir Dr. Raymond Chung-tai Ho Ir Professor Hsin Kang Chang Ir Professor Wai Sun Leung Ir Professor Otto Chui Chau Lin Ir Professor William A. Gambling Ir Professor Che King Chow Ir Professor Ping Cheng Ir Hon Sang Kwong Ir Francis Shu-ying Bong

(10) Session 2003–04

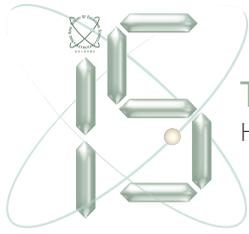
<i>President:</i>	Ir Professor Yau-kai Cheung
<i>Senior Vice President:</i>	Ir Professor Chack-fan Lee
<i>Vice Presidents:</i>	Ir Francis Shu-ying Bong Ir Professor Otto Chiu Chau Lin
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Professor Yu-leuk Choi
<i>Members:</i>	Ir Edmund Kwong Ho Leung Ir Russell John Black Ir Professor Allen Tse Yung Chwang Ir Professor Hsin Kang Chang



Ir Professor Wai Sun Leung
Ir Che King Chow
Ir Professor Ping Cheng
Ir Hon Sang Kwong

(11) Session 2004–05

President: Ir Professor Chack-fan Lee
Immediate Past President: Ir Professor Yau-kai Cheung
Senior Vice President: Ir Francis Shu-ying Bong
Vice Presidents: Ir Professor William A. Gambling
Ir Professor Joseph H.W. Lee
Honorary Treasurer: Ir James Chiu
Honorary Secretary: Ir Professor Yu-leuk Choi
Members: Ir Che-king Chow
Ir Hon-sang Kwong
Ir Edmund Kwong-ho Leung
Ir Russell John Black
Ir Professor Allen Tse Yung Chwang
Ir Dr. Ching Kwong Lau
Ir Professor Wilson H. Tang



(12) Session 2005–06

<i>President:</i>	Ir Professor Chack-fan Lee
<i>Immediate Past President:</i>	Ir Professor Yau-kai Cheung
<i>Senior Vice President:</i>	Ir Francis Shu-ying Bong
<i>Vice Presidents:</i>	Ir Professor William A. Gambling Ir Professor Joseph H.W. Lee
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Professor Yu-leuk Choi
<i>Members:</i>	Ir Che-king Chow Ir Hon-sang Kwong Ir Edmund Kwong-ho Leung Ir Russell John Black Ir Professor Allen Tse Yung Chwang Ir Dr. Ching Kwong Lau Ir Professor Wilson H. Tang Ir Dr. Raymond Chung-tai Ho

(13) Session 2006–07

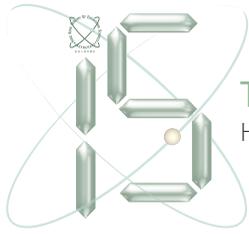
<i>President:</i>	Ir Professor Chack-fan Lee
<i>Immediate Past President:</i>	Ir Professor Yau-kai Cheung
<i>Senior Vice President:</i>	Ir Francis Shu-ying Bong
<i>Vice Presidents:</i>	Ir Professor William A. Gambling Ir Professor Joseph H.W. Lee
<i>Honorary Treasurer:</i>	Ir James Chiu
<i>Honorary Secretary:</i>	Ir Professor Yu-leuk Choi
<i>Members:</i>	Ir Che-king Chow Ir Hon-sang Kwong Ir Edmund Kwong-ho Leung Ir Russell John Black



Ir Professor Allen Tse Yung Chwang
 Ir Dr. Ching Kwong Lau
 Ir Professor Wilson H. Tang
 Ir Dr. Raymond Chung-tai Ho

(14) Session 2007–08

President: Ir Francis Shu-ying Bong
Immediate Past President: Ir Professor Chack-fan Lee
Senior Vice President: Ir Professor Joseph H.W. Lee
Vice Presidents: Ir Professor Yu-leuk Choi
 Ir Professor William A. Gambling
Honorary Treasurer: Ir Dr. Ka-ching Chan
Honorary Secretary: Ir Dr. Tat-lun Ng
Members: Ir Russell John Black
 Ir Professor Yau-kai Cheung
 Ir James Chiu
 Ir Dr. Raymond Chung-tai Ho
 Ir Dr. Ching Kwong Lau
 Ir Professor Chung-yee Lee
 Ir Edmund Kwong-ho Leung
 Ir Professor Wilson H. Tang



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(15) Session 2008–09

<i>President:</i>	Ir Francis Shu-ying Bong
<i>Immediate Past President:</i>	Ir Professor Chack-fan Lee
<i>Senior Vice President:</i>	Ir Professor Joseph H.W. Lee
<i>Vice Presidents:</i>	Ir Professor Yu-leuk Choi Ir Professor Wilson H. Tang
<i>Honorary Treasurer:</i>	Ir Dr. Ka-ching Chan
<i>Honorary Secretary:</i>	Ir Dr. Tat-lun Ng
<i>Members:</i>	Ir Russell John Black Ir James Blake Ir James Chiu Ir Dr. Raymond Chung-tai Ho Ir Dr. Ching Kwong Lau Ir Professor Chung-yee Lee Ir Edmund Kwong-ho Leung



(B) Membership Committee

(1) 1994–95

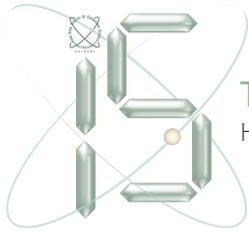
Ir Professor Leory Chan
Ir Professor Y.K. Cheung
Sir S.Y. Chung
Ir Bengt Delaryd
Ir Professor Charles Kao
Ir Niels Anthony Kraunsoe
Ir Professor T.P. Leung
Ir David Morris
Ir Dr. Samuel Ping-wai Wong

(2) 1995–96

Sir S.Y. Chung	(Chairman)
Ir Dr. N.K. Chan	(Civil)
Ir Professor Leroy Chan	(Chemical)
Ir Professor Charles Kao	(Electrical)
Ir Dr. Samuel Wong	(Mechanical)

(3) 1996–97

Ir Dr. N.K. Chan	(Chairman)
Ir James Blake	(Civil)
Ir James Chiu	(Electrical)
Ir Professor T.P. Leung	(Mechanical)
Ir Malcolm Matthews	(Chemical)



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(4) 1997–98

Ir Dr. N.K. Chan	(Chairman) (Civil)
Ir Professor T.P. Leung	(Honorary Secretary) (Mechanical)
Ir Dr. H.K. Cheng	(Civil)
Ir James Chiu	(Electrical)

(5) 1998–99

Ir Professor Y.K. Cheung	(Chairman) (Civil)
Ir Dr. H.K. Cheng	(Civil)
Ir James Chiu	(Electrical)
Ir Dr. Edwin Tao	(Mechanical)
Ir Professor T.P. Leung	(Honorary Secretary)

(6) 1999–00

Ir Dr. H.K. Cheng	(Chairman) (Civil)
Ir Leroy Chang	(Chemical & Others)
Ir Professor W.S. Leung	(Electrical)
Ir Edmund K.H. Leung	(Mechanical)
Ir Professor C.C. Chan	(Honorary Secretary)



(7) 2000–01

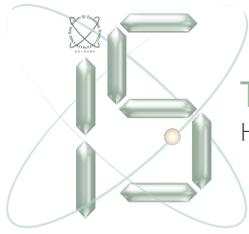
Ir Professor Y.K. Cheung	(Chairman) (Civil)
Ir Professor Charles Kao	(Electrical)
Ir Professor T.P. Leung	(Mechanical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Edmund K.H. Leung	(Honorary Secretary)

(8) 2001–02

Ir. Professor T.P. Leung	(Chairman) (Mechanical)
Ir Professor C.C. Chan	(Electrical)
Ir James Blake	(Civil)
Ir Professor Otto Lin	(Chemical & Others)
Ir Edmund Leung	(Honorary Secretary)

(9) 2002–03

Ir Professor Otto Lin	(Chairman) (Chemical & Others)
Ir James Blake	(Civil)
Ir James Chiu	(Electrical)
Ir Professor Allan Chwang	(Mechanical)
Ir Professor Y.L. Choi	(Honorary Secretary)



(10) 2003–04

Ir Professor Otto Lin	(Chairman) (Chemical & Others)
Ir James Blake	(Civil)
Ir James Chiu	(Electrical)
Ir Professor Allan Chwang	(Mechanical)
Ir Professor Y.L. Choi	(Honorary Secretary)

(11) 2004–05

Ir James Blake	(Chairman) (Civil)
Ir Professor Allan Chwang	(Mechanical)
Ir James Chiu	(Electrical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Professor Y.L. Choi	(Honorary Secretary)

(12) 2005–06

Ir Professor Allan Chwang	(Chairman) (Mechanical)
Ir Francis Bong	(Civil)
Ir James Chiu	(Electrical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Professor Y.L. Choi	(Honorary Secretary)



(13) 2006–07

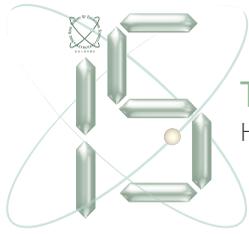
Ir Francis Bong	(Chairman) (Civil)
Ir James Chiu	(Electrical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Professor C.Y. Lee	(Mechanical)
Ir Dr. T.L. Ng	(Honorary Secretary)

(14) 2007–08

Ir James Chiu	(Chairman) (Electrical)
Ir Russell Black	(Civil)
Ir Professor C.Y. Lee	(Mechanical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Dr. T.L. Ng	(Honorary Secretary)

(15) 2008-09

Ir James Chiu	(Chairman) (Electrical)
Ir Russell Black	(Civil)
Ir Professor C.Y. Lee	(Mechanical)
Ir Professor Otto Lin	(Chemical & Others)
Ir Dr. T.L. Ng	(Honorary Secretary)



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(C) Ad hoc Committees

(1) 1996 A Editorial Board for Book Project 50 Years of Engineering Achievements

Ir Professor Charles Kao (Chairman)

Ir Dr. R.M. Kennard

Ir James Blake

Ir Professor T.P. Leung

(2) 1996 B Financing Committee for Book Project Engineering Hong Kong — 50 Years of Achievements

Ir James Chiu (Chairman)

Ir Dr. N.K. Chan

Ir James Blake

Ir Dr. Samuel Wong

Ir Dr. Edwin Tao



(3) 2002 Committee on Construction Industry Policy

Ir Professor Yu-leuk Choi (Convenor)
Ir Dr. Hon-kwan Cheng (Honorary Advisor)
Ir Dr. Raymond Chung-tai Ho
Ir Professor C.K. Chow
Ir Hon Sang Kwong
Ir Professor Allen Tse Yung Chwang
Ir Edmund Kwong-ho Leung
Ir Edgar Kwan (by invitation)
Ir Kenneth T.K. Lau (by invitation)

(4) 2003 Committee on "Hong Kong 2030"

Ir Professor Yu-leuk Choi (Convenor)
Ir Dr. Hon-kwan Cheng (Advisor)
Ir Professor W.A. Gambling
Ir C.K. Chow
Ir H.S. Kwong

Appendix 3
Selected Papers
Issued by the Academy

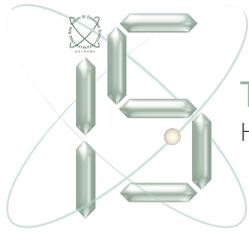




(1) An Article on “The Hong Kong Academy of Engineering Sciences (HKAES)”

by Sir S Y Chung, First President of the HKAES, Asia Engineer,
April 1995, P. 56

1. As many of you know, many developed countries in the world have a highest national body of their own consisting of a relatively small number of professional engineers who have achieved great success in engineering, business and public service.
2. In the United Kingdom, which is the sovereign power ruling Hong Kong since the 1840s, the Council of Engineering Institutions formed in 1965 took the initiative in the mid-1970s to establish the Fellowship of Engineering with an initial limit of members to six hundred. In 1983 the first engineer from Hong Kong was admitted to the British Fellowship, and to date a total of seven Hong Kong professional engineers have acquired this prestigious status. In 1992 the Fellowship of Engineering received its Royal Charter and changed its name to the Royal Academy of Engineering.
3. After the transfer of Hong Kong’s sovereignty from British to China in July 1997, Hong Kong will become part of China as a Special Administrative Region in accordance with Sino-British Joint Declaration signed in 1984 and the Basic Law of Hong Kong passed by the National Peoples Congress in 1990. Therefore after June 1997, Hong Kong’s professional engineers, being Chinese nationals, can only be admitted to the Royal Academy of Engineering in Britain as Foreign Members with consequential limitations and difficulties.
4. In the light of this development, a group of eight resident Fellows mainly from the Royal Academy of Engineering got together in June 1991 and discussed plans to establish Hong Kong’s own academy.



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

The information received in 1993 that China was planning to form its National Academy of Engineering gave them impetus to move forward. With the full support of both the Government and the Hong Kong Institution of Engineers, and after a long process of preparation, the Hong Kong Academy of Engineering Sciences was formally established on 13 September 1994. Two of the important objectives in the Mission Statement of the Hong Kong Academy are:

- 1) to raise the awareness of the importance of engineering in the Government and the Community; and
 - 2) to demonstrate to the Government and the Society the essential role of engineering in creating wealth and improving quality of life.
5. As Hong Kong is a relatively small place, it is considered that its Academy should cover a wider field and hence follow the practice in Continental Europe by using the terminology “Engineering Sciences”.
 6. It has also decided that the Hong Kong Academy should fix its initial limit of fellowship to sixty. This number was determined after taking into account of the initial size of the Royal Academy of Engineering and the population in both Britain and Hong Kong. It is planned that admission of fellows would not exceed eight in any one year.
 7. The Hong Kong Academy of Engineering Sciences at present consists of eight Founding Fellows, together with its first batch of six Fellows admitted in December last year. The batch for the year 1995 will be decided in June this year by a system very similar to that used by the Royal Academy in Britain.
 8. The Hong Kong Academy will not seek to duplicate the effort of the Hong Kong Institution of Engineers, but rather to provide



encouragement and influence to facilitate the work of the Institution. More importantly, the Hong Kong Academy aims to assume the role of adviser to the government as well as political and community leaders on matters of importance pertinent to engineering and the engineering community.

9. Among the fourteen Fellows elected to date, seven are from the Royal Academy of Engineering in Britain, one from the American Academy of Engineering, one from the Swedish Academy, and five are former Presidents of the Hong Kong Institution of Engineers. Each of these Fellows has achieved eminence in engineering or business or public service. They now come together as a body to serve engineering as a whole. The Hong Kong Academy is only at its very beginning.
10. List of Officers and Council Members of the Academy for 1995 and 1996 and Fellows is as follows:

Officers

President: Sir Sze-yuen Chung, Fellow of the Royal Academy of Engineering

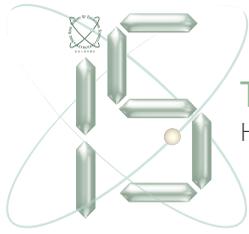
Senior Vice-President: Professor Charles Kuen Kao, Fellow of the Royal Academy of Engineering

Vice-President: Dr. Kenneth Nai-keong Chan, Fellow of the Royal Academy of Engineering

Vice-President: David Austin Morris, Fellow of the Royal Academy of Engineering, Past President of the Hong Kong Institution of Engineers

Honorary Treasurer: Dr. Kenneth Nai-keong Chan

Honorary Secretary: Professor Tin-pui Leung, Immediate Past President of the Hong Kong Institution of Engineers



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

Council Members

Professor Yau-kai Cheung, Fellow of the Royal Academy of Engineering

Professor Leroy L Chang, Member of the National Academy of Engineering

Dr. the Hon Samuel Ping-wai Wong, Fellow of the Royal Academy of Engineering

Bengt Delaryd, Fellow of the Royal Swedish Academy of Engineering Sciences

Nels Kraunsoe, Past President of the Hong Kong Institution of Engineers

Fellows

R. J. Black, Past President of the Hong Kong Institution of Engineers

Dr. H. K. Cheng, Past President of the Hong Kong Institution of Engineers

Dr. R. C. T. Ho, Past President of the Hong Kong Institution of Engineers



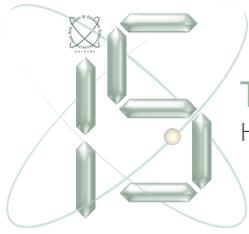
(2) Framework for Construction Policy Study

Submitted to Secretary for Environment, Transport and Works in 2003

1. Hong Kong is approaching a matured economy. The construction industry will continue to be influenced by three long-term trends. New construction of the conventional types of infrastructure and buildings are stabilizing. Business development requires integration of related activities. Less new entrants are attracted to the on-site work force. While individual companies and the professionals are responding to the market forces arising from these trends, the changing economic structure has aggravated their situation. Many construction firms do not see how they can become profitable business again in the future new economy. The construction industry is at a low morale.
2. A strong leadership is required from the government to show the direction for the industry's development. A construction policy is needed in line with the overall economic policy. The fundamental question is the inter-related issues of the construction sector's appropriate contribution to HK's GDP, and the desired type, quality and quantity of its output. The purpose of this note is to set out the main study subjects which should be undertaken to provide sound analysis and research in the policy formulation process.

Need for Government's Direction

3. Government did and should continue to exercise positive influence on construction matters when there is a need to do so for social, technological, economic or political reasons. Major examples include:
 - (a) The introduction of statutory agents in building control and the subsequent major development of this system notably in 1955, 1972 and 1996.



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

- (b) The introduction of the statutory control of R.C. in the 1930's and the subsequent development of the control system.
 - (c) Cutting back public works expenditure in the early 1970s and 1980s.
 - (d) Shifting construction focus to the Airport Core Programme in the early 1990s.
 - (e) The appointment of the Construction Industry Review Committee (CIRC) and the follow-up work.
4. Hong Kong construction industry has traditionally supported a significant part of the Hong Kong economy and is believed to have fuelled the retail, restaurant and entertainment businesses. Despite recent criticisms of low productivity and several corruption cases, the industry as a whole performs not unfavourably compared with other similar economies or with other economic sectors in Hong Kong. There is scope for operational improvement and the CIRC's recommendations are being taken forward. But certain fundamental issues are yet to be resolved in the light of Hong Kong's changing economic structure. This is all the more important as the government's economic policy must be supported by policies in all contributing areas.
5. The Chief Executive's Policy Address has reasserted the consensus view of the recent discussions and experience in the last few years. Economic integration with the mainland must be further strengthened and that "producer services" are the logical economic base of Hong Kong in the foreseeable future. Construction service both locally and outside Hong Kong can be part of this base.
6. Government can help to achieve this goal through physical development policy and construction works policy. The former sets the strategy for key infrastructure and urban development. HKU and other institutions are conducting relevant studies on development



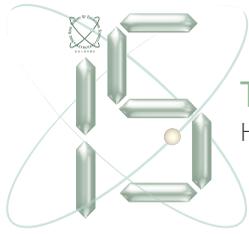
strategy. A clear and consistently implemented development strategy will provide guidance on the estimation of future demand for construction services.

7. Construction works policy helps to create the environment for the healthy operation and growth of the construction industry. In the above macroeconomics context, construction policy objectives should include:
 - (a) to maintain the appropriate GDP proportion in construction (as required from economic policy);
 - (b) to maximize productivity and quality;
 - (c) to maintain a high level of safety, both for the workers and to the community.

8. In order to formulate policies to achieve these objectives, the key action areas have to be identified first. Studies can then be conducted to set the appropriate range of action targets.

Key Issues

9. Construction sector's output is contributed by private-sector works, public works, overseas work and public housing. Apart from direct control of public works and public housing, government policies have varying influence on the cost of undertaking construction works locally or overseas. The economic consequence of varying the inputs to each category of works need to be better understood for a rational decision process which would otherwise be unduly dominated by social and political factors (as seems to be so in recent years). This is the first fundamental issue in construction policy. Its resolution is essential to avoiding the painful consequences of periodic cycles of labour shortage and unemployment.



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10. In the longer term, the proportion of on-site construction work must be reduced as well as improving the working conditions on site. The operational issues of health and safety are tackled by government in recent years and are not further addressed herein. Site work is unattractive and labour import causes social problems. Prefabricated construction method is being adopted by the building sector but is generally still more costly. Both the scale of use has to be increased and the corresponding process and technology involved need be more fully developed. Leadership from the government can accelerate beneficial change to maximize productivity and quality in future new construction.
11. Massive construction has continued for more than 20 years from the beginning of the New Towns Programme to the end of ACP, (1974–1997). The maintenance, repair and rehabilitation of the building stock and public works infrastructure are receiving greater attention. Because of the increasingly large scale, there is scope for process re-engineering and development of new technologies in this area of construction work.
12. Competition in an open market has been an effective means of driving change in Hong Kong. As conventional technologies are widely grasped, integration of mutually supportive businesses in the chains of activities related to construction is becoming an important factor in competitiveness. For example, design-and-build and BOT types of contracts are more common than before. Some construction firms are also engaged in property investment or management. The corporate quality and their performance need to be controlled to assure construction quality and client satisfaction. This is another area required to be studied.
13. Hong Kong being an open economy, fair competition can only be achieved if there are ways to ensure technology transfer to local



firms in projects undertaken by overseas firms and if local firms are on equal footing as overseas firms in the international market. The international competitiveness of Hong Kong construction firms need to be studied.

14. To sum up, the following key issues require studies of policy analysis and research in order to assist rational policy formulation:
 - (a) Economic consequences of varying policy measures on private sector works, public works, public housing and overseas works.
 - (b) Construction process and technology in new building construction and in the rehabilitation of existing buildings and infrastructure.
 - (c) Corporate quality and performance of construction firms.
 - (d) International competitiveness of the construction industry.

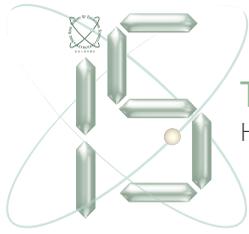
Key factors affecting these issues form the key action areas of construction policy.

Performance Indicators

15. When studies of the above 4 issues are completed, performance indicators of the construction industry have to be set up so that the effectiveness of policies can be measured.
16. In parallel, action should be taken to document the current best practices in each major type of construction. This will serve as the benchmark for firms to instigate improvements and for researchers and professionals to innovate.

HKAES Secretariat

15 March 2003



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(3) Realizing Hong Kong's Development Vision

(HKAES's Response to HKSAR Government's Stage 3 Public Consultation on Hong Kong 2030 Study)

Introduction

1. Hong Kong has set the vision of continuing development as a major world city. This requires continued improvement to the quality of living and maintaining appropriate economic activities. Both factors are necessary to sustain Hong Kong as a major international city.
2. Quality is of great importance to Hong Kong's future, both in functional, cultural and symbolic dimensions. These qualities should reflect Hong Kong's unique position as the melting pot of Chinese and foreign cultures. However, quality is a subjective issue. As much as possible should be left to the private sector to decide within a broad land use framework which must however be set by the government.
3. Sound economy is essential to ensure resource availability. Government has identified four pillar industries as Hong Kong's economic base, and has also pointed out integration with the Pearl River Delta (PRD) as the general direction forward. These are the basis for planning Hong Kong's economic infrastructure for servicing both regional and territorial activities.
4. In this note we will present our views on future development needs, options and strategy and develop our discussions from the viewpoint of feasibility and adaptability. Our comments are mainly on how to derive the strategy of key infrastructure and land use development, and how to ensure smooth implementation of the strategy. We will

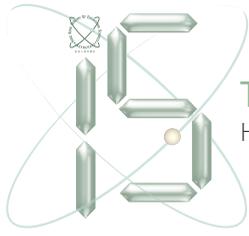


also comment on several specific development issues critical to the success of the strategy.

General Comments

5. We fully support the government's decision to formulate a long-term physical development strategy with planning horizon to the year 2030. The strategy is the essential framework to guide the consistent implementation of physical urban development works. The implementation process includes not only plan preparation and engineering construction, but also periodic review of development needs and the corresponding adjustment of the strategy. Without such a long-term reference framework, construction works can easily stray into inconsistency under public pressure to respond to short-term fluctuations in the external conditions that are inevitable during the long lead time of physical development plan. Indeed, Hong Kong's situation today is comparable to that of 20 years ago when the first TDS was promulgated. Thus the present planning horizon is reasonable.

6. We fully endorse the four-stage consultation framework adopted for the HK2030 study by the Planning Department. This represents the logical progression from development vision through planning objectives, issues and evaluation criteria to development options and strategy. In fact, we have high regard for government's open approach in inviting public participation in a wide spectrum of studies of planning issues. Looking back, this is a considerable advancement in public consultation in the last two decades. The expanded scope of public consultation increases the thrust of public opinion on development directions, and hence will render the resulting product (i.e. the development options and strategy) more palatable to the public.



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7. On the other hand, the expanded scope of public consultation will make it all the more important for the feasibility and implications of realizing different public desires or their perceived needs to be thoroughly discussed and clearly understood by all stakeholders before a decision on the strategy is made. We suggest the government to consider putting greater effort to publicize these implications and convey to the public the main reasons of major government decisions. Seminars, newspaper coverage and the Hong Kong Radio TV production e.g. “鏗鏘集” are useful ways for this purpose.

8. We will begin with our views on the suitable approach to develop strategy formulation and implementation that enables the achievement of feasibility and adaptability. Feasibility and adaptability are the critical success factors of Hong Kong’s first TDS of 1984. Elsewhere in the world, many grandiose urban development plans have failed to be realized because of serious implementation problems, especially economic and financial problems or difficulties of adapting to unforeseen changes in external conditions.

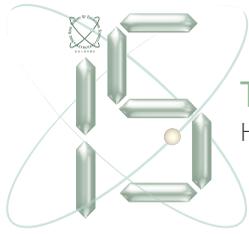
Strategy Formulation and Implementation Approach

9. The foundation of a feasible development plan is a set of realistic standards of performance that is to be satisfied by the entire urban system from implementation to operation. We endorse the definition of sustainable development adopted by Plan D in the Stage 1 Consultation Report. The standards to be set for the various performance indicators of the development plan must be considered in totality. When individual indicators are considered in isolation, the public would be only too easily misled by emotional and sensational arguments to demand unrealistically high requirements. Indicators arising from social and environmental issues are particularly



vulnerable. The compensation criteria for acquiring old buildings to implement URA projects and the environmentalist's demand on the KCR spur line through Long Valley are vivid examples that too high standards for individual performance indicators actually adversely affect the overall project because of the resulting high costs. The full cost implications of alternative standards should be made known to the public to stop unrealistic demands.

10. We advocate the approach of parallel improvements on all important performance indicators so as to "balance social, economic, environmental and resource needs". All performance indicators that require improvement over the existing situation must be considered together. The additional resources that are available for raising current standards in the planning horizon must be fairly distributed among all these indicators. The resulting new standards are thus feasible and "balanced".
11. In setting standards, we should base on past experience or the experience of comparable economies. In a later section, we will give specific comments on development density. We will also make some general comments on the relationship between standards and technology.
12. For strategy evaluation, we advocate a systems approach. The urban system's performance is achieved through the operation of the various components of the system. In the present strategic planning study of Hong Kong 2030, we need to consider the land use and infrastructure components only down to the size commensurate with a typical residential district. The functional requirements (FR) on these components are derived from the system performance requirement (i.e. the standard) and hence the FR have to be set for both the implementation process and operational state.



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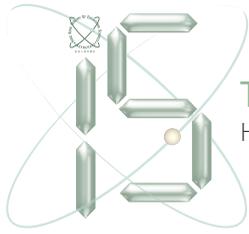
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13. The planning process translates FR into the type, quality and location of land use and infrastructure to be provided in the development plan. These planned components must be technically constructible, economically affordable, legally enforceable, socially and politically acceptable. The environmental factor should be interpreted as a “stability” requirement such that the significant environmental attributes do not become unstable (i.e. do not deteriorate progressively without limit) as a result of the proposed new development. Thus the environmental impact is assessed at the overall system performance level as it has been taken into account through the FR.
14. This systematic approach ensures unbiased assessment of all factors. In the conventional matrix evaluation method, double counting of some factors sometimes occurs as the performance of certain aspects of the system is sometimes additionally included as separate items in the evaluation matrix even though these items are already included in the performance indicators of the entire urban system.
15. Population and employment are the basic generators of needs for land use and infrastructure development. The projected size of population and employment stratified by attributes (age, household income, education industry, economic base or non-economic base) broadly determine the need for each of the different LU types and the likely utilization of each of the various infrastructure types. Applying the FR on land use and infrastructure, which are derived from the adopted urban development standards, there will result in the quantity required of each of these various LU and infrastructure types.
16. The government has studied the development potential of all likely new development sites (NDA). The corresponding infrastructures required to service these NDA's have also been identified. The results can be used to compile the maximal land use plan in the form of a



set of nodes with maximal land use capacity and the corresponding costs of land and infrastructure development. Similarly, transport planning studies (e.g. Railway Development Strategy) and relevant development studies have identified realistic potential transport links (PTL). These PTL and the existing transport network form the maximal transport network. Clearly, in general, the maximal LU capacity and maximal network exceeds the LU and transport infrastructure needs in the planning horizon. The planning problem is to select a set of NDA and PTL from the maximal sets that “best” meet our planning objectives.

17. We advocate the optimization approach with minimizing costs as the planning objectives. An optimization approach is necessary for this combinatorial problem of a large size. Taking a simplified model of 5 NDA's to be chosen from 10 NDA's with 10 PTL's, the possible number of LU-transport plans can be $C_5^{10} \times 2^{10} = 252 \times 1024 = 258,048$! Even assuming say only 1 minute of computer time for analyzing the performance of one plan, it is unrealistic to test all possible plans.
18. The optimization approach has been used successfully in the formulation of the TDS in 1984. The model can be used again with a set of updated planning data. Furthermore, the opportunity can be taken to improve the optimization model with the advent of computers and computational algorithm in the last two decades.
19. The most important advantages of using the optimization approach is that it enables the systematic development of action plans that are feasible for implementation, effective in meeting the functional requirement of the projected development needs, and can be combined with other supplementary actions to achieve maximum performance in the near term and to adapt to likely changes in the (external) operational environmental of the urban system in the medium and long term.



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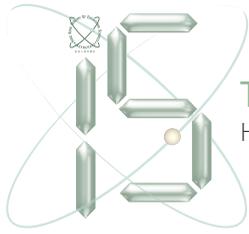
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20. An outline of the advocated optimization approach is as follows. A strategy is optimum if it minimizes total costs to the community and minimizes total costs to the government. Two development patterns are derived, each minimizing one of the above two cost objectives. The common components would therefore be most appropriate to meet development needs in the planning horizon and are used as the skeleton to form the long-term development strategy.
21. Likely changes of the planning parameters (population, employment, GDP, etc.) are used to generate a number of equally likely scenarios of development needs. The optimum solution for each scenario consists of certain selected NDA. The NDA's are prioritized according to their frequency of occurrence in the set of all optimum solutions corresponding to the set of equally likely future scenarios. The high-priority NDA's are used to form the near term action plan.
22. The development resulting from the near term action plan can thus easily adapt to different scenarios in the medium and long term. The process is rolled forward progressively using the updated data at each step.
23. At each step, both resources availability and planning standards are reviewed to introduce any feasible quality improvements as well as fine-tuning the strategy.
24. It must be emphasized that the above common-components approach for prioritizing NDA's can be applied only when the alternative development patterns are the optimum solution to the alternative likely scenarios. If the alternative development patterns are set up based on subjective evaluation results, the meaning of common-components would be dubious.



Development Density

25. Hong Kong's economy has grown considerably in the last three decades. This rapid growth has enabled us to solve the basic housing problem despite the fact that population has more than doubled in the same period. Now that population growth is slowing down, it is time that we make some greater strides in improving the quality of living. This is in line with the government's goal of becoming and remaining one of the major world cities for Hong Kong.
26. Development intensity is the most fundamental factor in quality. Architecture and urban design can enhance the quality of a given building and its neighbourhood. But building density and population density limits what can be done. More open space is needed in the current urban areas. Hence we are supportive of the suggestion to lower development intensity provided the specific suggestion is economically feasible and the implementation approach is flexible and socially acceptable.
27. There are lesser problems in adopting a plot ratio (PR) of 6.5 for the NDA's. If the PR of the existing urban area is to be similarly reduced this would require new development areas equivalent to about $\frac{1}{4}$ of the existing main urban areas. This requires the construction of two typical new towns together with redeveloping or remodeling a significant part of the main urban areas. Assuming 30 years to achieve this aim, the suggestion should be economically feasible given that the population pressure is easing. Indeed, this suggestion of lowering PR in the main urban areas is even desirable from the point of view of sustaining the construction industry which has long been an important contributor to Hong Kong's economy. We note that other factors are already discussed in the consultation document. In particular, it is an indirect effective means to prevent unduly tall



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buildings to be built on sites not meant for such development.

28. In implementing any major change, we emphasize the need to be adaptable. Naturally, a lower PR should only be enforced upon redevelopment of the existing buildings. In addition we consider it necessary to respect property rights.
29. If and when a decision to lower the PR in a district is made, a grace period should be given during which redevelopment to the currently permissible PR should be allowed. This grace period should be set with reference to the typical cycle time of the property market, say e.g. five years. This arrangement will reduce the strength of argument for compensating the loss of land value due to a lower PR.

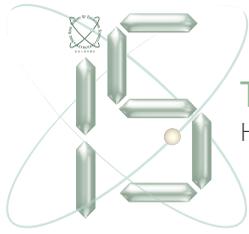
Regional Linkage

30. In the same vein, it is essential to respect other cities' rights and interests in developing regional linkage. There is already consensus both within Hong Kong and in Guangdong Province on the need for a coordinated approach to economic and physical developments of the Greater Pearl River Delta (PRD) region. We consider that a common rational planning approach for the whole region is essential and that the focus of physical development coordination should include water resources as well as the now conventional subjects of container port, airport and regional transport infrastructure.
31. For the planning approach, we advocate the optimization approach similar to that as explained in the earlier paragraphs, but to be developed for regional planning so as to provide the framework for coordinating the urban developments of the various cities in the region. The optimization approach is necessary to maximize the total economic benefit for the entire region. For the rational planning to



succeed, it is essential that the apportionment of economic benefit of development as well as the sharing of costs must be fair. A means to predict the generation of development benefits, a mechanism to distribute the benefits, and a regular review process to adjust and adapt to the changing conditions are all essential tools. **We urge the government to initiate action to carry out a regional coordination study** so that these tools can be developed in time in addition to handling individual projects separately.

32. Hong Kong has taken adequate water supply for granted for many years since the supply was available from East River. In recent years, attention was focused on the price and water quality of this source. We must realize that with increasing urbanization of the East River basin, there will be an inevitable increasing need to spend more on water treatment in order to maintain the same water quality standard. More intense farming, which is also the trend and produces more polluted discharges, not only increases the need for higher water treatment cost, but also becomes an acute competing water user. This particular aspect has to be studied for ensuring sustainable development at this higher level of planning and strategy. **We urge the government to commission or sponsor a relevant study of the hydrology, water usage and water quality of East River as soon as possible.** This is an essential component of the regional coordination study suggested in the last paragraph.
33. The real need for further container berth development in Hong Kong is largely dependent on the regional development context. Hence the location of future container port extension should depend on the outcome of the proposed regional development coordination study. A decision should be deferred to as later as possible. We are aware of the employment implications of the container transport business and therefore strongly feels that an adaptive incremental



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decision approach is extremely important. The intrinsic value of the competing sites can then be better realized.

34. Many commentators have expressed the view on coordination of all the major airports in the region. Some work in this direction has already started by the Airport Authority according to recent newspaper report. Our main point is that the airport is also an important generator of urban activities. Hence the coordination of airports should be encompassed by the regional and territorial development frameworks. Thus the proposed regional-level studies are all the more important.
35. Regional transport links are of course the backbone of the regional development framework. They are also essential to Hong Kong's linkage with other parts of the Mainland beyond PRD. In addition to the coordination of physical development works, which include location and connection points, we draw attention to two particular points in planning regional transport links:
 - a. The management and control of these multi-jurisdiction facilities must be planned not only fairly, but also the data to be used must be scientifically derived and the implementation system is adaptable to changes.
 - b. The HK-Zhuhai-Macau Bridge should include the provision for railways, to be implemented at a later date as appropriate. Rail transport will be necessary in the long term. Indeed, this is more consistent with the regional rapid transport concept.

Population Movement

36. Improving regional transport links promotes social and economic

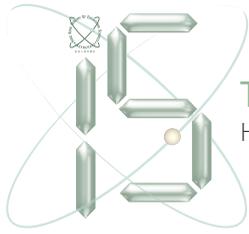


integration through easier interflows of goods and people. This will also open up more choices of location of jobs and residence. The trend is intensifying upon the implementation of CEPA. In 30 years time, the number of Hong Kong people living or working in PRD cities and vice versa can become significant as the trend continues.

37. Consequently, there will be greater uncertainties in the projection of residential and worker population in Hong Kong. This additional factor makes it all the more necessary to use the optimization cum common-components approach for formulating the long-term development strategy.
38. Population projection for each district of HKSAR will be similarly affected as the territorial population. In addition, two other factors increase the variability of population distribution within Hong Kong. Public housing used to dominate the new towns since the 1970's, leading to greater certainty in the projection of population-distribution. Now that the Public Housing Policy is being reviewed, the effect on population distribution of laying greater emphasis on private sector housing has to be examined. The current suggestion of lowering PR in the main urban areas is the second additional factor that needs to be taken into consideration in projecting population distribution.
39. We consider that **a modeling study of population and employment movement should be undertaken.**

Other Issues and Detailed Comments

40. We consider a flexible approach should be adopted in considering the two development patterns posed in the Stage 3 consultation document. Assuming the Consolidation Pattern and the



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Decentralization Pattern to be the optimum for two alternative objectives, the common components of the two patterns are the higher-priority NDA's in the near to medium term. As indicated in Annex 2 of the document, there is a high degree of overlap of the two patterns.

41. The effective use of buildings as they get older, should be duly considered in its layout planning and hence also in detailed urban design. Reclamation of older urban areas through rehabilitation and regeneration is generally preferable to indiscrete expansion of the urban areas.
42. A study on the impact of IT on the relative location of housing and work place and on the demand for communication infrastructure should be seriously contemplated. As the importance of knowledge-based work increases in the long planning horizon, its effect on the necessity of commuting to work could become significant.
43. In considering new or improved standards, greater emphasis should be placed on encouraging and using local research capabilities in addition to overseas research findings. For example, local developments in electric vehicles and applications of biomedical sciences may have useful information to offer in assessing environmental standards.
44. Hong Kong should encourage the private sector to provide more tourist attractions such as resort village in Sai Kung, shopping malls/entertainment complex in central N.T. in addition to projects under planning.

HKAES Secretariat

22 March 2004



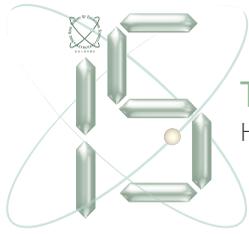
(4) HKAES Report on Academician's Consultation Forum on Development of International Transportation Hub at Dalian, 10–11 July 2006

(A Collaborative Project with Chinese Academy of Engineering)

1. This is the first major event in which our advice is sought by a government on an engineering-based public policy. It is co-organized by HKAES and CAE under the auspice of the Dalian Municipal Government. Dalian University of Technology (DUT) is the organizing agency and Dalian Port Authority is the co-organizing agency. Some 100 government officials, academics and business executives attended the Forum by invitation. This report records the preparation and proceedings of the Forum for reference in planning future events.

Background

2. In early 2005 the President established contact with Professor Wang Zhongtuo, a member of the Chinese Academy of Engineering (CAE) who has interests in management and Pearl River Delta development and is the (adjunct) Director of South China University of Technology (SCUT) in addition to his principal association with the Dalian University of Technology (DUT). We visited SCUT on 28th May 2005 and held discussion with SCUT President Li and Professor Wang. Four topics were identified to be worthy further exploration as possible collaborative projects. These included engineering management education and logistics.
3. CAE's Management Division invited HKAES to participate in a Forum on Engineering Management Education held in SCUT on 13 September 2005. As we subsequently noted, this is part of the



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activities organized under CAE's project on the review of engineering management education. The HKAES delegation gave three presentations that covered the development of urban development management, the new town programme management system, and Polytechnic University's M.Sc. course on construction management. We pointed out that Hong Kong's urban development management system had evolved alongside the transition from responsive to proactive approach to formulating the public works programme.

4. Hong Kong's experience in the management of physical development and logistic operations attracted CAE's interest. In late 2005, Professor Wang informally sounded out our interest in participating in a seminar on port development. In March 2006, the President received a formal invitation from Professor Wang requesting HKAES to share Hong Kong's experience in a Forum to be organized by Dalian Municipal Government. Ten specific areas were stated for seeking our advice on the development of the Dalian as the International Transportation Centre of NE Asia, including government's role in the development process, coordination with other infrastructure and economic development projects, and the financing of new projects.

Preparation

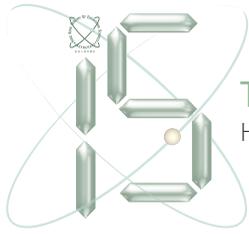
5. The Council held a special meeting on 23 March 2006 and decided to accept the invitation in principle. Six areas were identified for giving presentations of Hong Kong experience and potential speakers were proposed. At the 47th Council meeting held on 10 April 2006 presentation topics and speakers were finalized. The principle for dealing with acceptance of financial sponsorship offered by organizers of Seminars/Forums for our Fellows to attend is established. Council resolved that



- (a) HKAES accepts Dalian Municipal Government's offer of providing return air passage between Hong Kong and Dalian and hotel accommodation in Dalian for those Fellows and other speakers invited by HKAES who give presentations.
 - (b) HKAES declines all other advantages offered with the invitation to the Dalian Seminar that are not necessary to enabling the HKAES presentations. HKAES encourages Fellows to participate at their own costs even though they do not give presentations.
6. Professor Wang visited HKAES on 30 May 2006 to firm up on the main issues of the Forum. He explained the background of Dalian Government's invitation and the main problems facing Dalian development as the international transport hub of NE Asia. Professor Wang also invited Hong Kong delegation to visit DUT in conjunction with the Forum.
7. The date of the Forum and the visit itinerary were fixed in early June. The final list of HKAES participants and the Powerpoint files of the speakers/presentations were emailed to DUT at the end of June 2006 for prior dissemination to Dalian participants of the Forum.

Visit to Dalian

8. Seven Fellows visited DUT on 9 July 2006. They attended the opening ceremony for the establishment of DUT's International Transportation Centre and met Dalian Vice Mayor Mr. He Jianzhong, the Party Secretary and the President of DUT. One Fellow (Y.L. Choi) was invited to give a presentation on Hong Kong's experience on the integrated development of transportation and urbanization. The ensuing discussions indicated significant interest in optimum development planning subject to implementation under market conditions. The delegation was given a guided tour of the campus



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and visited two nationally supported laboratories respectively for hydraulic and geotechnical researches.

9. Altogether eight Fellows and two HKAES-invited speakers attended the Forum. On 10 July 2006, the HKAES delegation received briefings by the Dalian Municipal Government's Vice Secretary General, Mr. Mu Guosheng, Vice Director of Development and Reform Commission Mr. Sun Shaojie, and Director of Dalian Port Authority Mr. Hui Kai. The briefings covered the overall development plan of Dalian Port, the related regional development policy, and the guiding principles behind, and the current state of implementation.
10. In essence, the overall Development Strategy for the NE Region is to revitalize the existing industries. The new re-industrialization makes use of the existing strength in manpower, knowledge and experiences, infrastructure and equipment but takes account of the diminishing natural resources and the changing trends in product requirement. The revitalization of the manufacturing base together with the traditional export of agricultural products requires the development of a port cluster with Dalian as the hub. The cluster comprises five Points (Jingzhou, Yingkou, Changxing Island, Dalian and Dandong) connected by a Line (of coastal highway).
11. Dalian development plan revolves around port development. Most of the current major construction projects are related to port development. Construction of Harbin-Dalian Railways will start in September. Railway ferry crossing facility at Bohai Strait is completed. The new port is being moved to the north east. The old port area is to be developed for urban uses. Environmental protection is one of the key issues. Port related industries such as shipbuilding and food processing are the emphasis of industrial development. The delegation visited the existing port area and the new port facilities

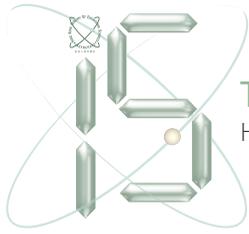


including the two new 300,000 tonne berths respectively for oil and ore transportation.

12. On 11 July 2006, the Dalian Mayor received the delegation and the two CAE members attending the Forum. He delivered the opening Welcome Speech and officiated at the lunch in honour of HKAES and CAE Fellows. The speakers comprised three HKAES Fellows, two CAE members and the two experts invited by HKAES. The full program is appended at the end of this report.
13. The presentations began with port development strategy, then progressively particularizing onto specific focused areas, and ending with Professor Wang's presentation to recapture the main problems of sustainable development of Liaoning Province. The ensuing discussions indicated strong interest in the complementarity of economic and physical development, the coordination of public and private investment, and the improvement of port operational efficiency. Vice Mayor He summed up the Forum. He pointed out that there has been adequate investment in the hardware and the emphasis should be on revamping the management environment to maximize the contribution of the constructed projects to the economy. The 11th five-year Plan has provided the framework. The transcripts of the seven presentations and the speeches by the Mayor and the Vice Mayor prepared by the organizers are at Appendices 2 to 4. (Not included herein.)

Observations

14. Comparing with our previous attempts, the success of this event in collaboration with CAE and in contribution to government policy is believed to be due to two factors respectively.



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- (a) CAE has a specific project (viz. management education) that is closely related to certain areas of HKAES strength (viz. development management and logistics).
 - (b) The relevant government has set a specific policy objective (i.e. to develop Dalian as International Transportation Centre), the implementation of which requires certain knowledge that Dalian Government believes (through CAE's introduction) that HKAES can provide.
15. Hence in considering our contributions to HKSAR's public policy, we may need to critically rethink:
- (a) What is HKSAR Government most concerned about?
 - (b) What projects the HKSAR Government would believe it requires HKAES knowledge and expertise?

HKAES Secretariat
12 September 2006



“大連國際航運中心建設” 院士諮詢座談會

會議日程

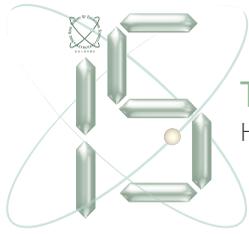
上午 (9:00 – 12:00)

- 9:00- 9:10 嘉賓介紹
- 9:10- 9:20 大連市市長 夏德仁先生 致歡迎詞
- 9:20- 9:30 香港工程科學院院長、香港大學副校長 李焯芬先生 致辭
- 9:30- 10:00 主題發言1 香港港口發展戰略
香港特別行政區政府規劃署副署長 伍謝淑瑩女士
- 10:00- 10:30 主題發言2 港口和城市一體化戰略：香港的經驗
香港工程科學院院士 蔡宇略先生
- 10:30- 11:00 主題發言3 交通運輸網理論要點
中國工程院院士 朱高峰先生
- 11:00- 11:30 主題發言4 海運物流管理
香港工程科學院院士 李忠義先生
- 11:30- 12:00 主題發言5 環境工程和可持續發展
香港工程科學院院士 李行偉先生

午餐 (12:00 – 13:30)

午後 (13:00 – 17:30)

- 13:30- 14:00 主題發言6 香港集裝箱碼頭的設計與建設
茂盛（亞洲）工程顧問有限公司董事 黎其昌先生
- 14:00- 14:30 主題發言7 遼寧老工業基地可持續發展的若干問題
中國工程院院士 王眾托先生
- 14:30- 15:00 茶歇
- 15:00- 17:00 大會討論
- 17:00- 17:30 大連市副市長 何建中先生 大會總結



The First Fifteen Years

Hong Kong Academy of Engineering Sciences

(5) Expanding Horizons of Engineering Management

Abstract of Invited Keynote Speech delivered at EMS International Conference 2008, held in Dalian, China

Management issues of a common nature can be treated similarly regardless of the application domain. Use of the engineering approach to treat non-engineering issues widens the context of engineering management.

In Hong Kong, the simultaneous optimization of land use and transport planning was achieved by combining engineering analysis and the old practice of incremental decision. Consensus under multiple objectives and uncertainties was achieved using common components of the optimizing solutions. This new engineering approach of optimization was used to formulate and implement Hong Kong's first Territorial Development Strategy in 1984, which led to the integration of management of public sector projects and government finance. The application to control of private sector works is epitomized by a new law enacted in 1997 for improving construction site safety. The system was extended to include quality supervision in 2005.

Continuing economic development necessitates the integration of cities in the Pearl River Delta. Several cross-boundary projects highlights the extra difficulties of apportioning cost and benefits in regional development coordination. In addition, water resource is a new constraint. Opportunities arise for new applications of the above engineering optimization approach.

Return of sovereignty has accelerated democratization in Hong Kong. The increasing extent of public engagement since 1985 necessitates a rational basis to treat the diversity of user's valuation of performance of the urban



system. The engineering optimization approach enables constructing a solution and the systematic feedback from users to planning.

Recently, a community service project in Hong Kong that integrated volunteerism and professionalism succeeded in solving a long standing social-technical problem in building repair management. A new frontier is emerging for applying engineering management to voluntary work.

Regional integration, democratization and volunteerism being world trends, the urbanization issues of Hong Kong are global. Applications of the engineering approach provide the impetus for the continually expanding horizons of engineering management.

Yu-Leuk CHOI

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