

PILLARS |

Building and Construction  Authority

We shape a **safe**, **high quality**, **sustainable** and **friendly** built environment.

Developing Leadership in the industry

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Building Design • p12

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Letter from CEO



Dear readers

Welcome to the new edition of Pillars. We are sporting a new look, bringing you fresh perspectives and keeping you engaged with informative articles.

This issue is especially dedicated to leadership and capability development in the building and construction sector. The sector is undergoing a major transformation as it gears up itself for the drive towards sustainable development, and also to support Singapore's economic and social development. Today, our building developments are increasing in scale and complexity, involving more advanced design and also construction methodology. The Government is also making huge investment in major infrastructural developments, including rail and road projects.

To deliver this, we need people with the relevant expertise, knowledge and experience to ensure the sustained growth and advancement of the industry. In this regard, BCA has developed a Construction Manpower Development (CMD) Masterplan to set out a medium-term framework to develop a highly competent, professional and productive workforce.

Leadership development is one of the key focus areas under the CMD Masterplan. The latest initiative in facilitating leadership renewal is the Built Environment Young Leaders Programme which aims at grooming young professionals to helm the construction industry in the near future. A case in point is this issue's cover model, Lee Yee Seng, Associate Director with an engineering consultant company, who is also incidentally the youngest person in the programme. Through Pillars, BCA will be featuring more of such upcoming young professionals in the industry.

We invite you to support our programmes and join us in our journey towards advancing our capabilities and developing leadership to achieve the best built environment for Singapore.

Dr John Keung
Chief Executive Officer

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Let us know what you think about Pillars. You are also welcome to contribute an article, subject to our approval. Please attention it to **The Editor, Pillars** if you send by post or fax to the BCA address stated. Alternatively, you can email to bca_enquiry@bca.gov.sg.



Lee Yee Seng, is an Associate Director of KTP Consultants Pte Ltd. Currently, the civil engineer leads a team of engineers in the structural & geotechnical design of residential and commercial projects.

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Construction Manpower Development Masterplan

Developing Leadership in the Industry



Singapore's building and construction sector has always played a critical role in nation building, particularly in delivering world-class buildings and infrastructure to support economic growth and social development. As we continue our relentless efforts to mould the country into a vibrant and distinctive global city, it is important that we have a strong workforce to support the building and construction sector's future developments and growth opportunities in delivering the best built environment moving forward.

Supporting this vision, BCA has formulated the Construction Manpower Development Masterplan to ensure we are well-placed to seize every opportunity to deliver the best built environment. It sets out the medium-term framework to shape a highly competent, productive and progressive construction workforce at all levels. One of the focus areas in the Masterplan is the development of leadership capabilities to lead the industry in technological and manpower development.

Sustaining the Industry's Leadership

Leadership plays a critical role in determining the success of firms, which in turn underpins the advancement of the industry. To ensure a sustained leadership in the workforce, BCA has launched various initiatives targeted at three key groups from across the entire value chain:

- Top management of firms, the leaders of today**
 To enhance and sharpen the leadership capabilities of CEOs and top management officers in setting strategic directions, BCA has introduced Advanced Management Programmes (AMPs), such as the Tsinghua University-BCA AMP and the more recent Singapore Management University-BCA AMP. These programmes aim to equip participants with the latest management tools, knowledge and networks to help their firms seize growth opportunities.

- Young professionals, the leaders of tomorrow**

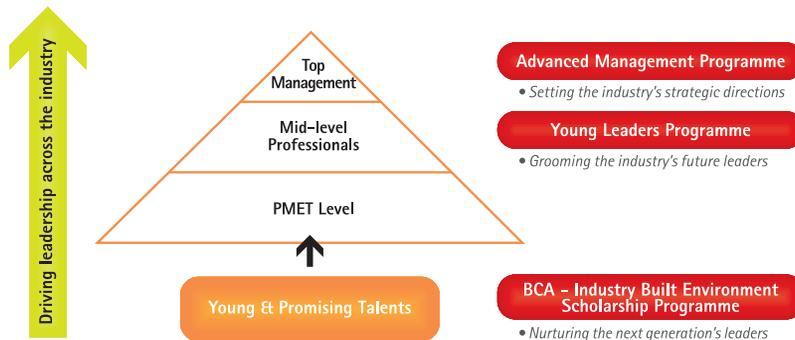
To ensure effective leadership renewal, BCA recently launched the Built Environment Young Leaders Programme. This platform aims to groom passionate, successful and promising professionals, currently holding mid-level management positions, to helm the construction industry in the near future. BCA will actively engage these young leaders in policy formulation and provide them with upgrading and networking opportunities.



• *Young talents, the next generation of leaders*

The future of the built environment rests on the shoulders of up-and-coming bright sparks joining the industry. To attract these young and promising talents to take up a career in our sector, BCA collaborates with industry partners to offer the BCA-Industry Built Environment Scholarship programme.

Framework for Leadership Development



Developing Leadership in Specialised Areas

Beyond supporting the leadership succession in the industry, BCA is also working closely with the industry in developing leadership and specialised capabilities in its four key pillars of safety, quality, sustainability and user-friendliness.

In the areas of safety and sustainability, BCA, had earlier formed two International Panels of Experts to review the Building Control System on building safety and accelerate the pace of driving sustainability in the built environment respectively. Providing quality training in niche domains is championed by the BCA Academy, which runs a whole suite of courses, seminars and workshops to develop leadership in specialised disciplines. Some of BCA's more recent initiatives are shown below, with more details available in this **Special Edition of Pillars on Leadership Development**.

Leadership Development in Specialised Areas



Leading the industry to greater heights

The various initiatives by BCA will help to lay the foundation for leadership development and succession. Together with the industry, BCA aims to propel the construction industry to greater heights so that it can support the transformation of our built environment to that of a distinctive global city.

SMU-BCA Advanced Management Programme

What
Participants
Say

Senior executives looking to take on leadership roles can now apply for the SMU-BCA Advanced Management Programme for Leaders of the Building & Construction Industry, a flagship programme tailored for the building and construction industry.

Course participants will be provided with a broader strategic vision of the construction business environment, facilitating an understanding of the complex market and process-oriented issues that drives the industry. In each module, insights are shared by industry leader firms through industry-specific case studies drawing on the rich experience of these industry leaders.

Designed and facilitated by the Singapore Management University (SMU), this programme aims to elevate the way leaders manage for performance excellence, business transformation and organisational growth to deliver a quality and sustainable built environment.

Looking at the Overlooked

Tah Kong Han is a Director of Projects at Architects 61 Pte Ltd.



What did you hope to achieve from the course?

In many ways, the course provided an intense and quick insight into the other overlooked or lesser-known aspects of management such as finance, marketing, risk and change management. I was satisfied that I came away from the course, more enlightened about

other relevant business issues involved in the managing and growing a business.

How has the course helped to position you, and your company, achieve better business performance?

Resulting from a change in management, my current CEO has already implemented many initiatives in terms of business strategy, branding, overseas business model and others. Therefore, the course serves to reinforce and help me understand the bigger picture of the strategic moves that the company is taking, in order to create a differentiation amongst our local competitors – a better value proposition to our clients.

How have you benefited from the lecturers and the construction caselets used in the sessions?

I find most of the lecturers very knowledgeable in their field of expertise. They also managed to keep the lectures engaging. On the whole, I have gained a much broader perspective of the many macro and micro issues that make a business tick and be successful.

Would you recommend this course to your peers?

Most definitely! One of the shortcomings of the architectural education is that the business aspects of the profession are never really taught nor even discussed. It seems cliché that "art" and "money" are not seen to be necessarily compatible but almost evil. However, the business aspects of the architectural profession, or any other profession, cannot be considered secondary. I think it is only when the business is sustainable that architects can provide better service and design quality.

Supporting Personal and Professional Development

Colin Tan is a Senior Project Manager at Tiong Seng Contractors (Pte) Ltd.



What did you hope to achieve from the course?

On an individual level, I was hoping to sharpen my skills in macro-project management especially in the areas of adverse risk taking, effective crisis management as well as marketing and positioning strategies for long term sustainability for my project teams.

I was also interested to further develop myself in areas of corporate branding, and by understanding our focal touch points, market needs and demands, we could grow our business exponentially.

My objectives were met as the lecturers were experts in their own field and gave critical insight into the many issues that were raised. The interactive mode in which classes were conducted also allowed industry stakeholders to share their valuable opinions and even appraisals of sensitive topics.

How has the course helped to position you, and your company, achieve better business performance?

To various degrees, the course has broadened my insight into business modus operandi across all value chains within our industry. This is important for us in order to better appraise the environment and then decide on how we intend to position ourselves in the market.

Would you recommend this course to your peers?

Definitely! The topics were fantastic, the lecturers were professional, the course was well organised and the networking was fun.

Built Environment Young Leaders Programme

Future Leaders at the Forefront

The Built Environment Young Leaders Programme (YLP) is BCA's latest initiative to nurture young professionals to lead the construction sector in the near future.

To kick-start the programme, BCA has worked closely with leading industry firms to identify an initial group of talented professionals who exude the dedication, passion and leadership qualities expected of our young leaders.

The main intent is to proactively engage these capable professionals within the industry by giving them a greater stake in the advancement of the industry. In addition, the YLP will facilitate their training and upgrading progression so that they can constantly enhance their competency and enjoy greater job satisfaction.

With this initiative, BCA hopes to engage these young leaders in charting the future developments of the built environment as well as the advancement and growth of the industry.

Going forward, BCA plans to reach out to more firms to expand the YLP so that more promising individuals can be roped in to strengthen the current pool of passionate young professionals who will lead, transform and advance the industry.

Young Leaders have a Stake

Here are the various ways the young leaders can expect to be involved in this leadership development programme:

Feedback on Policy Formulation

BCA will seek the feedback of the young leaders on policy formulation and innovative ideas on transforming and advancing the industry.

Nurturing of Leadership Qualities

BCA will promote and make available suitable training and upgrading opportunities to the young leaders to facilitate their acquiring of essential technical knowledge and also soft skills of leadership and management. Complementing these would be networking and sharing sessions with government agencies, industry experts and international speakers, to encourage the exchange of views and conceptualisation of new ideas on construction related issues.

Inspiration as Role Models

The young leaders will also serve as role models and support BCA and the industry in various career promotion efforts to inspire more youths to join the industry and pursue their dreams in built environment careers.

Great Expectations



From the Young Leaders...

"I look forward to sharing my perspective, as an architect, on the need for a more integrated industry. Being in the Young Leaders Programme also facilitates a more direct and timely form of feedback from the industry to the authorities on issues that have implications on the industry's development."

*Leong Tatt Man (young leader, aged 35)
Senior Design Architect
Architects 61 Pte Ltd*

"As the youngest member of the Programme, I believe I can contribute in the area of career promotion targeted at students. I look forward to closer collaboration with BCA in career talks and fairs in schools. I would also be pleased to host student visits to my project sites where they can have a feel of the 'real' thing and where I can share my passion and the challenges I face in my profession as a civil and structural engineer."

*Lee Yee Seng (young leader, aged 29)
Associate Director
KTP Consultants Pte Ltd*



And their employers...

"Naturally, the development of mutual respect and of supportive mutually beneficial lasting relationships amongst all the important players in the industry is very important. Architects 61 is excited and highly optimistic of the positive initiatives being invested into this Young Leaders Programme. The industry will definitely benefit from all the support that industry players extend to the Programme."

*Joseph Cheang
Senior Vice President
Architects 61 Pte Ltd*

"The Young Leaders Programme is a good initiative to retain and nurture future industry leaders. KTP Consultants is glad to participate in the Programme with our nominee Yee Seng, who shows great potential and initiative. I believe it is reflective of the strong partnership we share with BCA in the common long-term goal of leadership renewal."

*Song Wee Ngee
Managing Director
KTP Consultants Pte Ltd*



Esprit de Corps in the Construction Value Chain

A day of networking and fun brought 26 young leaders from the industry together to exchange views and ideas on 18 September 2009. Through activities that were designed to foster bonding and team-spirit, the young leaders were able to interact freely in an informal and relaxed manner. The event also provided a rare opportunity for representatives across the construction value chain -- including BCA officers -- to discuss current gaps and offer suggestions for improvements to the industry.



Bright

BCA-Industry Built Environment Scholarship



(Front row, fourth from left): BCA Chairman, Quek See Tiat, Senior Minister of State for National Development and Education, Ms Grace Fu and BCA CEO, Dr John Keung, with 2009 sponsors and scholars.

In July this year, 19 promising students took their first step into the built environment arena when they received their BCA-Industry Built Environment Scholarships from Senior Minister of State for National Development and Education, Ms Grace Fu. These young bright sparks were selected among the crème of the crop by 13 leading firms in the construction sector, to be groomed as the future leaders in the industry. Find out more about the scholarship programme, which was first introduced in 1993.

Why do we have this scholarship programme?

The BCA-Industry Built Environment Scholarship programme is a partnership between BCA and leading industry firms to attract young talents to the building and construction sector. It aims to enhance the industry talent pool, among which some will go on to become the next generation of industry leaders.

Despite the current economic downturn, building and construction sector has performed well, and the construction demand is expected to be sustained at healthy levels over the next few years. To support this demand, a vibrant workforce that is continuously injected with new blood is essential.

The scholarship scheme aims to attract young talents to take up courses in the built environment disciplines, and thereafter take on exciting careers in this sector. In particular, with the launch of the 2nd Green Building Masterplan, the sector needs passionate young talents to join and steer the industry towards sustainable development. Green specialists will be required throughout the construction value chain, covering the conception, design, construction, operation and maintenance of green buildings.

How it works

BCA administers and co-funds this initiative with the sponsoring firms. The programme accepts applications from 'A' level students, polytechnic graduates and university undergraduates with excellent academic results and CCA records.

After an initial pre-selection exercise by BCA, the sponsoring companies will conduct interviews to select their sponsored scholars. Upon graduation, these scholars will join their respective sponsors and embark on a career that is truly challenging, fulfilling, and rewarding.

BCA takes this opportunity to extend our unequivocal appreciation to all sponsors for their invaluable and continuous support. At the same time, we look forward to more industry firms partnering us in this talent development journey. Initiating the nurturing process of our promising youths at a tender age will, in time to come, reap its fruits in producing the next generation of industry leaders who will steer our construction sector to even greater heights!

For more information on the BCA-Industry Built Environment Scholarship programme, please visit our career portal at www.buildingcareers.sg

Sparks

From The Scholars



"It is my aspiration to do more for the environment by incorporating eco-friendly designs into engineering. Taking up a course in Environmental Engineering takes me a step nearer to my dream career that is aligned with my personal belief and passion about protecting the environment. I thank my sponsor CapitaLand for giving me this opportunity."

Lai Zhen Qin

*1st-year undergraduate in Environmental Engineering
National University of Singapore*



"I feel very honoured to be a BCA-Industry Built Environment Scholar. Beyond the monetary sponsorship for my studies in NUS now, I believe my bond to work in DP Architects upon graduation will give me a headstart in the early years of my career as I strive to lay a strong foundation for it."

Lee Chin Wei

*Pursuing Master of Architecture
National University of Singapore*

From The Parent



"Teck Hong was unable to attend the Scholarship Award Ceremony as he was on an overseas attachment. I readily agreed to go on stage to receive the BCA-Meinhardt Built Environment Scholarship on his behalf. Any father would gladly do so! It was one of the proudest moments in my life! "

Wong Wan Fook

*Father of Wong Teck Hong,
2nd-year undergraduate in Civil Engineering
Nanyang Technological University*

From The Sponsors



"I am heartened that BCA has recognised the importance of leadership renewal in the building and construction industry and has been pro-actively working towards this long-term goal. The BCA-Industry Built Environment Scholarship Scheme is instrumental in the drawing and nurturing of talents in the industry. As a quantity surveying firm in need of fresh new talents, I strongly support this scheme."

Mr David Lim

*Director
WT Partnership (S) Pte Ltd*



"The BCA-Industry Built Environment Scholarship is a good demonstration of CPG Corp's commitment in the nurturing of young talents in the construction industry. As people are our key assets, we believe that if we have the right people in our organisation, we can achieve much more in the long run."

Mr Lye Kuan Loy

*President & CEO
CPG Corporation Pte Ltd*



Poh Chien, a BCA-CPG Built Environment Scholar, is now a second-year Civil Engineering student at the Nanyang Technological University. Despite the challenges that lie ahead, his strong determination and will to succeed will take him far and beyond.

I don't believe in waiting for something to happen. I take control of my life and destiny.

It's NOT the end It's only the BEGINNING

Back in Primary Four, I was just a boisterous and active kid like any other ten-year-old boy. However, one day, I suddenly found myself among those who were callously labelled as 'basket cases' by fellow classmates and some adults who thought EM3 students were deprived of an opportunity to shine.

It was definitely a wake-up call for me when I first learnt of my streaming results. Being streamed into EM3 didn't come as a surprise to my parents, but I could tell that they were disappointed. I felt remorseful. But the condescending attitude of fellow school mates who were in other streams made it worse. They did not hide the fact that they looked down on EM3 students. I was treated like a black sheep. It was quite hurtful.

I decided not to let remorse and hurt dampen my spirit. In fact, it motivated me to strive to get back on the academic track. With my fighting spirit, I topped the entire EM3 cohort. But it was still not good enough to realise my ultimate goal to join the EM2 stream.

After four years of normal academic education in Tanglin Secondary School, I went to the Institute of Technical Education (ITE). I experienced two very fruitful years there, juggling my studies and co-curricular activities, and graduating with a National ITE Certificate in Building Drafting (Civil & Structural). At 19, while other youths were searching for a calling of sorts, I found the future direction of my career.

I loved to build since I was a kid. I built little toys, houses and bridges with satay sticks, ice-cream sticks and whatever I could lay my hands on. You would understand why I enjoyed my time in ITE as it provided a hands-on learning experience. Hence, I decided to pursue Civil Engineering.

I applied to the Singapore Polytechnic and became one of the few students in my cohort to be accepted to do a Diploma in Civil & Structural Engineering. During my polytechnic days, I remained focused and consistently delivered good results and an impressive co-curricular activities record.

I wanted to prove that EM3 students could do equally well, if not better. I wanted to lead as an example to my ITE juniors to show that it is not the end of the road if one does not perform well academically, in the initial stages. There is always hope and it all depends how badly you want it. And I did.



Build Green. The Future is Now.

BCA organised the inaugural International Green Building Conference (IGBC) 2009 on 28 – 30 October at Suntec Singapore. The event is timely in answering the Singapore government's call to create a better, greener living environment.

IGBC 2009 was the anchor event of the Singapore Green Building Week, which happened from 26 to 30 October 2009. The Singapore Green Building Week also featured the official opening of Singapore's first Zero Energy Building – one of the first of its kind in the world.

Themed 'Build Green. The Future is Now' and held alongside BEX Asia, IGBC 2009 focused on green issues concerning the industry, with an emphasis on green building technologies and green building designs. International and local chief executives, industry experts, planners, architects and designers came together to share the latest innovations and ideas to turn vision into reality.

Participants of IGBC had the opportunity to visit outstanding green buildings including the Zero Energy Building, as part of the BCA Green Mark Tours.

Look out for more news on the Singapore Green Building Week in our next issue, a special edition of Pillars.



Mr Arab Hoballah (top) and Ms Maria Atkinson (bottom) were keynote speakers at the BCA's inaugural International Green Building Conference.

Zero Energy Building @ BCA Academy



Master of Science in Sustainable Building Design



Singapore's first Master of Science in Sustainable Building Design course welcomed its first batch of 37 professionals in September. This new postgraduate degree course is jointly offered by BCA and the University of Nottingham.

Students can expect to receive government funding of up to 90% of course fees over the course duration, which comes under the Singapore Workforce Development Agency's Professional Conversion Programme.

This programme targets green building practitioners who are looking to expand their knowledge and expertise further. It is specially tailored to meet the needs of a wide group of audiences such as architects, engineers, quantity surveyors, building managers and other related disciplines in the built environment. Green professionals can look forward to creative approaches in the course modules, covering integrated design, passive design, renewable energies, building modeling, simulation and analysis, high impact systems in buildings, and built environment design.



Doing more with less

Terence Tan is the Regional Service Manager (Building Efficiency) at Johnson Controls.



Q1: Why did you decide to sign up for the programme?

Buildings consume about 30% of the national energy consumption and represent one of the major sources of greenhouse gas emissions. It seems clear to me that the building industry can play a critical role in mitigating people's impact on the environment by being more innovative, effective and efficient.

Johnson Controls has very strong green values and is committed to creating a safer, more efficient and sustainable world. My job is leading Johnson Controls' service business in Singapore, focusing on one-stop building services. Practically, that means taking existing buildings and making them as efficient as they can possibly be, which often means making them better than they were originally designed to be.

From a professional perspective, this programme will provide added insight – especially those that range beyond technical and energy services – which will help improve our building service delivery and assist building owners to create high performance green buildings. The more knowledge in sustainable building design we have, the more effective our solutions and services will be.

Q2: Why is it important in gaining competencies in green building design and technology?

Gaining competencies in green building design and technology can enable us to optimise the use of our limited resources, by doing more with less, while controlling the impact on our environment.

Fundamentally, this programme is in line with my passionate belief that for buildings to be sustainable, they must be holistic and integrated. That takes close collaboration amongst all the stakeholders from the initial design phase, through to the end of building life cycle. It also has to make economic sense, while incorporating ecological design where appropriate to optimize building performance.

Q3: How do you find the lecturer so far?

I found Dr Sergio Altomonte remarkable! Despite the weighty issues he had to deal with, Dr Altomonte kept the pace fast. His light-hearted approach also kept the various parameters of the environmental design interesting, which really helped us appreciate and develop a full understanding of the subject.

Applying knowledge immediately

Tan Shao-Yen is a Registered Architect and the Senior Vice President of CPG Consultants. He specializes in providing consultancy services in environmental sustainable design, known as CPGreen.



What attracted you to the programme?

The interruption to work is minimal. Otherwise, it wouldn't have been possible for me to take up a MSc course if I am required to break away from work for a few months.

What do you hope to achieve from this programme?

I hope to put the knowledge gained to good use in my work. This being a part-time course means that we could apply what we have learnt in class in our day-to-day work.

Why is it important to gain competencies in green building design and technology?

The need to consider green building design and technology is a part of my work. Attending the course allows me to consolidate the knowledge that I already know, close some of the gaps in my knowledge and gain insights to new trends. Finally, it gives me the opportunity to connect with people from different fields who are interested in green building design and technology. This being an emerging field, the collaboration is important as we can tap on each other's strength.

China Beckons



BCA led 14 delegates from 10 companies — covering consulting firms, builders and manufacturers of building materials to gain valuable insights on green buildings and business opportunities in China. From 28 June to 2 July 2009, the delegation visited Tianjin and Beijing.

In Tianjin, the delegates gained a first hand account of the development of the Tianjin Eco-City. They learnt about its master plan, development plan in the 4 square kilometre start-up area, investment regulations, incentives and upcoming projects. The Eco-City Administrative Committee and the master developer, Sino-Singapore Tianjin Eco-City Investment and Development also shared their building regulations, building control process and green design requirements.

Moving on to Beijing, the delegates toured the Prosper Center, the city's LEED-certified 'Gold' green building, to learn more about the features of the building and the challenges faced during development. In addition, they visited the Olympic Stadium and the Olympic Swimming Complex.

Also on the itinerary was the Tianjin Urban Construction Institute, where delegates sought business opportunities to collaborate on training and research in sustainable development. In addition, BCA representatives visited local developers in Tianjin to understand their developments and explore business opportunities for BCA Green Mark services.

A recent business mission trip to China built relationships and uncovered 'green' opportunities for BCA and Singapore firms.

Sino-Tianjin Eco-City

The Sino-Singapore Tianjin Eco-City, is a project between the China and Singapore governments to jointly develop a socially harmonious, environmentally friendly and resource-conserving city in China. BCA, a member of the working committee, worked with the authorities in sourcing and identifying suitable sites for the eco-city. BCA also collaborated with various Chinese authorities in developing Green Building Evaluation Standards (GBES), which has been promulgated by the Chinese authorities as the local standard for the Eco-City. Simultaneously, BCA is working on a programme to train officials in the development and implementation of Green Building Evaluation Standards.



Universal Design in Japan

A recent visit to the Shizuoka Prefecture provided insights into how Japan's first prefecture government that adopted Universal Design (UD) had advanced beyond accessibility. With UD as one of its basic policy objectives, Shizuoka Prefecture has provided a highly livable environment for residents.

Like Singapore, Japan also experiences the challenges of creating a friendly built environment for a fast ageing population. Since the 1970s, Japan has championed a barrier-free built environment through regulations and standards.

To learn from Japan's experience Dr John Keung, BCA's CEO, led the industry on a UD study mission to Tokyo and Shizuoka Prefecture from 20 to 26 July 2009. The delegation comprised 31 representatives from developers, architectural firms, voluntary welfare organisations and government agencies.

Several sites were visited to enable the delegation to learn and appreciate the application of UD in commercial buildings, train stations, hospitals, residences, a university, public library and sports facility.



Upfront Planning Critical for Successful UD Implementation

Japan has demonstrated the importance of incorporating UD concept in the early planning and design conceptual stage. A prominent application is the Ogasayama Sports Park. The sports park was the main venue for the 2002 FIFA World Cup. As a result of considering UD at the early stage, the venue is very friendly to all users. One of the many friendly features is the entrance, equipped with conventional stairs, travelators and trams to cater not just to the crowd but also the young, elderly and disabled.

UD is 'Good Design'

In Shizuoka Prefecture, UD in the built environment is recognised and practiced as 'Good Design'. Not perceived as an extension of barrier-free accessibility, good design is about incorporating the design needs of various users right from the design stage instead of refurbishing it later.

An example of good design is found in the family toilet. Instead of designing a separate toilet for wheelchair users, the family toilet is already equipped with family-friendly facilities like a diaper changing station, a child protection seat and a child WC. This allows the toilet to be better utilized.

UD Embraced by Architects

Architects play a key role in ensuring that buildings are designed for as many users as possible. It was refreshing for the delegation to see architects explaining the UD concepts, demonstrating the high level of acceptance by the architectural community.

UD in Schools and University

Schools in Japan have also embraced UD where students in higher primary schools appreciate UD in their lessons. Empathy workshops are also held to put them in the shoes of an individual with varied needs. Students who progress to study architecture in Shizuoka University of Art and Culture are also required to attend a module on UD in their second year.

Certified QM/ CONQUAS Manager & Supervisor Schemes

Home buyers' expectations for better quality homes have been rising in tandem with escalating property prices in Singapore. The Quality Mark (QM) for Good Workmanship and Construction Quality Assessment System (CONQUAS) are 2 schemes developed by BCA to provide assurance to developers and homeowners on the workmanship quality of projects and units that are built and purchased.

To deliver quality projects, properly trained managers who understand the quality standards and how to go about achieving them, are needed. The Certified QM/CONQUAS Manager Course aims to train a pool of such managers who will play a leading and critical role in delivering projects of high quality.

The course equips participants with the knowledge and skills to implement quality management systems that lead to high quality projects. The teaching model comprises real life case studies, group-based assignments and discussions. Practical strategies to achieve better QM/CONQUAS scores and the latest trends and benchmarks in construction quality will also be covered. The course contents are updated regularly to keep abreast with latest industry developments. Since its launch in January 2007, more than 200 participants have been trained.

After attending the 3-day course, a participant also has to complete a minimum number of QM/CONQUAS projects to become a BCA certified QM/CONQUAS Manager. This scheme, also launched in January 2007, accords recognition to engineers and other building related professionals who have delivered high quality projects with high QM/CONQUAS scores.

Currently, there are 3 Certified CONQUAS Managers. They have distinguished themselves and contributed to their firms' quality performance by achieving high CONQUAS scores in the following projects:

- Mr Jimmy Qu - China Construction (SP) Development Co Pte Ltd - 93.6 (The Azure in 2008)
- Mr Wong Cheng Huat - Guan Ho Construction Co Pte Ltd - 88.6 (Bukit Panjang Govt High Sch in 2008)
- Mr Lim Kian Huat - Kwan Yong Construction Pte Ltd - 89.9 (Pathlight Pri and Sec Sch in 2009)

These are way above the 2008 industry's average CONQUAS scores of 89 and 81.5 in the private housing and institution categories respectively.



Mr Jimmy Qu receiving his Certified CONQUAS Manager certificate from BCA Chairman



Mr Wong Cheng Huat receiving his Certified CONQUAS Manager certificate from BCA Chairman

The Azure was our first project to be certified with Quality Mark, achieving an average QM score of 87.3 and CONQUAS score 93.6.

We also performed well for projects such as The Fernhill, with an average QM score of 84.5 and CONQUAS score of 90.8, while the Pavilion 11 netted an average QM score of 87.8.

Knowledge is endless. I look forward to keep pace with new developments in construction quality management and continue to enhance our company's CONQUAS/QM performance, through BCA Academy.

Jimmy Qu

The course has helped me plan the work at site and prepare for CONQUAS assessment more efficiently. Several pictorial examples were used to demonstrate the concepts. Now, I understand the CONQUAS requirements and can apply the many practical strategies, implement the good practices while avoiding the negative aspects. It has also helped me achieve good quality construction by "doing it right the first time", thus saving time and cost!

Mr Wong Cheng Huat

Builders Embrace Modern Technologies



Participants learnt that the new generation integrated formwork system increases construction productivity and safety

Thumbs Up for the Event

"I found it interesting and informative. I highly recommend it to other colleagues in my company to attend such future seminars and workshops. Of the many exhibits, I am most impressed with the ease, efficiency, safety features and time savings offered by the PERI SKYDECK and GRIDFLEX systems."

*Patrick Lee Tiong Poh
Senior Engineer*

Sembcorp Design and Construction Pte Ltd

"The video that was played at the seminar gave everybody a better understanding on the use of system formwork and the time savings achieved as compared to conventional formwork. It successfully proved that integrated formwork systems are efficient and safe."

*Puah Sze Hwee
Quantity Surveyor
Kajima Overseas Asia Pte Ltd*

Can improved productivity, safety, quality and sustainability all be achieved simultaneously in a construction process? The answer was obvious to those who attended BCA's seminar and workshop 'An Evolutionary Journey – Conventional to Integrated Advanced Formwork Systems' on 17 July 2009.

In the opening address, Mr Tan Tian Chong, BCA's Director for Technology Development, urged builders to embrace technologies to develop competencies and deliver more efficient and productive construction. He shared with the audience the advantages in adopting modern formwork systems, which enhances productivity and simplifies the construction process.

The presentations then described and demonstrated the benefits of the integrated formwork system. The speakers were Mr Markus Schade and Mr Marcus Beez – both from PERI GmbH, formwork design specialists from Germany – and Mr Edwin Lee, Manager for Tiong Seng's Corporate Formwork System Specialist Unit and a Project Manager at the Resorts World at Sentosa.

From the seminar, participants took away practical examples on how the use of integrated advanced formwork systems and three-dimensional planning could lead to improved productivity and quality without compromising safety and the environment.

A mini-exhibition was also put up to showcase new-generation formwork systems that could increase productivity and safety levels at job sites. The exhibition also provided an opportunity for the participants to appreciate the merits of using integrated formwork systems compared to conventional formwork.

The event was well-received by the 280 participants of the seminar and the 230 who attended the afternoon workshop.

News Snippets

Good Piling Practices

Solid Foundations

BCA held an industry briefing session for 124 licensed piling specialist builders at BCA Academy in July. The participants learnt more about the builder licensing scheme and good piling practices. Guest speaker, Mr Eric Low Keng Suan from ZAP Piling also shared with participants on how his company overcame the challenges of piling work in difficult ground conditions at the Fort Canning boulder bed.

Piling specialists, who play a critical role in laying strong and solid foundations for buildings, can look forward to more of such sessions in the future.



Accredited Checker System

Checks and Balances

With structures in Singapore becoming more complex, the role of the accredited checker was again reinforced at BCA's recent sharing session to industry participants. The accredited checker system, which was first implemented 20 years ago, is a unique and effective safety feature in Singapore's building control system.

Participants at the session looked into examples of overseas building failure cases and how they could be prevented. They also gained from guest speaker, Dr Tan Guan's knowledge and experience in approaching accredited checking in a practical and systematic way for major projects.



Be Prepared



At a recent Civil Defence Shelter Seminar, BCA took time to brief 170 building professionals, supervisors, developers, builders and representatives from government agencies about the importance of Civil Defence shelters. These shelters are an important part of an emergency preparedness programme.

The seminar reviewed the technical requirements by BCA and the Singapore Civil Defence Force in line with changing building trends. It also touched on best practices and innovative designs in the household shelter, storey shelter and staircase shelter, including the use of pre-fabricated shelters.

Later, participants were shown shelter designs through an exhibition that featured shelter doors and ancillary steelworks, such as the blast hatch and ventilation sleeve, and material used for strengthening existing structures. The seminar ended with an engaging question-and-answer session.

News Snippets

Earthquakes beyond Textbooks



Geography came to life to 150 junior college students when they attended a talk about forecasting earthquakes and tsunamis in Southeast Asia at the BCA Academy. They were able to get first-hand information from earthquake management experts.

This outreach was the first in annual collaboration between BCA and the Geography Teachers' Association. The aim was to enrich students' learning of geography with practical examples of how earthquakes affected Singapore and what protective measures BCA took against them.

Prof Kerry Sieh – Director of NTU's Earth Observatory of Singapore and one of the world's leading earth scientists – shared his professional expertise on earthquakes and tsunamis in Southeast Asia.



Nigerian Trainees at BCA Academy



Up to 100 senior officials from Nigeria benefited from an executive training programme held at the BCA Academy. Trained over a period of three months, the officials from the Lagos State Ministry of Physical Planning & Urban Planning learnt about the nuts and bolts of Singapore's Building Control Framework. The first batch also included the Member of Parliament from Lagos State House of Assembly.

Events

(Nov 2009 ~ Jan 2010)

Date	Event	Contact
16 Nov 2009	Nurturing the Young Series – Universal Design Talk @ Singapore Polytechnic	Ms Lee Keng Keng Deputy Director (Division of Architecture) DID: 6772 1194 Email: kengkeng@sp.edu.sg
17 Nov 2009	bizSAFE Workshop for Company CEO / Top Management _ 6th Run	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
17 Nov 2009	Good Industry Practices – Aluminium Window	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
17, 19, 24, 26 Nov, 1 & 3 Dec 2009	Internal Audit (QEHS) Course Based on Quality ISO 9001, Environmental 14001 and Health & Safety OHSAS 18001 _ 3rd Run	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
19, 20, 23 & 24 Nov 2009	Building Energy Modeling & Thermal Simulation (GMP Core Module) _ 5th Run	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
23, 24 & 25 Nov 2009	Essential Knowledge in Local Regulations and Construction Practices _ 9th Run	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
14 & 15 Dec 2009	Green Architecture & the Integrated Design Process (GMP Elective Module) _ 3rd Run	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
17 Dec 2009	CONQUAS Training (For Developer & Consultants)	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
13 Jan 2010	Construction & Property Prospects Seminar 2010	Marketing Dept DID: 6248 9843/824 Email: bca_academy@bca.gov.sg
14 Jan 2010	BCA Academy Open House	Jaime Loong DID: 6248 9806 Email: jaime_loong@bca.gov.sg
16 Jan 2010	Built Environment Scholarship, Training & Career Fair	Manpower Planning Dept DID: 6325 5083 Email: bca_job@bca.gov.sg

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