

CHANGING THE WAY WE BUILD

BUILDING AND
CONSTRUCTION
AUTHORITY

ANNUAL
REPORT
2015/16



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“Our buildings are more than bricks and mortar. They reflect the ethos of our society – efficient, practical and forward-looking. A society which wants an environmentally sustainable and safe urban environment to live in. A society where we care for one another, are sensitive to each other’s needs, and aspire to be inclusive and to bring everybody along in our journey. Then we can have good buildings – well built, efficiently built, and safely built, meeting human needs, showing off a modern city – to be an element of the endearing home that all of us share.”

Prime Minister Lee Hsien Loong
on the built environment of Singapore (2016)



MISSION

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

VISION

A future-ready built environment for Singapore

STRATEGIC THRUSTS

In line with our mission and vision, our strategic thrusts are:

1. A Caring and Innovative Organisation
2. A Safe and High Quality Built Environment
3. A Friendly and Sustainable Built Environment
4. An Advanced and Productive Built Environment Sector
5. Effective Partnerships with Our Stakeholders

CORE VALUES

WE CARE

We care for our staff, our customers, the community and the environment

WE DARE

We dare to be innovative in transforming BCA and the built environment

WE CAN

We can overcome all challenges with courage, confidence and commitment

Photo courtesy of PARKROYAL on Pickering





CORPORATE GOVERNANCE

BCA is committed to good corporate governance. We have put in place a Code of Corporate Governance to formalise the principles and practices of governance within BCA to ensure accountability, responsibility and transparency.



Board Members

The Board currently comprises 14 members. All are non-executive members, except Dr John Keung who is BCA's Chief Executive Officer.

The Board comprises representatives from the industry, academia and ministries. The diverse representation of the Board provides an appropriate range of experience, skills, knowledge and perspectives to enable it to play an active role in guiding BCA to achieve its mission and vision. The Chairman provides strategic leadership and guidance to the management of BCA, and ensures that discussions are fairly, objectively and independently conducted.

The Board meets at least six times a year to evaluate, approve and monitor the plans and budgets of BCA. It also oversees the work and performance of the Management and assesses the financial health of BCA.

The BCA Act empowers the Board to form committees from among its members to support the work of the Board.

Finance and Audit

Internal Controls

The Board ensures that the Management maintains a sound system of internal controls to safeguard the interests and assets of BCA. It also ensures that a review of BCA's material internal controls, including financial, operational and compliance as well as risk management, is conducted annually through internal and/or external audits according to the direction of the Audit Committee.

Audit Committee

The Audit Committee reviews the audited financial statements with external auditors, as well as reviews audit plans and observations of the external and internal auditors. It also ensures that the Management takes appropriate action for audit observations and the Audit Committee's recommendations. The Audit Committee also provides guidance for BCA's Fraud Reporting policy. All members in the Audit Committee are non-executive members.

BCA is dedicated to contributing to the well-being of the community and the environment through our efforts in shaping a sustainable and friendly built environment.

Serving The Community

To us, serving the community is a privilege. Embedded in our core value, We Care, we take pride in each and every contribution as we serve with our hearts for the good of the community and to promote an inclusive society. To achieve this, BCA will:

- shape a friendly built environment for Singapore through improving accessibility and promoting Universal Design;
- inculcate a spirit of volunteerism among staff;
- organise purposeful programmes that help to bring about a better built environment for all; and
- raise public awareness of the importance of a friendly built environment through dialogues, public education and collaborative projects.

Greening The Built Environment (BCA's Environmental Policy)

BCA takes pride as the Green Leader for Singapore's built environment. Care for the environment is embedded strongly in our core values, and we are committed to championing this worthy cause together with our stakeholders to help promote environmentally sustainable developments. To achieve this, BCA will:

- spearhead green strategies and initiatives towards sustainability in the built environment;
- champion and lead the built environment sector in the development of sustainable building and sustainable construction;
- actively engage stakeholders through dialogues, public education and collaborative projects; and
- inculcate environmental awareness and commitment amongst our staff through educational and actionable programmes.



CHAIRMAN'S MESSAGE

“ AS SINGAPORE LOOKS BEYOND SG50, BCA WILL ALSO WORK TOWARDS RAISING THE CAPABILITIES AND PRODUCTIVITY OF THE INDUSTRY TO BE FUTURE-READY FOR THE BENEFITS OF THE PEOPLE IN SINGAPORE.”



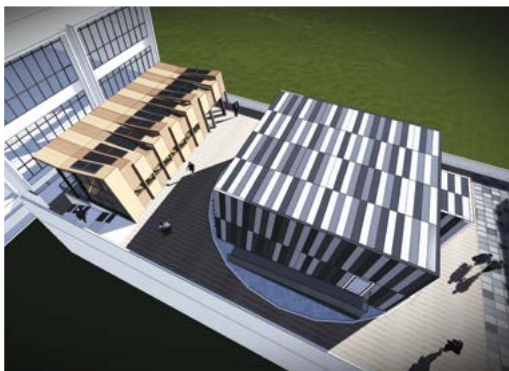
For many years, BCA has championed the advancement of Singapore's construction industry towards a safe, high quality, sustainable and friendly built environment. Our built environment sector has indeed grown with Singapore. And as Singapore looks beyond SG50, BCA will also work towards raising the capabilities and productivity of the industry to be future-ready for the benefits of the people in Singapore.

An important milestone for BCA in 2016 is the opening of BCA SkyLab. The SkyLab is the world's first rotatable laboratory for the tropics. It is part of our effort to push the boundaries on environmental sustainability and promote innovations in energy efficient buildings and universal design in construction.

The SkyLab is built on the rooftop of the new Academic Tower at the BCA Academy. The Academic Tower is a dedicated experiential learning facility and living lab for the built environment sector. The urban landscape is evolving and we need to keep stay ahead of the curve by changing the way we build. Game-changing technologies such as Design for Manufacturing and Assembly, Building Information Modelling and Virtual Design & Construction will power the industry ahead.

To meet the future needs of Singapore, BCA is **formulating the construction productivity R&D roadmap with our stakeholders to identify new knowledge, processes and technology areas.** The two new centres, the Built Environment Research and Innovation Institute (BERII) and the Built Environment Technology Centre (BETC), will further drive the research and innovation towards a future-ready built environment. BERRI will plan and implement research and development activities in the areas of green building, construction productivity, construction quality and construction IT. BETC will chart the strategic direction in underground development, coastal protection and the implementation of Smart Nation programmes.

As champion for the development of an excellent built environment in Singapore, BCA will **continue to push for high building standards such as improving workmanship quality and safety requirements for lifts and escalators.**



For a friendlier built environment that meets the different accessibility needs, there will be **additional requirements for existing buildings undergoing A&A works to be retrofitted with barrier-free accessibility features** from 2017. As such, we are extending the Accessibility Fund for another five years to help the industry meet these new requirements.

BCA launched its Green Mark scheme in 2005 and has been adopted by other countries as an established standard for sustainable building. We will **continue to advocate the adoption of energy-efficient technologies** as part of our effort towards sustainable development. More than a third of Singapore's buildings are certified under the Green Mark scheme and our goal remains to green at least 80 per cent of our buildings by 2030.

In the coming years, we will continue to work closely with the built environment sector and partners to achieve what we set out to do. I believe with the strong support we have from the industry, we can face the future with confidence. The future is bright as we change the way we build.

Mr Lee Fook Sun
Chairman



Top left:
*Artist's impression of the
BCA Skylab*

Top right:
*Virtual concierge that are
strategically located at
entrances help visitors locate
their directions easily*



Left:
*ITE Headquarters & ITE
College Central is a Green
Mark Platinum project with
one of the world's largest
vertical greenery installation*

BOARD MEMBERS



1
BOARD MEMBER
Mr Kenneth Loo
*Executive Director
and Chief Operating
Officer,
Straits Construction
Group Pte Ltd*

2
BOARD MEMBER
**Ms Kala
Anandarajah**
*Partner,
Rajah & Tann LLP*

3
BOARD MEMBER
Mr Terence Ho
*Director (Economic
Programmes),
Ministry of Finance*

4
BOARD MEMBER
**Mr Frankie Chia
Soo Hien**
*Managing Partner,
BDO LLP*

5
BOARD MEMBER
Mr Tang Kok Thye
*Associate Partner,
ADDP Architects LLP*

6
BOARD MEMBER
Mr Yong Tiam Yoon
*Deputy Chairman,
Woh Hup Pte Ltd*

7
CHAIRMAN
Mr Lee Fook Sun
*President,
Singapore Technologies
Electronics Ltd*



8

BOARD MEMBER

Dr Lim Jui

Chief Executive Officer,
NTU Innovation &
Chief Executive Officer,
NTUitive Pte Ltd

9

DEPUTY CHAIRMAN

Mr Norman Ip

Chairman, WBL
Corporation Limited
Group Managing
Director, United
Engineers Limited

10

BOARD MEMBER

Mr Ang Wee Gee

Chief Executive Officer,
Keppel Land Limited

11

BOARD MEMBER

Dr John Keung

Chief Executive Officer,
Building and
Construction Authority

12

BOARD MEMBER

**Mr Mohamad
Saiful Saroni**

Partner,
PricewaterhouseCoopers
LLP

13

BOARD MEMBER

Mr Han Fook Kwang

Editor-at-Large,
The Straits Times,
Singapore Press
Holdings Ltd

14

BOARD MEMBER

Er Lai Huen Poh

Managing Director,
RSP Architects Planners
& Engineers Pte Ltd



SENIOR MANAGEMENT



1
Mr Teo Orh Hai
*Acting Group Director,
Building Plan &
Management Group*

2
Mr Tan Tian Chong
*Deputy Managing
Director,
Built Environment
Research and Innovation
Institute*

3
Ms Jeanna Das
*Group Director,
Corporate Development
Group*

4
Mr Benedict Tan
Senior Advisor

5
**Er Thanabal
Kaliannan**
*Deputy Managing
Director,
Built Environment
Technology Centre
Group Director,
Special Functions Group*

6
Er Lam Siew Wah
*Managing Director, Built
Environment Research
and Innovation Institute*

7
Er Chew Keat Chuan
*Group Director,
Building Engineering
Group, Commissioner
of Building Control*

8
Mr Neo Choon Keong
*Deputy CEO, Industry
Development*

9
Mr Ang Kian Seng
*Environmental
Sustainability Group*

10
Dr John Keung
Chief Executive Officer



11
Mr Cheng Tai Fatt
*Deputy Managing
Director, BCA Academy*

12
Mr Chin Chi Leong
*Deputy CEO, Building
Control, Commissioner
of Buildings,
Commissioner of
Amusement Rides
Safety*

13
Mr Koh Lin Ji
*Group Director,
International
Development Group*

14
Er Ong See Ho
*Managing Director,
Built Environment
Technology Centre*

15
Mr Ang Lian Aik
*Group Director,
Construction Productivity
and Quality Group*

16
Er William Tan
*Managing Director,
BCA Academy*

17
Mr Tan Chee Kiat
*Acting Group Director,
Business Development
Group*

18
Mr Choo Whatt Bin
*Executive Director,
Services*

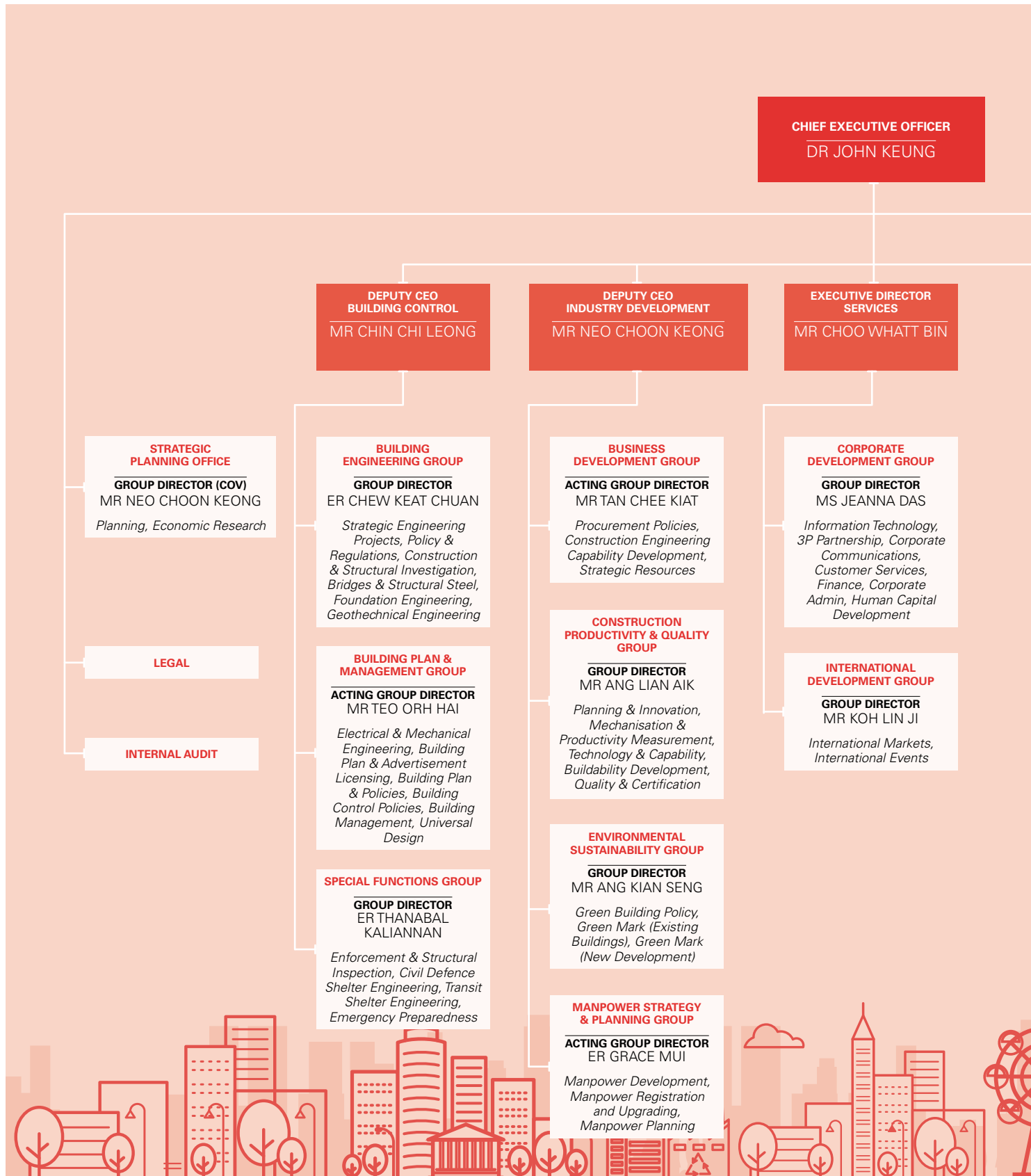
19
Er Grace Mui
*Acting Group Director,
Manpower Strategy and
Planning Group*

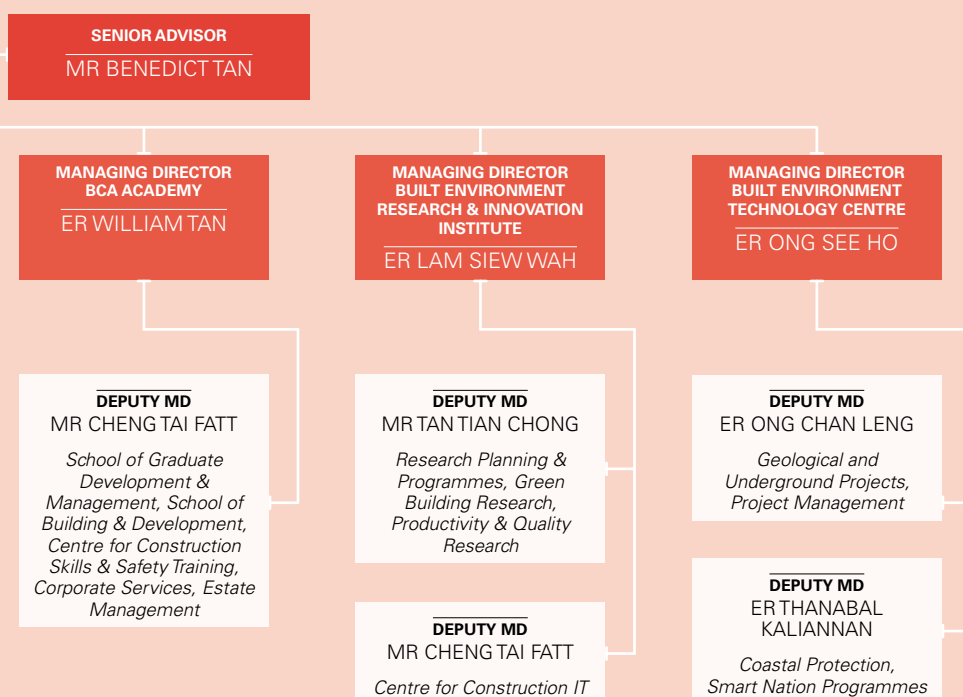
20
Er Ong Chan Leng
*Deputy Managing
Director,
Built Environment
Technology Centre*



BCA ORGANISATION STRUCTURE

(with effect from 9 July 2016)







FUTURE-PROOFING THE BUILT ENVIRONMENT:

Strengthening Environmental and
Social Sustainability



BCA champions an inclusive and sustainable built environment to enhance the lives of people from all ages and walks of life.

ENVIRONMENTAL SUSTAINABILITY

As a global citizen, BCA plays a significant role in advancing the green building agenda in Singapore and contributing to international efforts in reducing carbon emission and mitigating climate change.

A Decade of Achievements

Celebrating ten years of sustainability efforts in 2015, BCA released a commemorative publication titled, "Realising Singapore's Green Building Dream: Towards a Future-Ready Built Environment". The book featured 50

significant local and overseas Green Mark projects, many of which were a first of its kind. They included hospitals, hotels, schools, zero-energy buildings, carbon-neutral developments and even a wildlife park.



Marking our leadership
in green buildings beyond
Singapore

299 PROJECTS
IN **80 CITIES**
IN **14 COUNTRIES**

Key Stats as at end FY2015

Green Mark
Local Projects

Green GFA

81
MILLION
SQM



Percentage
Green Buildings

MORE THAN
31%



Green Mark
Pearl Awards
Buildings

6



Green Mark
Portfolio Projects

30



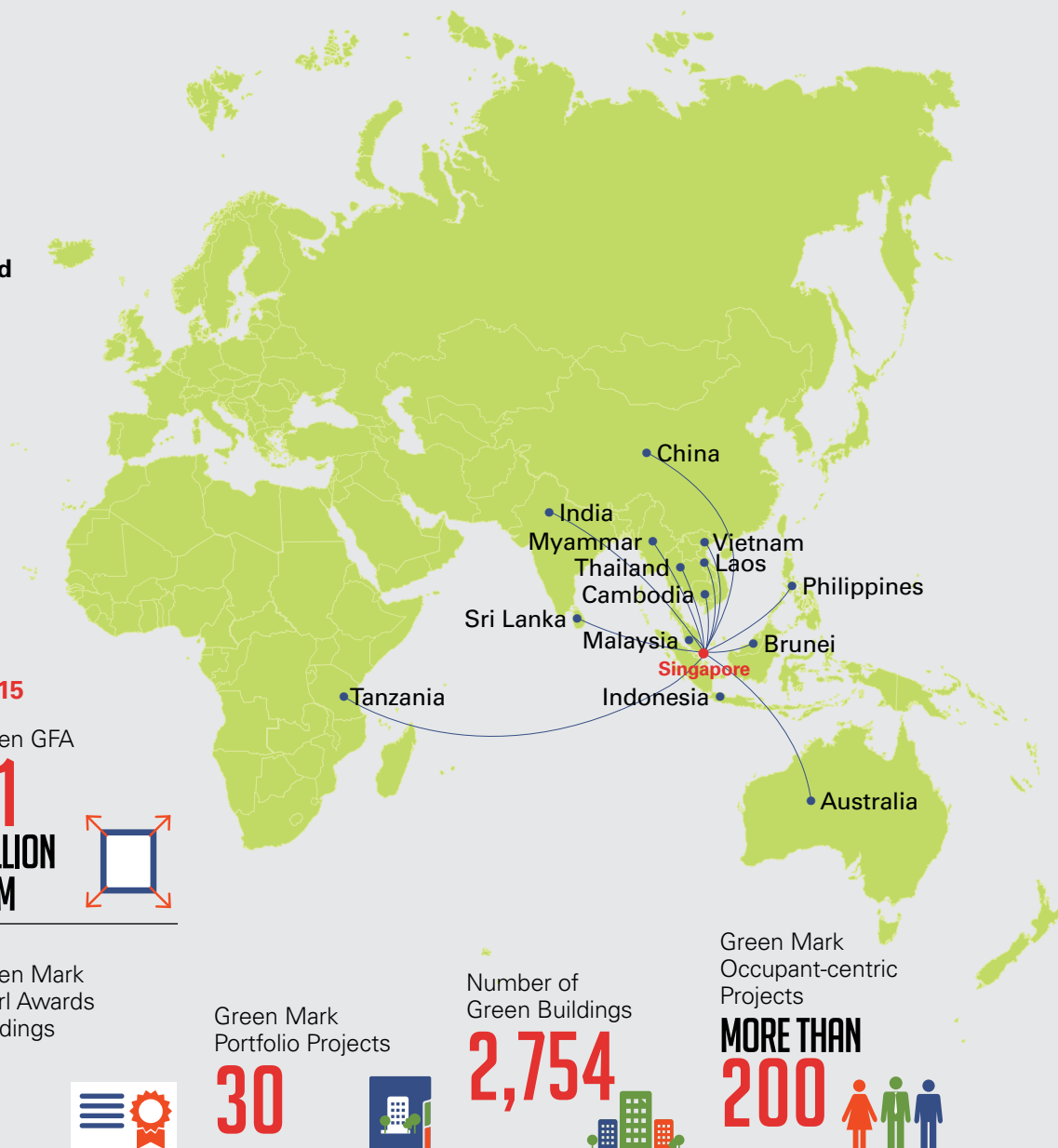
Number of
Green Buildings

2,754



Green Mark
Occupant-centric
Projects

MORE THAN
200





Left:
Dr John Keung received the WorldGBC Chairman's Award from Mr Bruce Kerswill (Chairman of WorldGBC – 2015) and Ms Terri Wills (CEO of WorldGBC – 2015) at the WorldGBC Congress Gala Dinner 2015

To cap off an eventful milestone year, Dr John Keung, CEO of BCA was conferred the World Green Building Council Chairman's Award in October 2015 in honour of his energy and passion in advancing the global sustainability movement. Dr Keung was one of three recipients in 2015, and the first recipient from Southeast Asia.

Contributing to the Global Alliance

On the international front, BCA represented Singapore in the Global Alliance for Buildings and Construction, launched at the inaugural "Building Day" at the United Nations Climate Change Summit in Paris in 2015. Members and partners of the Global Alliance are committed to lead and contribute to key climate change mitigation strategies, through net zero energy buildings and vernacular architecture, to catalyse greater pace and impact on climate action in the sector.

"Dr Keung's efforts have been instrumental in advancing the movement, in raising awareness of the challenges the world faces and most importantly, in implementing policies and initiatives that advance the green building movement. The WorldGBC Chairman's Award recognises his vision and leadership, and we congratulate him on his achievements."

Mr Bruce Kerswill
Chairman of WorldGBC

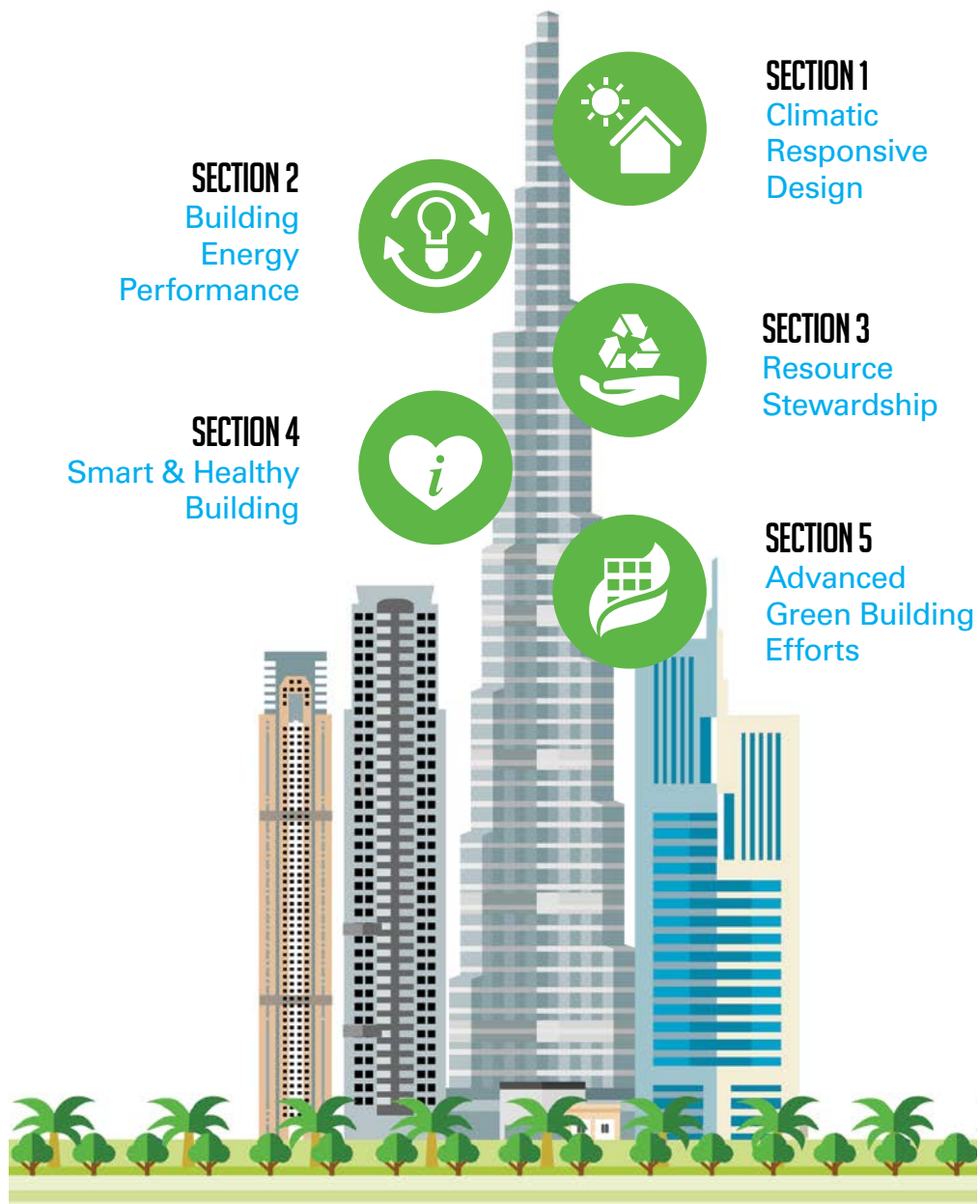
ENVIRONMENTAL SUSTAINABILITY

A More Comprehensive Green Mark

BCA revamped the Green Mark criteria in 2015, and launched the Green Mark for Non-Residential Buildings (GM NRB: 2015) for pilot. Developed through extensive industry collaboration, the revamped criteria built on the strengths of its first decade of influence to further establish the scheme

as the leading green building rating tool of choice in the tropics and sub-tropics. GM NRB: 2015 will play a prominent role in driving sustainability outcomes to address climate change, with greater emphasis on climatically contextual design, energy effectiveness, smart and healthy building, and a systematic approach to address embodied energy and resource use.

GREEN MARK 2015



Key Stats for Incentive Schemes for Existing Buildings



\$S\$100
MILLION

fully committed to the Green Mark Incentives Scheme for Existing Buildings



\$S\$50
MILLION

Green Mark Incentive Scheme for Existing Building and Premises

Engaging Building Owners and Tenants

To accelerate Singapore's green building agenda, BCA continues to actively engage building owners and tenants to drive energy consumption behavioural changes. A suite of incentive and financing schemes supports building owners in complying with minimum energy efficiency standards so they can reap the benefits of energy savings from operating an efficient retrofitted chiller system.

With S\$100 million fully committed to the Green Mark Incentives Scheme for Existing Buildings (GMIS-EB), BCA now has a S\$50 million Green Mark Incentive Scheme for Existing Building and Premises (GMIS-EBP) to support smaller building owners and tenants with energy efficient retrofits. As at FY2015,

five building owners and one tenant have benefitted from this scheme.

In addition to incentive schemes, BCA shares 60% of the default risk with private financial institutions under the Building Retrofit Energy Efficiency Financing scheme (BREEF). A total of 10 building owners and Energy Performance Contractors (EPC) have benefitted from BREEF to secure loans for energy efficient retrofits.

In partnership with the Singapore Green Building Council (SGBC), BCA has also jointly developed a standard Energy Performance Contract template and an accreditation scheme for EPC firms. These efforts have made the runway towards energy efficient retrofits substantially smoother for building owners.



Left:

Fortune Centre is one of the beneficiary of the Building Retrofit Energy Efficiency Financing (BREEF) scheme. The building has undergone building retrofits with energy savings guarantee from a Energy Performance Contractor to attain Green Mark Gold award



Uplifting Industry Skills and Knowledge

The BCA Academy continually strives to deepen its partnerships with several Institutes of Higher Learning, developing comprehensive training frameworks to build up a strong green collar workforce. In 2015, BCA Academy launched the Green Mark Facilities Professional Course, tailored for Facilities Management (FM) practitioners and other stakeholders working on existing

buildings. The course seeks to advance their technical knowledge and skills in green building solutions so as to manage, maintain, retrofit and operate a building at optimal efficiency.

As at FY2015, there are more than 13,000 green specialists. This puts BCA firmly on track for the target of grooming 20,000 green specialists by 2020.

Key Stats for Number of Green Specialists:

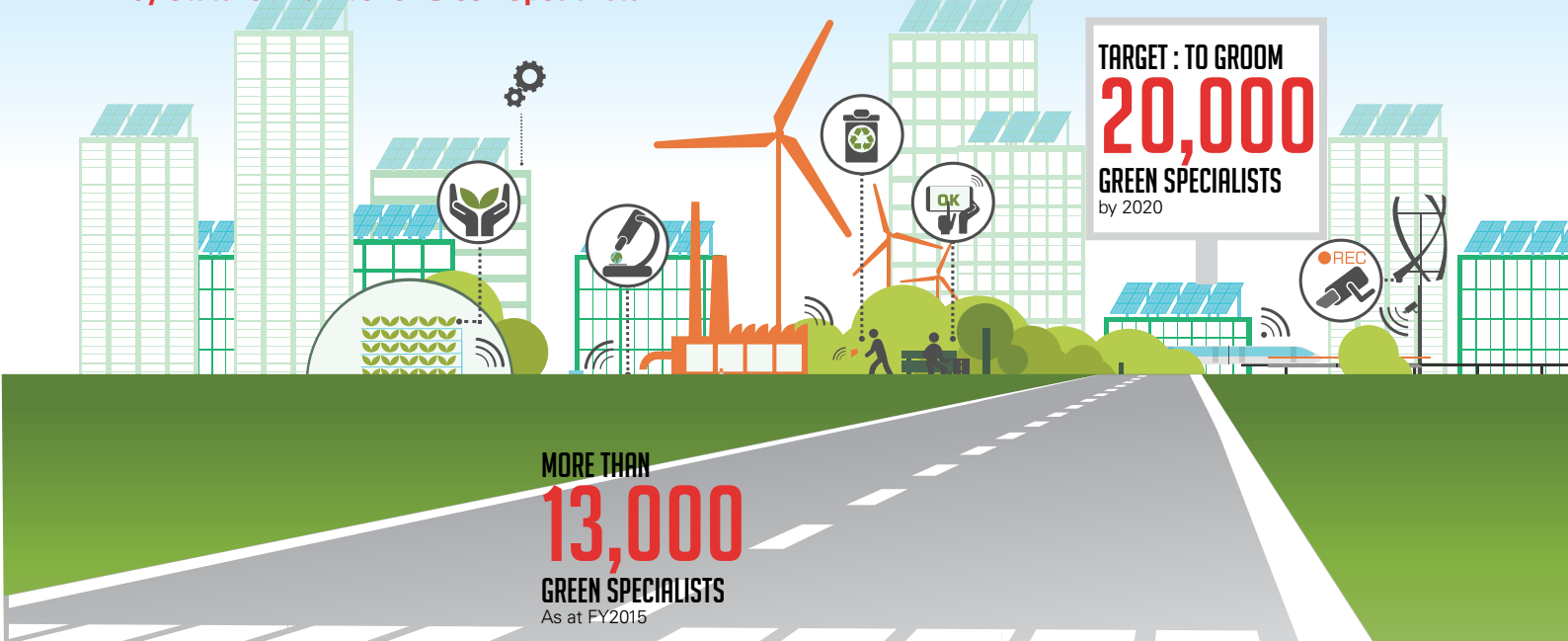


Photo courtesy of City Developments Limited



Expanding the Scope for Building Energy Submission

Owners of commercial buildings are required to submit data annually on their building's energy consumption into BCA's Building Energy Submission System (BESS) portal. The information is used by BCA to evaluate and identify areas for improvement in energy efficiency. In 2015, BCA included healthcare facilities, as well as tertiary and private institutions in the mandatory submission.

In the second BCA Building Energy Benchmarking Report (BEBR) released in 2015, commercial buildings were found to have achieved better energy performance in 2014 compared to 2013, with BCA

Green Mark certified commercial buildings continuing to perform better than non-certified buildings. However, tenants' electricity consumption remains comparable to that of landlords. To address this, BCA will increase its efforts to partner landlords in engaging tenants to reduce their energy and carbon footprint.

Extending Green to Tenants' Premises

Since inception in 2009, BCA's Green Mark occupant-centric schemes have increased steadily over the years. There are 16 different Green Mark schemes in 2015, including occupant-centric ones such as Green Mark for Restaurants and Retail. A total of 215 projects were awarded in FY2015.



Top:
Shown here is the world's first green library for children – 'My Tree House' – a collaboration between National Library Board and City Developments Limited. 'My Tree House' received the Platinum award under Green Mark for Retail scheme

Bottom:
McDonald's JEM was awarded the Gold^{PLUS} award under the Green Mark for Restaurants scheme





Right:

Fairprice has participated in the Green Mark Portfolio Programme, with a commitment to green at least 20 supermarkets. Several green initiatives have been rolled out within their supermarkets such as implementing glass doors for refrigerators, providing green check-out options for customers, and recycling corners.

Bottom:

Senior Minister of State Desmond Lee (centre) officiated the launch of the BCA Green Mark for Restaurants and Retail For Dummies®, together with Mr Eric Thrasher, General Manager and Marketing Director, Asia, Wiley (left) and Mr Lam Siew Wah, Deputy CEO, Industry Development, BCA (right)



To further promote greening and sustainability to tenants, seven developers have joined the Green Partnership scheme in a commitment to encourage present and future tenants to reduce their environmental impact. A miniature guidebook titled “BCA Green Mark for Restaurants and Retail For Dummies®”, was released to provide tenants with insights and tips on adopting eco-friendly practices and features in their restaurants and retail outlets.

Greening Schools

The Green Mark for Existing Schools version 2.0 was launched for pilot in 2015 with a target of greening all schools in Singapore by 2020. Besides acknowledging existing green features and management plans that schools have in place, Green Mark for Existing Schools 2.0 also places emphasis on schools’ curriculum and programmes in environmental sustainability. Alongside the revised criteria, a Green Schools toolkit was developed to ease and facilitate the documentation process of Green Mark Certification.





Left:

Winners of the inaugural Building Energy Efficiency Solutions Students Competition 2015 with BCA Chairman, Mr Quek See Tat (2nd from left)

BCA-SGBC Green Building Individual Award

2

NEW AWARDS

BCA has also been actively engaging students through multiple platforms to inculcate sustainable values and challenge the next generation. In 2015, competitions such as the NP-BCA Design Challenge and the inaugural "Building Energy Efficiency Solutions Students' Competition", were organised to provide students a platform to showcase innovative and sustainable solutions for the built environment.

Integrating Smart Technology into Green Mark Assessment

Online submission of Green Mark assessment related documents is now available through the Green Mark online submission module. The integration of smart technology has boosted BCA's Green Mark

operational efficiency, with paperless capability and easier data tracking and retrieval.

Recognising Visionary Leadership In Green Building

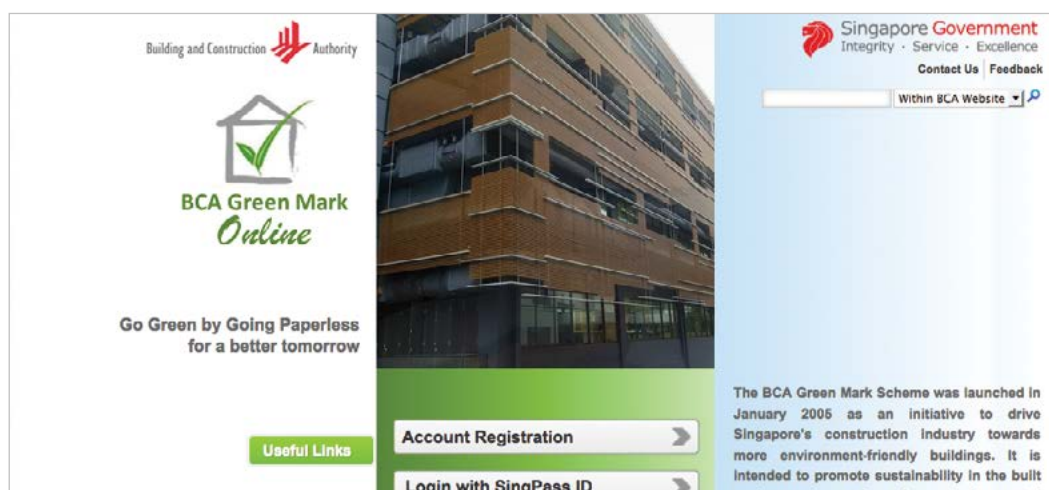
BCA's achievements over the past decade can be attributed to the invaluable support and partnership of the industry. In recognition of key industry leaders who have pursued the green building endeavour, BCA, together with the Singapore Green Building Council, introduced two new awards under the Green Building Individual Awards category, the "Green Visionary Award" and "Lifetime Achievement Award". These are conferred on inspiring green industry leaders with significant contributions to the transformation of the green built environment.



**GREEN
VISIONARY
AWARD**



**LIFETIME
ACHIEVEMENT
AWARD**



Left:

<https://www.bca.gov.sg/GreenMarkOnline/>



Key Stat:



Maintains
15 KM
of foreshore
structures



Protecting Our Coastlines

As the lead agency tasked with safeguarding Singapore's long term coastal protection needs, BCA actively drives exploration of new strategies and innovative ideas to support the management of the country's coastal areas. In FY2015, BCA contributed to the development of the Singapore Climate Action Plan launched by President Tony Tan during the World Cities Summit 2016.

BCA's ongoing Coastal Adaptation Study (CAS) remains on track for completion by 2017. The study aims to develop appropriate site specific measures to further enhance existing coastal protection measures and ensure the long term resilience of our coastline. A third International Panel of Experts Workshop for the study was successfully concluded in May 2016. As

part of capability building within government agencies, BCA also organised a Coastal Adaptation Seminar in May 2016, attended by more than 120 participants from various government agencies and ministries.

Foreshore structures perform an integral function in the protection of our coastal land. BCA inspects and maintains 15km of foreshore structure. BCA's innovative use of "green" materials such as large sand-filled geo-textile bags as an alternative to traditional stone revetments to protect the coastal land at East Coast Park, was featured in the IES-SG50's top 50 engineering feats competition organised by the Institution of Engineers Singapore. BCA will be taking on more foreshore structures to be maintained when more coastal land comes under MND as part of the round island park connector network.



Top:
Coastal protection using
sloping revetment

Bottom:
Coastal protection using
innovative solutions like
geobags

Shaping a future-ready Singapore begins with forging an inclusive built environment to support her people. BCA regularly reviews and updates its industry initiatives to champion wider adoption of Universal Design (UD) through creating more user-friendly and well-connected spaces for people of all ages and different mobility needs.



Left:

The design of Westgate (BCA UD Mark Award Platinum Winner 2015) epitomises the seamless connectivity that is characteristic of Jurong Gateway – a covered walkway that is seven-metre wide links Westgate and the nearby Jurong East MRT station, making it easier for pedestrian of all ages and needs to move about

Bottom:

A reception counter of a lower height, with knee space, allows wheelchair users to access the counter easily

Raising the Bar for UD Mark Certification

The BCA UD Mark was introduced in 2012 to drive industry-wide adoption of UD in the design and management of building developments. UD Mark provides a systematic scoring criteria to guide developers and architects in designing for UD in both new and existing buildings.

In 2015, BCA rolled out the UD Mark version 2.0 with enhanced criteria and revised points system to intensify UD adoption.

As at FY2015, BCA received 99 applications for the UD Mark certification from both public and private sector developments.



**Key Stat as at
FY2015:**



A total of

99

**APPLICATIONS
FOR UD MARK
CERTIFICATION**

from both public
and private sector
developments

USER-FRIENDLINESS



Right:
Ramp at d'Leedon, a UD
Award Platinum project,
improves accessibility for
wheelchair users and families
with baby carriages



Greater Accessibility for Existing Buildings

BCA's S\$40 million Accessibility Fund provides grants to owners of existing pre-1990 private buildings, to defray the costs of retrofitting accessibility features and family-friendly facilities. Since the Fund's inception in 2007, a total of 194 applications for accessibility upgrading has been accepted by BCA as at FY2015.

Improving Connectivity in Private Estates

As a managing agent for MND, BCA oversees Estate Upgrading Programmes (EUPs) for 43 private estates which are in various stages of planning, consultation and construction works. In FY2015, BCA awarded construction contracts for the upgrading of six private estates comprising 5,532 households. Where feasible, barrier-free accessibility features

Key Stats as at FY2015:**194****APPLICATIONS**for accessibility upgrading
accepted by BCA**63****ESTATES**selected to-date for the
EUP, benefiting more than**46,000****DWELLING UNITS**

were incorporated in these upgrading projects to provide connectivity within the estates for people of all ages and different mobility needs.

BCA also managed the Interim Estate Upgrading Programme (I-EUP) for all private estates in three cycles. In FY2015, upgrading works for Cycles 1 and 2 were completed and work on Cycle 3 had commenced.

Infrastructure Development

Infrastructure development projects are essential in supporting the needs of the built-

environment industry such as the construction of foreign workers dormitories, aggregate terminals and stockpile sites, ready-mixed concrete plants, precast concrete plants and integrated concrete precast hubs. In FY 2015, BCA managed the construction contract for the widening of Jalan Bahar and a new major sewer line, as well as the planning of infrastructure development works at Pulau Punggol Barat to support a Integrated Concrete Precast Hub. In addition, BCA will manage the road-widening works and construction of a new sewer line along Lor Lada Hitam.



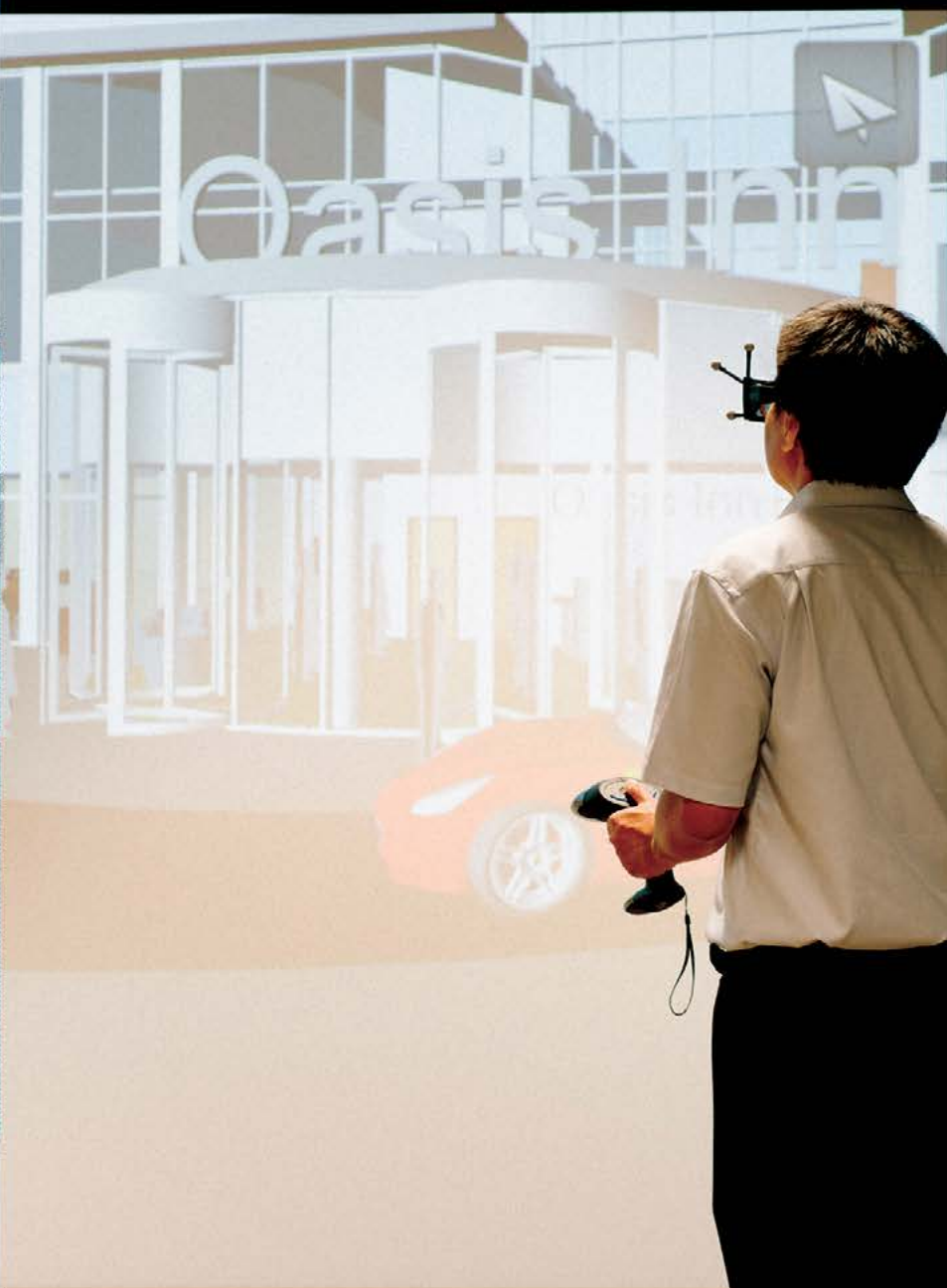
Bottom:
Private estate upgrading
works at Sembawang
Springs Estate, converting a
plain field into a barrier-free
new park for the enjoyment
of residents

**Before****After**



FUTURE-PROOFING THE INDUSTRY:

Revolutionising Practices and
Enhancing Standards



BCA stays ahead of the curve by pioneering innovative technological advances in building methodologies and raising the bar on quality to revolutionise the way we build.

PRODUCTIVITY – CHANGING THE WAY WE BUILD

BCA leads the charge in driving industry-wide adoption of game-changing technologies and best practices to boost construction productivity for a Singapore that is future-ready, today.

“We are gradually making progress. Our construction productivity has been increasing in the recent years by about 1.3 percent a year over the last seven years since 2009. We must continue to do better because we have many more projects but we have people constraints. The more productive we are, the better our architects, contractors, technicians and construction workers can put effort and produce results instead of generating work which then have to be reworked, which is expensive and unproductive.”

Prime Minister Lee Hsien Loong
on construction productivity (2016)

Raising National Site Productivity

Raising site productivity is critical for efficient and timely completion of projects. At the national level, site productivity improved 2.09% year-on-year in 2015, meeting the year’s target of 1.5% to 2.0% productivity improvement. In 2015, BCA also extended the measurement of site productivity to MRT and road projects and has been working closely with the Land Transport Authority to track productivity ratings for these civil engineering projects.



Bottom:
At the construction site of the Nanyang Technological University’s (NTU) North Hill Residential Halls, rooms complete with finishes, fixtures and fittings are done at a factory, before being transported and assembled on site.

Funding Boost For Construction Productivity

In FY2015, BCA embarked on the 2nd Construction Productivity Roadmap to further drive productivity in the industry. An additional government funding support of S\$450 million has been successfully secured for the Construction Productivity and Capability Fund from 2016 to 2018. The funding boost is projected to benefit more than 7,000 firms across the entire value chain.



Construction Productivity and Capability Fund



Successfully secured

\$450M
2ND TRANCHE OF CONSTRUCTION PRODUCTIVITY AND CAPABILITY FUND FROM 2016 TO 2018

Projected to benefit

MORE THAN 7,000
FIRMS ACROSS ENTIRE VALUE CHAIN

Photo Courtesy of JTC

**Left:**

The JTC Space @ Tuas, an industrial development with dormitory, to be constructed using the Prefabricated Prefinished Volumetric Construction (PPVC) method, one of the Design for Manufacturing and Assembly (DfMA) technologies

Bottom:

A prefabricated bathroom unit at Cube 8

Optimising Public Sector Project Productivity

Public sector projects form a substantial portion of overall construction demand. In view of this, MND and BCA developed a structured Productivity Gateway Framework (PGF) in 2015, to help Government Procuring Entities (GPEs) raise construction productivity of public sector projects. Key considerations include the adoption of transformative technologies and Design for Manufacturing and Assembly (DfMA), collaboration and integration through Virtual Design & Construction (VDC) and adoption of productive procurement practices. Through the PGF, a total of ten GPEs have incorporated upstream

productivity considerations and downstream implementation of productive measures in their projects.

Productive Technologies for Government Land Sales (GLS) Sites

To create sustained lead demand for DfMA technologies such as Prefabricated Prefinished Volumetric Construction (PPVC) and Prefabricated Bathroom Units (PBUs), DfMA adoption was mandated in 2014 as one of the conditions for GLS sites. To date, a total of five GLS sites have been mandated to adopt the PPVC method.

Photo courtesy of City Developments Limited



PRODUCTIVITY – CHANGING THE WAY WE BUILD



Right:
CapitaGreen was a Platinum winning project under the Construction Productivity Awards 2016.

Bottom:
The BCA-URA's Balcony Bonus GFA scheme gives developers bonus GFA for balconies if they commit to a set of productivity pre-requisites

Levelling Up Buildable Design and Constructability

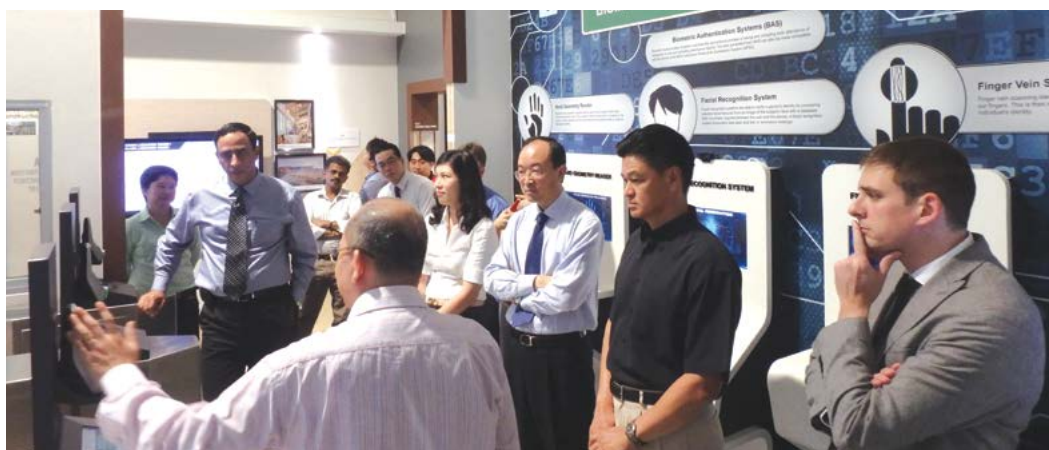
First established to encourage easy-to-build designs and easy-to-deploy construction methods, the minimum Buildable Design Score (B-Score) and Constructability Score (C-Score) were increased further for all building projects with effect from December 2015. With this latest move, all projects must now meet the same standards imposed on key Government Procuring Entities (GPEs) in November 2014.

Improving Productivity of Private Residential Non-landed Projects

To elevate project productivity for private residential non-landed developments, the joint BCA-URA's Balcony Bonus Gross Floor Area (GFA) scheme introduced in November 2013 allows developers of these projects to enjoy bonus GFA granted for balconies by committing to a set of productivity pre-requisites. The scheme was revised in December 2014 with a set of new pre-requisites such as 80% adoption of Prefabricated Bathroom Units (PBUs). A total of 31 projects have since applied to the scheme under the revised conditions, in addition to 19 projects prior to December 2014.

Photo courtesy of CapitalLand





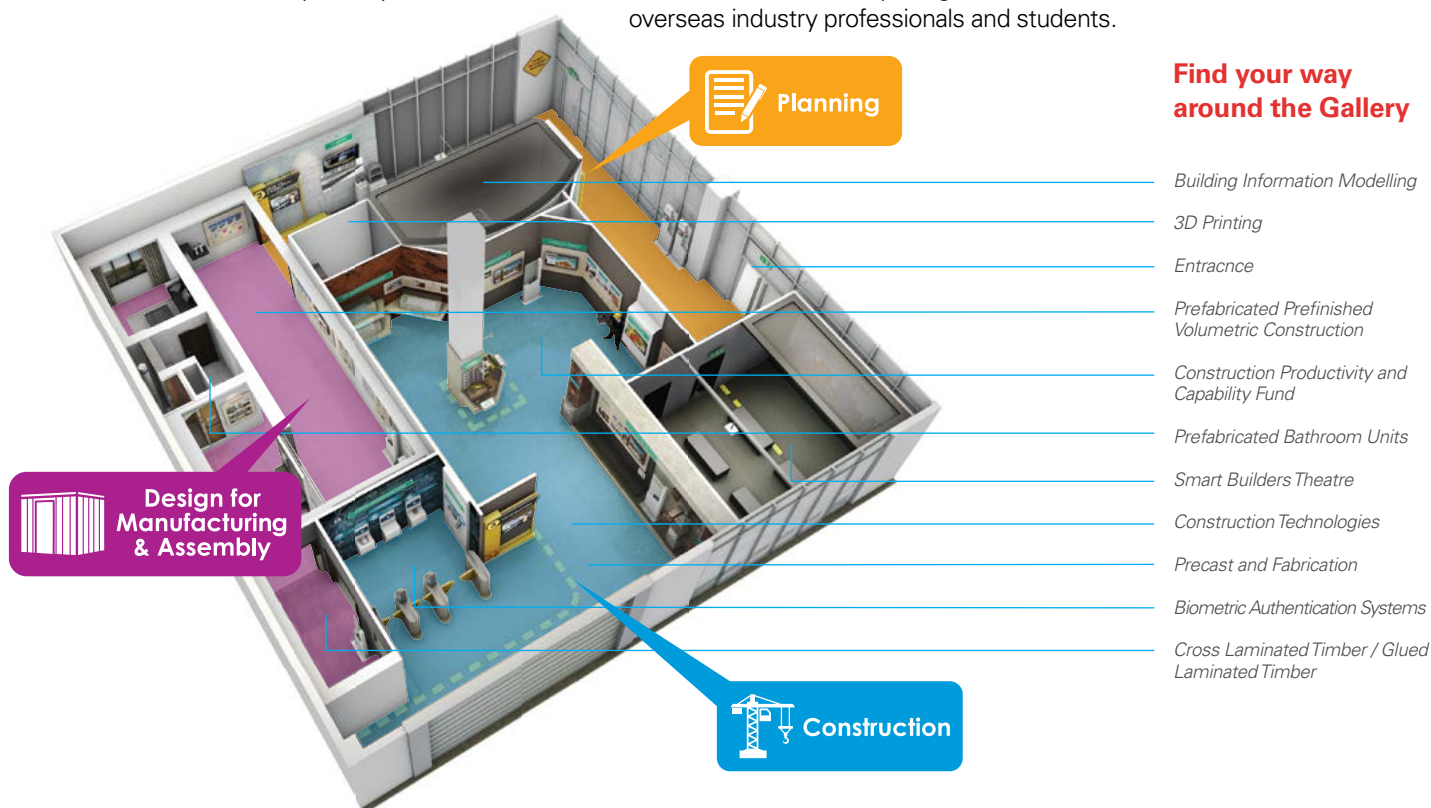
Left:
At the Construction Productivity Gallery, game-changing technologies, equipment, training programmes, as well as planning, design and construction methodologies are brought to life through interactive displays and engaging exhibits

More Timely Construction Market Information

BCA provides timely construction market information through various platforms, such as the Construction InfoNet, to facilitate business decisions and resource planning. This information also serves as a barometer for current and expected industry situations, including a five-year construction demand forecast and quarterly Tender Price Index. In addition, BCA compiles and monitors industry structure and performance at the firm level by conducting an annual construction industry survey.

Opening of Construction Productivity Gallery

BCA opened the Construction Productivity Gallery in July 2015, the first-of-its-kind in Singapore, dedicated towards educating the industry and promoting better knowledge on construction productivity. The Gallery is an interactive showcase of BCA's transformative vision for Singapore's construction industry and provides up-close, first-hand experience of cutting-edge productive construction technologies and equipment under the DfMA concept. In FY2015, the Gallery hosted more than 6,500 visitors comprising both local and overseas industry professionals and students.



AUGMENTING QUALITY STANDARDS



Right:
BCA officers conducting
Quality Mark assessment
in a new residential unit

Standards play a critical role in raising professionalism and ensuring alignment of industry practices to a common goal. BCA consistently seeks to uplift the industry's standards for sustainable quality benchmarks that can support the nation's future built environment needs.



New CONQUAS® 9th Edition

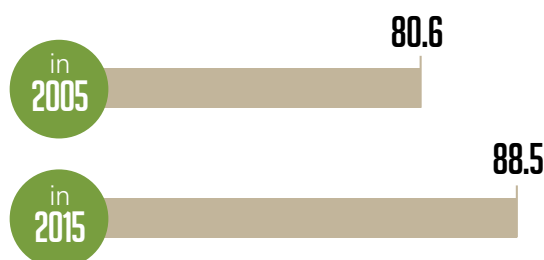
BCA's Construction Quality Assessment System (CONQUAS®), remains the de-facto gold standard industry benchmark for better quality buildings. The success of CONQUAS® lies in its proven ability to achieve greater productivity faster by reducing unnecessary rework and getting things right the first time.

Since its inception in 1989, more than 3,900 projects had been assessed under CONQUAS®. The average overall CONQUAS® score has persistently grown over that time, currently peaking at 88.5 as at 2015, compared to 80.6 a decade ago. BCA also provides customised and complimentary training for all CONQUAS® projects. This has produced close to 1,400 trained managers and

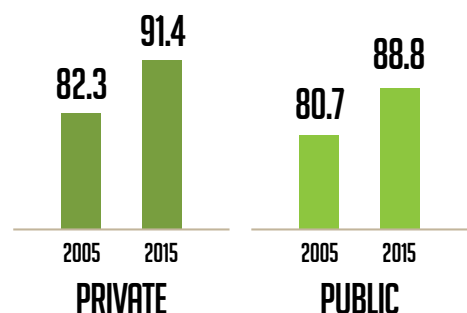
supervisors since 2007. Of this number, more than 250 are certified under the CONQUAS®/QM Managers/Supervisors schemes, forming an important core group committed to quality construction in Singapore.

CONQUAS® continues to demonstrate an exceptionally high adoption rate among developers and builders. In FY2015, 95% of private residential and commercial projects in Singapore, as measured by contract value, were committed for CONQUAS® assessment. Equally well received internationally as a benchmarking tool for quality, Singapore's regional neighbours, Malaysia, Hong Kong SAR and South Korea, have built their quality assessment systems based on the CONQUAS® framework.

The average overall CONQUAS® score:



The average overall CONQUAS® score in quality of private and public housing:





The new CONQUAS® 9th edition will deepen the robustness of BCA's quality assurance schemes. It will also better meet expectations of homeowners and building occupants on workmanship quality.

Key changes include increasing the sample size for internal finishings and wet area water tightness testing across all categories, awarding bonus points for the adoption of productive technologies, and factoring major defects and questionable practices in the scoring system. BCA is also studying the feasibility of using drone technology to improve quality of assessments and productivity.

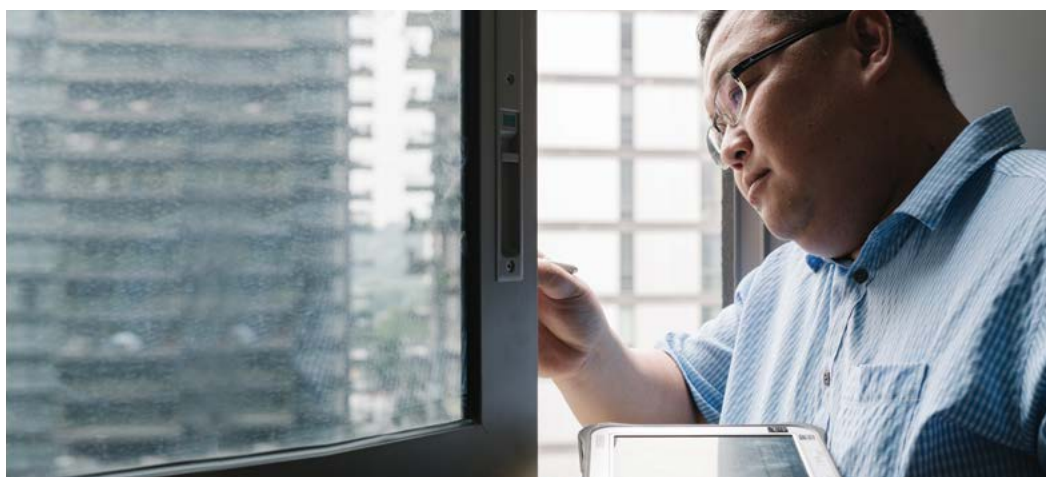
Setting the Standard for Workmanship Quality

Introduced in 2002, the BCA Quality Mark (QM) for Good Workmanship scheme measures the quality of workmanship in each newly completed residential unit, and certifies the condition of the unit at the time of assessment. Units must pass stringent finishing standards and quality checks, as well as bathroom water tightness testing before being QM certified.

To date, close to 79,000 private residential units have been committed by the industry for QM evaluation and in FY2015 alone, 40.7% of new private residential units adopted QM.



Top:
Suites at Orchard has a high CONQUAS score of 95.5 and has also received the Quality Mark Star rating





Top:
Mr Quek See Tiat
(Former Chairman of BCA),
joined by Mr Augustine Tan
(President of REDAS, left
of photo) and Mr Benedict
Tan (Senior Advisor of BCA,
right), launching the "Good
Industry Practices Guide –
Engineered Wood Flooring"

Launch of PPVC Manufacturer Accreditation Scheme (PPVC MAS)

To ensure adherence to high quality standards in production and delivery of quality product for Prefabricated Prefinished Volumetric Construction (PPVC), BCA launched the Prefabricated Prefinished Volumetric Construction Manufacturers Accreditation Scheme (PPVC MAS) at the annual BCA-REDAS Quality & Productivity Seminar on 29 March 2016. PPVC MAS is jointly administered by BCA, Singapore Concrete Institute (SCI) and Singapore Structural Steel Society (SSSS). The scheme ensures that PPVC manufacturers are held accountable to a common minimum standard for building projects in Singapore.

New Industry Advances in Workmanship and Productivity

A Good Industry Practices (GIP) Guide on Engineered Wood Flooring was officially launched at the annual BCA-REDAS Quality & Productivity Seminar in March 2016, as part of BCA's CONQUAS® Enhancement

Series that promotes good practices in workmanship quality of building projects. Engineered Wood Flooring has been identified as an environmentally friendly and sustainable product which can help the industry achieve the dual objectives of improved productivity and better workmanship. To date, a total of 15 GIP Guides have been published to propel more widespread adoption of best practices on quality and pave the way for higher industry-wide quality excellence.

Rewarding Progressive Construction Through PQMv2

Following the pilot version introduced in 2015, BCA deployed the Price-Quality Method Version 2 (PQMv2) Framework in full, with effect from 1 January 2016. PQMv2 accords a higher weightage of 10% for productivity attributes and rewards progressive construction firms that have achieved higher constructability scores in their past projects and invested in technology and workforce development.



Left:
Granite barge being unloaded
at Pulau Punggol Aggregate
Terminal

Bottom:
BCA oversees a total of 24
purpose-built dormitories for
foreign construction workers,
with a total of 141,300 bed
spaces. Shown below is
Sungei Tengah Lodge, the
latest dormitory managed by
BCA that began operations in
April 2016

Supporting Growing Industry Capacity

BCA's aggregate terminals at Pulau Punggol Timor and Tuas handled a total of 22.3 million tonnes throughput in 2015 to meet the industry's needs. BCA also oversees 24 purpose-built dormitories for foreign construction workers, with a total

of 141,300 bed spaces. These purpose-built dormitories provide a conducive living environment equipped with adequate social, recreational and commercial facilities to meet the daily needs of foreign construction workers.



SPEARHEADING RESEARCH AND INNOVATION

Strategically driven research and innovation play a powerful role in challenging the way we build. It paves the way to discovery of new solutions and ideas to meet the challenges for Singapore's future builders.

To ensure Singapore's lead at the forefront of built environment research and development, BCA administers a number of incentive schemes to support market-driven research and innovation for the sector.

PRODUCTIVITY & CONSTRUCTION IT

Transform the built environment sector into one that is highly advanced, highly skilled and integrated:

- Reduce reliance on foreign manpower
- Build faster, with higher quality and lower impact on the surrounding neighbourhood
- Create higher value jobs for Singaporeans

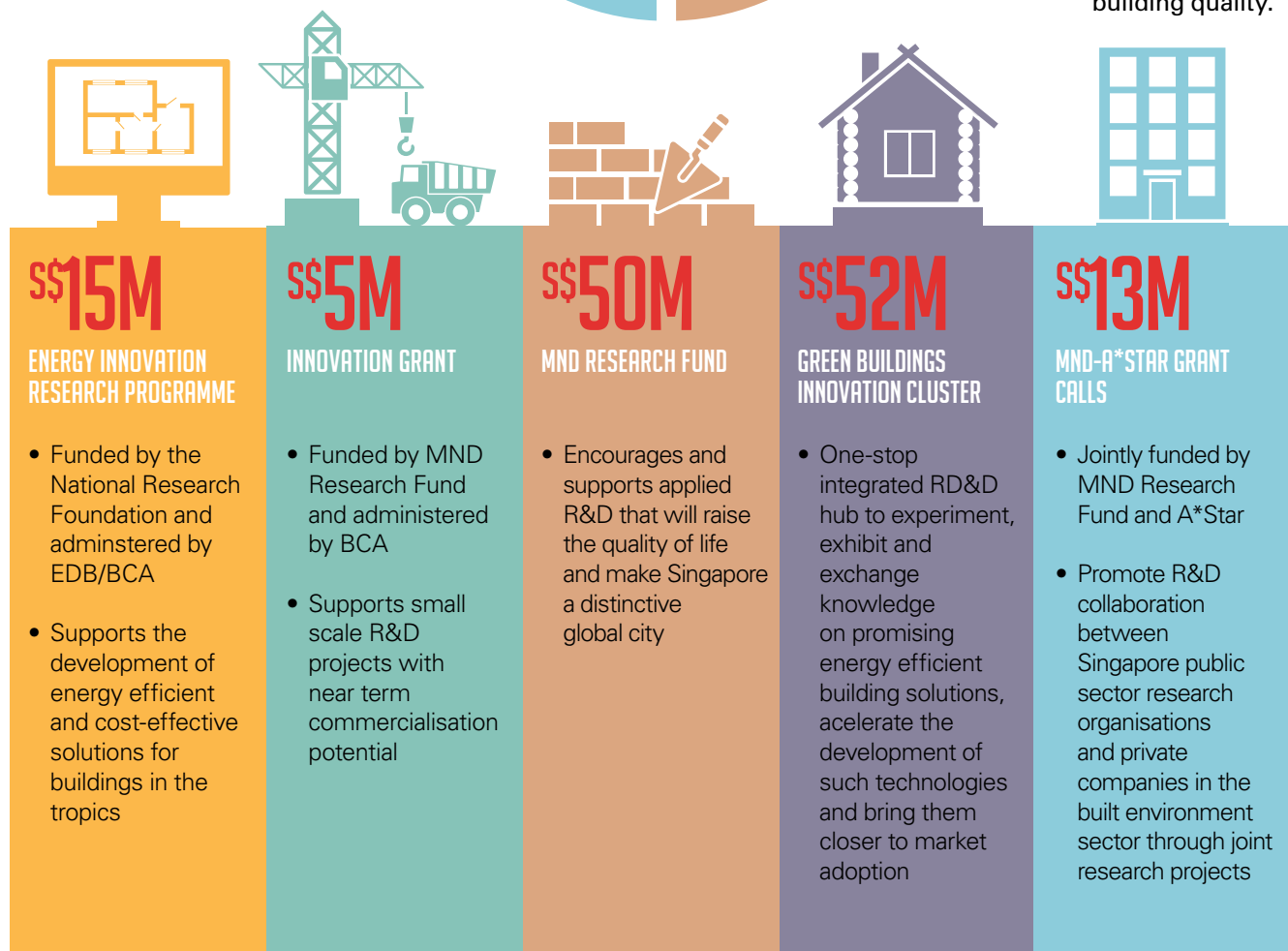


GREEN BUILDINGS

Support Singapore's commitments to reduce its emissions intensity as the building sector accounts for more than a third of Singapore's electricity consumption.

BUILDING QUALITY

Keep pace with changes in technology and meet higher demands for building quality.



Achievements in FY2015**14**

committed
technologies for
demonstration or
test-bedding

**32**

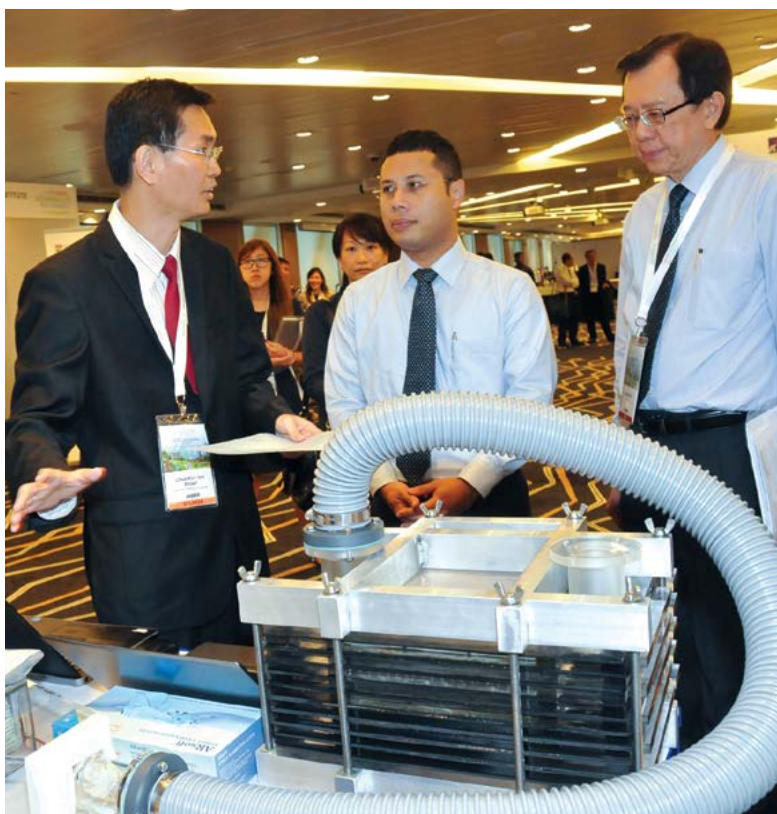
R&D proposals
awarded with
\$21.5 million

**23**

projects completed
under BCAs
R&D funding
programmes

**\$25.15M**

of new funding
was secured from
from MNDRF and
National Research
Foundation

**Recognition for ZEB@BCA Academy**

The Zero Energy Building @ BCA Academy (ZEB@BCA Academy) is widely recognised by the industry and general public for its engineering efforts as well as significance in showcasing green building performance. In 2016, it was nominated as one of Singapore's

top 50 engineering achievements by Institution of Engineers Singapore. ZEB@BCA Academy continues to maintain a net positive energy output in its sixth year of operation, relying on a combination of active and passive solutions and the energy generation from solar photovoltaic cells.



Top:
Notable project: "A Novel Nano-woven Membrane Air Dehumidification to Enhance Building Energy Efficiency" led by Prof. Ernest Chua and funded under the A*STAR MND Green Building grant focuses on the development of a hybrid air dehumidification system with membrane and composite desiccant

Left:
The ZEB@BCA Academy was ranked as the most popular project on ASHRAE's High Performing Buildings based on web visitorship





Right:
*BCA SkyLab – the world's
first high-rise rotatable
laboratory for the tropics*



**BCA SkyLab –
First Of Its Kind Worldwide**

BCA SkyLab is the world's first high-rise rotatable laboratory for the tropics. Developed by BCA in collaboration with the Lawrence Berkeley National Laboratory in California, a world leader in science and engineering and building energy performance research, BCA SkyLab is slated to be a key driver in

Singapore's environmental sustainability drive. The 132m² facility is equipped with a 360-degree rotatable capability, full plug-and-play configurability and fitted with extensive instrumentation and sensor networks scalable in future.

BCA SkyLab was granted its Temporary Occupation Permit in March 2016.

Key Stats: BCA SkyLab



132 M² OF FACILITY



360 DEGREE ROTATABLE
CAPABILITY



FULL PLUG-AND-PLAY
CONFIGURABILITY



Left:
Closing Plenary at the Urban
Sustainability R&D Congress

Bottom:
BCA organised a series
of research and innovation
workshops to engage the
industry and academia on
the latest updates on green
buildings

GBIC Accelerates Green Building Technology

The Green Buildings Innovation Cluster (GBIC) was launched in September 2014 as an integrated research, development and demonstration hub, as part of BCA's third Green Building Masterplan. In January 2016, the 3for2@UWCSEA project was awarded as the first GBIC-Demo project. 3for2@UWCSEA is built on research conducted by the Singapore-ETH Centre (SEC), and is expected to achieve more than 20% improvement in energy efficiency compared to Green Mark Platinum buildings through the integration of various green building technologies.

Spurring Strategic Dialogue Through Research and Innovation Events

Modernisation and technology have precipitated tremendous changes in the building and construction industry. In 2016, BCA's Built Environment Research & Innovation Institute (BERII) organised several events such as the Urban Sustainability R&D Congress, Research & Innovation Workshop Series and Construction Productivity R&D Roadmap Workshops. These events foster an active forum for R&D discussions and strategy formulation to keep Singapore at the forefront of new innovations and key changes in built environment technology.





Top:
*SMS Lee at the opening
of the Centre for Lean &
Virtual Construction*

3D Experiential Technology for Enhanced Efficiency in Construction

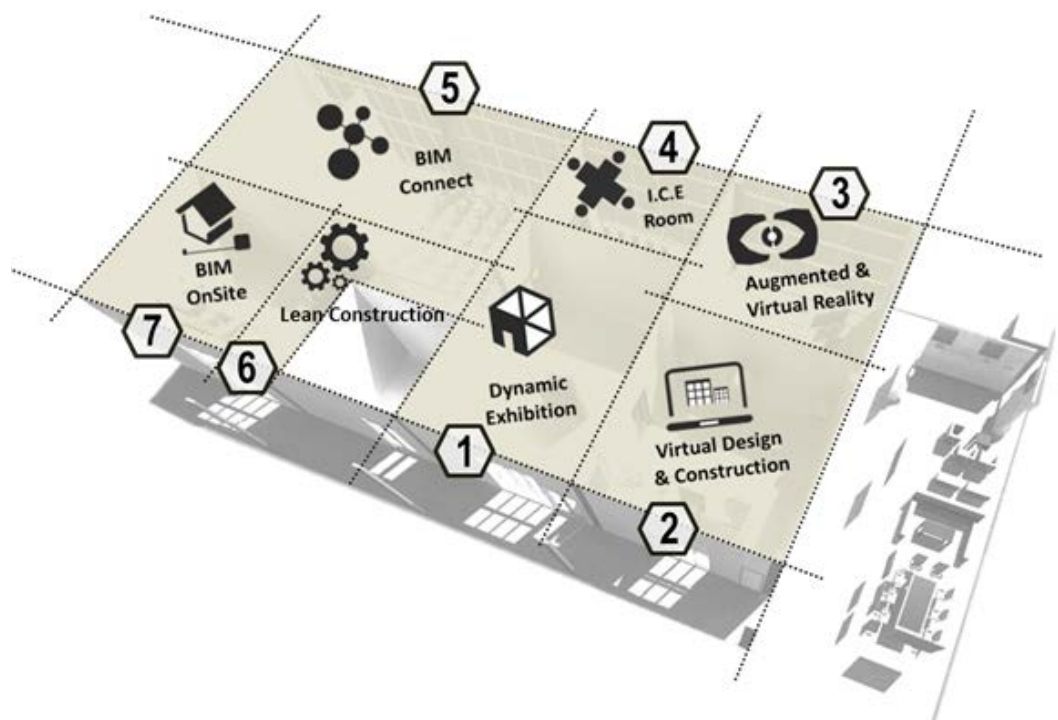
In December 2015, Senior Minister of State Desmond Lee opened the Centre for Lean & Virtual Construction, a million-dollar new facility that seeks to change existing mindsets and processes in communication,

work effectiveness and efficiency among stakeholders in a construction project.

The Centre is the first large-scale, fully immersive and experiential Virtual Design and Construction (VDC) facility and is equipped with state-of-the-art 3D technologies with a special focus on Lean Construction.

To date, the Centre
for Lean & Virtual
Construction
has hosted

**MORE THAN
1,200
VISITORS**



UPHOLDING BUILDING SAFETY

BCA champions a strong culture of safety awareness and regulation in the built environment sector.



Top and Bottom:
Safe completion of the
12-station Downtown line 2
and South Beach projects

FY 2015 was a fruitful year for BCA with the successful implementation of structural Eurocodes for all new projects from 1 April 2015. The year also marked the safe completion of major infrastructural and iconic building projects such as the 16.6km Downtown Line 2 which includes 12 stations and 1 depot as well as South Beach.



UPHOLDING BUILDING SAFETY



Right:
*DPM Tharman visited the
NTU North Hill Residential
Halls in January 2016 and
witnessed the hoisting of a
PPVC module at the
construction site*

Bottom:
*PPVC technology was
used in the Crowne Plaza
Hotel extension*



Safe Implementation of New Innovative Construction Technologies

FY2015 was a year of ground-breaking adoption of new construction technologies in the structural design and construction of new projects. PPVC technology was used for the first time in the structural design and construction of new projects such as the Crowne Plaza Hotel extension and NTU's North Hill hostels. BCA carried out rigorous reviews and close monitoring of the construction works to ensure proper application of PPVC technology and safe completion of the projects.

New Design Guide for Encased Composite Columns

In FY2015, BCA facilitated the development of a new design guide for Encased Composite Columns using high-strength performance materials that will lead to more economical design and better buildability. BCA also participated in the successful publication of the "Guide on Ground Investigation and Geotechnical Characteristic values to Eurocode 7" by Geotechnical Society of Singapore.





Left:

Mr Christopher De Souza, MP for Holland-Bukit Timah GRC joined BCA's public engagement session on slope safety at Ulu Pandan Community Club in October 2015

Bottom:

Survey of rock outcrop at St. John Island

New Guidelines for Offsite Structural Prefabrication

In response to increasing demand for offsite prefabrication of structural components, BCA issued a set of industry guidelines to regulate the supervision of structural steelworks fabricated offsite locally and overseas. The guidelines serve to ensure better quality assurance and compliance in fabricated structural components.

Safety of Buildings and Slopes

For buildings or slopes with safety concerns due to deterioration or incidents such as fire and excessive ground movement, BCA issues orders requiring owners to carry out immediate measures and permanent rectification works. A total of 44 Dangerous Building Orders and 40 Closure Orders were served in FY2015.

To raise greater awareness among property owners on safety and maintenance of slopes

and retaining structures, BCA conducted three public engagement sessions at Siglap, Bukit Timah and Ulu Pandan estates in 2015. More than 1,800 advisories were issued to private landed house owners in areas susceptible to slope failures, to remind them to carry out regular inspection and preventive maintenance of their slopes and retaining walls.

Framing an Underground Masterplan for Singapore

In FY2015, BCA conducted geological survey and investigation works for two new areas identified for underground developments. Located in the western and north-western part of Singapore where bedrock is found, the geosurvey works comprised seismic survey and deep borehole drilling. The geological data was collated and shared with agencies to support underground development works and aid planners in developing an underground masterplan for Singapore.

Key Stat in FY15:



Geosurvey drilling works collected more than

1,100
ROCK CORE BOXES



UPHOLDING BUILDING SAFETY



Top:
BCA engineer demonstrating
to heartland residents and
foreign domestic workers
the procedures of checking
casement windows with
the use of a mirror

Bottom:
[https://www.bca.gov.sg/
builditright/](https://www.bca.gov.sg/builditright/)



Enlightening the Public with “Build It Right”

An Interactive website “Build It Right” was launched in March 2016 to educate members of the public and industry players on building works that do not require BCA building plan approval from BCA. These are termed as Insignificant Building Works. The website was designed to be user-friendly, with interactive features and graphics presenting key information and examples in an easy-to-read format.

Greater Window Safety Awareness

In FY2015, the number of fallen windows dropped to a record ten-year low with 34 reported cases compared to 45 in FY2014. BCA conducted 10 window safety roving exhibitions in various neighbourhoods to reach out to residents on window safety. Two briefings on window maintenance tips were also held to educate foreign domestic workers. Half-yearly window safety campaigns were held on the 6/6 and 12/12 Window Safety Days (6 June and 12 December) to drive greater window safety awareness and educate homeowners on simple window maintenance tips.

Building and Construction
Authority

**BUILD IT
RIGHT**

HOME

BCA GUIDES

URA GUIDES

FIND A PROFESSIONAL ENGINEER

FAQS

CONTACT US

SELECT CATEGORY TO START

**LANDED HOUSES,
AGRICULTURE AND
LIVESTOCK BUILDINGS**



**OTHER
BUILDINGS**

**BUILDING
INTERIOR**



**EARTHWORKS,
INFRASTRUCTURE
AND OTHER WORKS**

BUILD IT RIGHT

This guide provides you with information on the types of work (termed as Insignificant Building Works) that do not require approval of plans from BCA. Understanding the guidelines may save you costly rectifications in the future.

However, it is the owners' responsibility to check if clearances from other relevant authorities (e.g. the Urban Redevelopment Authority (URA)) are required. In addition, owners should be mindful of having to comply with other laws (e.g. caveats, MCST by-laws).

In addition to understanding these guidelines, it would be advisable for owners to engage a professional engineer (PE) specialising in the field of civil and structural works to advise on whether the building works require clearances from BCA and other relevant authorities.

Carrying out building works without an approval from BCA is an offence under Section 20 of the Building Control Act. Such an offence may incur a fine up to \$200,000 or imprisonment for a term not exceeding 2 years or both. This does not apply to works termed as 'Insignificant Building Works'.

“Building works” means –

- (a) the erection, extension or demolition of a building;
- (b) the alteration, addition or repair of a building;
- (c) the provision, extension or alteration of any air-conditioning service or



Left and right:
Staircase storey shelter as
an alternative to household
shelter

Bottom left and right:
DTL2 CD shelter tests and
final Notice of Approval of
Commissioning (NOAC)
inspections

Improved Design Efficiency in Storey Shelters

Storey shelter, located at the common property area, is an alternative to household shelters located within individual household units. As part of our continuous improvement efforts, a review of the technical requirements for storey shelters was conducted in 2015. Following the review, BCA introduced several initiatives to implement better design efficiency for storey shelters in September 2015. These included detailed design requirements for scissor staircases that are used as storey shelters.

Commissioning of Transit Shelters

In 2015, BCA witnessed and assessed major Civil Defence (CD) shelters' commissioning tests and conducted final inspections of seven transit shelters at Downtown Line Stage 2 (DTL2)'s Bukit Panjang, Cashew, Hillview, Beauty World, King Albert Park, Sixth Avenue and Tan Kah Kee MRT stations. The CD station shelters were successfully commissioned and have been certified operationally ready since end December 2015.





Top:
*Ensuring the safety of
escalators*

Bottom left:
*BCA engineer inspecting an
amusement ride*

Bottom right:
*BCA engineer conducting
checks on lifts*

Regulating Amusement Rides

The Amusement Rides Safety Management System (ARSMS) provides a structured safety management framework for amusement ride owners to ensure adoption of an industry-wide quality standard to bridge gaps in existing safety practices. As at FY2015, the industry adoption rate has surpassed 90 percent, within a span of just 18 months since the launch of ARSMS.

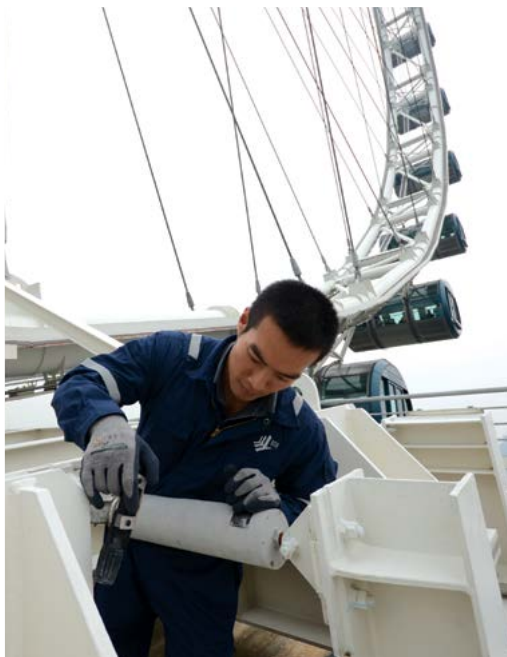
Safer Lift and Escalator Usage

Due to a number of lift-related safety incidents in late 2015, BCA stepped up on audits of

lifts islandwide and introduced procedures for the safe operation of lift doors enhanced requirements on specific maintenance outcomes for lifts and escalators.

In addition, posters raising awareness on the safe usage of lifts were distributed to lift owners.

To align proposed enhancements to existing lifts and escalators in Singapore with internationally accepted best practices, BCA also carried out benchmarking of Singapore's practices in comparison to overseas





jurisdictions, and organised an International Panel of Experts meeting in September 2016.

Overseas learning journeys provided BCA and industry stakeholders the opportunity to acquire new knowledge and identify new technologies and trends in lift and escalator development from overseas regulators, manufacturers, standards committees and industry associations.

Licensing for Outdoor Advertisements

Outdoor advertising in Singapore is regulated by BCA to ensure that signage and billboards are approved under the Building Control (Outdoor Advertising) Regulations. This helps control the streetscape, ensuring the amenity and aesthetics of the built environment. In 2015, BCA processed more than 4,000 applications for advertisement licences and renewed about 20,000 existing ones.



Left:
A poster to educate public on the safe use of lifts

Bottom:
Inspecting an outdoor billboard





Bottom:
*Sharing sessions on BMSMA
with students of Ngee Ann
Polytechnic on Strata
Management in Singapore*

Educating New Entrants on Building Control Compliance

To improve building control requirements compliance through education, interaction and clarification, BCA runs a programme on Building Control Requirements and Processes for new entrants to the building industry. The programme provides in-depth knowledge of plan submission processes and various requirements under the Building Control Act and Regulations. In 2015, 242 participants took part in the programme.

Leading Inter-Agency Policy and Regulation Reviews

BCA continues to lead the Inter-Agency Coordinating Committee (IACC) that reviews conflicting regulatory requirements by different agencies encountered in projects, as well as conflicting policies implemented by agencies impacting construction productivity.

A recent outcome from the IACC saw legislation amended to allow flexibility in using building materials with daylight reflectance exceeding 20%.

Reviewing Building Maintenance and Strata Management

The Building Maintenance and Strata Management Act (BMSMA) provides a self-regulatory framework for the management and maintenance of strata titled developments in Singapore. As part of an ongoing review of the Act, two rounds of public consultations were conducted to solicit feedback from stakeholders.

BCA is in the process of finalising the amendments to the BMSMA and will carry out a final consultation session when the draft bill is completed.



Key Stats as at FY2015:

Safety Numbers



>24,000

Advertisement
Licences Renewed
or Issued



>6,800

Building Plans
Processed



>16,000

Structural Plans
Processed



>9,900

Temporary Occupation
Permits Approved



>110

Lift Audits Conducted



17

New Amusement
Rides Approved



96

Amusement Ride
Operating Permits Issued



>280

Amusement Ride Safety
Inspections



>4,400

Periodic Structural
Inspections Reports
on Structural Condition
of Buildings Received



40

Closure Orders
Served



44

Dangerous Building
Order Served



20% ↓

Less Windows and
Exterior Features Fallen
than FY2014



>1,800

Advisories to Private
Landed House Owners
in Areas Susceptible to
Slope Failures



>31,800

Household Shelters
Commissioned



>3,800

Storey Shelters
Commissioned

BUILDING A FUTURE-READY WORKFORCE



Top:
BCA-Industry Built
Environment Scholarship
Award Ceremony 2015

Bottom:
Industry rebranding
campaign platforms

BCA actively drives efforts to attract, develop and retain a future-ready workforce able to meet the current and future manpower demands of the built environment sector.



Launch of Sectoral Manpower Plan

To build up a strong core of local talent, BCA launched the Sectoral Manpower Plan (SMP) in FY2015. The SMP consists of three key thrusts; attracting and retaining a strong local workforce core, equipping locals with future skills and improving foreign workforce quality.

To attract and retain young talents, the SMP is designed to provide an enhanced career guidance framework and an improved suite of scholarship and sponsorship programmes. In FY2015, the various scholarship and sponsorship programmes attracted more than 560 students and jobseekers to take up built environment courses and careers.

To create more attractive career progression pathways, BCA has included part-time diploma, part-time post-graduate, enhanced post diploma and ITE development programmes which is in line with the SkillsFuture Earn and

Learn programmes under its sponsorship.

Courses in DfMA, VDC, Green Building and Building Information Modeling (BIM), offered under SkillsFuture Credit and SkillsFuture Study Awards have also been included in support of SMP's objective to upgrade the local workforce with future-ready skills.

Rebranding BE Careers

One of the key initiatives under the five-year Built Environment (BE) Rebranding Roadmap is a sustained rebranding campaign to develop a more widespread public awareness on the BE sector and its careers.

Engaging and Retaining Talent through Building Careers Portal (BCP)

To complement the suite of initiatives under the five-year BE Rebranding Roadmap, BCA revamped the Building Careers Portal (BCP) to become a one-stop online platform for the promotion of BE careers.





Left:
38 students from 8 Junior
Colleges participated in the
5th run of JSP

Bottom:
Site visit to Bedok Reservoir
MRT station in the 4th run of
TAP for 43 Civil and Structural
ITEs and Polytechnic
lecturers

Reaching Students via Job Shadowing Programme (JSP)

Targeted at junior college students, BCA's Job Shadowing Programme (JSP) provides students exposure to the BE sector and its careers, with the purpose of equipping them to make informed decisions when choosing a BE course at university.

Promoting BE Career Awareness through Teachers' Attachment Programme (TAP)

The Teachers' Attachment Programme (TAP) is a customised two-day course designed to promote BE career awareness among lecturers and Education and Career Guidance counsellors from Institutes of Higher Learning. To help lecturers and counsellors to be career promotion ambassadors for the sector, the programme includes visits to industry firms and work sites to learn more about the latest developments and technologies within the sector.



BUILDING A FUTURE-READY WORKFORCE



Clockwise from right:
*Upskilling foreign workers on
precast concrete component
(right), precast kerb and drain
(bottom right) and curtain
wall installation (bottom left)*



Revamping Foreign Workforce Quality

To create a pool of higher-skilled foreign workers, BCA replaced the project level CoreTrade Tradesmen deployment criteria with the firm level Minimum R1 (Higher Skilled) requirement in 2015. The new Minimum R1 requirements administered by MOM will commence in January 2017 in which firms must maintain 10% of their workforce at the R1 level.

To facilitate firms' preparation, BCA has required firms to upgrade 5% of their workforce per year in 2015 and 2016. As at December 2015, 74% of all construction

firms have already achieved more than 10% R1.

New Direct R1 Pathway

To support the third key thrust of the SMP, BCA launched a new Direct R1 pathway in September 2015 for firms to bring in better workers directly from their source countries. To qualify for this pathway, workers are required to pass a trade test at a higher level and be paid a minimum monthly salary of \$1,600. This will complement other existing upgrading pathways including the CoreTrade/ Multiskilling schemes and the Market-Based Skills Recognition Framework (MBF) scheme.



UPGRADING EDUCATION AND RESEARCH CAPABILITIES

BCA Academy, the education and research arm of BCA, supports BCA's drive to build industry capability by offering continuing professional development courses for professionals, upgrading courses for supervisors and workers, and academic programmes for school leavers.



Left:

The Academic Tower is a dedicated experiential learning facility and living lab for the built environment sector

Bottom:

To provide a one-stop seamless customer experience for all BCA Academy customers, the new One-Stop Customer Service Centre in the Academy in the administration building was completed in March 2016



New Academic Tower and Facilities

BCA Academy added a newly completed Academic Tower in FY2015. A Green Mark Platinum and Universal Design Mark Platinum building, the Academic Tower is built with 100% reused concrete waste and 88% precast

concrete and provides a living learning lab for students and industry participants. Generating one of the highest energy savings in Singapore up to 35%, it is a testament to creating an energy-efficient building in a productive way.



UPGRADING EDUCATION AND RESEARCH CAPABILITIES



Right:

The new specialist diploma programmes will help future built environment professionals better understand disruptive game-changing technologies, and encourage them to deploy these innovative technologies when they become leaders in the field

Bottom :

Three-quarters of Diploma graduates secured employment within three months of completion of their studies



New Training Programmes on Cutting-Edge Technologies

In FY2015, BCA Academy introduced new training courses to move the industry towards the adoption of game-changing technologies and better management skills. These included

the new Specialist Diploma programmes in Design for Manufacturing and Assembly, Lean Construction, and Virtual Design & Construction (VDC), as well as professional development programmes.

Key Stats for 2015

TOTAL ENROLMENT FOR DEGREE
AND DIPLOMA PROGRAMMES
IN 2015

2,700

440

DIPLOMA
GRADUATES

710

SPECIALIST
DIPLOMA
GRADUATES

NUMBER OF BCA ACADEMY
COURSES IN WDA'S SKILLSFUTURE
CREDIT DIRECTORY

160





Left:

BCA Academy also introduced a VDC Leadership Program and a VDC Advanced Management Program (AMP). These programmes were the outcome of BCA Academy's collaboration with Stanford University's Center for Integrated Facility Engineering (Stanford-CIFE)

New BIM and VDC Courses

Singapore's IHLs provide a total of 30 full-time and 14 part-time programmes focusing on BIM. In FY2015, more than 2,500 full-time students and 8,500 professionals completed BIM training.

BCA Academy also introduced new courses in BIM and VDC. These include a Certification Course on BIM for MEP Coordination, a VDC portion in the Specialist Diploma in Construction Productivity, a Specialist Diploma in VDC and a Workshop for Parametric Design for Architecture: Workflow and Integration with BIM.

BUILDING INFORMATION MODELLING TRAINING

Full-Time
Students

MORE THAN

2,500

Notable Collaborations

Technische
Universität
BraunschweigTHE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

- TU Braunschweig - BCA Executive Development Programme: Innovations in Sustainable Design and Technology with the Fraunhofer Institute for Solar Energy Systems (the largest solar energy research institute in Europe and a global leader in applied solar research)
- Partnership with The University of Newcastle, Australia, on the Bachelor of Construction Management (Building) programme – First graduating cohort in 2015 – 40% obtaining First Class Honours
- 6-year partnership with SIM University for the Bachelor of Science (BSc) in Facilities and Events Management, and BSc in Building and Project Management – more than 230 graduates to-date

Industry
Professionals

MORE THAN

8,500

EXPANDING SINGAPORE'S GLOBAL FOOTPRINT



Right:

BCA successfully carried out its largest-ever Productivity Learning Trip with a delegation of 75 participants across four cities in China. In four days, the delegation travelled to four cities (Jiangmen, Changsha, Zhenjiang and Shanghai), a distance of over 1,600km

Bottom:

BCA organised a Smart City Conference in July 2015 to promote Singapore firms' capabilities in smart building technologies and sustainable urban solutions, in preparation for participation of Singapore's local companies in India's 100 Smart Cities programme

BCA routinely conducts overseas mission trips and local seminars for Singapore companies to explore prospective overseas building opportunities. A total of 11 overseas projects amounting to an aggregate worth of S\$8.2M were successfully clinched through BCA's direct efforts.



In FY2015, BCA conducted nine overseas mission trips leading more than 80 companies and facilitated three local seminars with participation from more than 250 companies.

On profiling Singapore firms, BCA also conducted 10 overseas forums and pavilions, 20 overseas briefings and presented seven papers at key events.





Left:
BCA pavilion at Greenbuild
International Conference and
Expo 2015 in the US

Summary of Achievements

FACILITATION EFFORTS



\$8.2M



>80 Singapore
Companies

11

Overseas
Projects
Clinched

9

Overseas
Mission
Trips



>350

Participants From

3

Local Seminars



>250

Companies

PROFILING EFFORTS



40 Singapore
Companies

10

Overseas
Green
Pavillions and
Forums



**LOCAL &
INTERNATIONAL
EDITIONS**

1st

E-Newsletter



>300

Delegates

29

Briefings
for Overseas
Delegates



7

Overseas
Papers
Presented



FUTURE-PROOFING RELATIONSHIPS:

Deepening Collaborations
and Widening Outreach



Strengthening stakeholder collaborations and extending community outreach form an all-important part of BCA's efforts to engage and empower industry and community alike to contribute to a shared vision for a future-ready Singapore.

DEEPENING COLLABORATIONS



Top:
Proud recipients of the
BCA Awards 2015

Strategic Approach to Stakeholder Engagement

BCA's stakeholders play a quintessential role in supporting the sustainability agenda by providing valuable on-the-ground feedback and strategic inputs for sector regulation and policy reviews. To further strengthen existing stakeholder relationships and lay a robust groundwork for establishing new ones ahead, BCA formulated six new approaches for stakeholder engagement in FY2015.

- a. Leveraging partners as force multipliers
- b. Bringing BCA exhibitions directly to audiences

- c. Developing permanent showcases
- d. Softer approaches to engagement
- e. Leveraging non-traditional tools/platforms
- f. Grooming new advocates

Honouring Industry Players at the BCA Awards

The BCA Awards 2015 was held on 14 May 2015 at Resorts World, Sentosa. Widely regarded as the "Oscars" in the built environment sector, members of the industry came together to honour the best and finest in the industry.

Key Stats for BCA Awards 2015

Number of Awards Presented:

372
(RECORD)



Inaugural Awards:

BIM Awards

19

Green Mark
Pearl Awards

5

Green Mark
Pearl Prestige

1

Design and Engineering Safety
Excellence Awards (DESEA):

10
PROJECTS

UD Mark Awards

37
PROJECTS

Construction
Productivity Awards

16
AWARDS

Construction
Excellence Awards

30
AWARDS

Quality Excellence
Awards

9
COMPANIES

Built Environment
Leadership Award

4
FIRMS

Green and
Gracious Builders

26
AWARDS

BCA Green
Mark Awards

221



Left:
City Developments Limited won the inaugural BCA Green Mark Pearl Prestige Award for City House, an existing Green Mark Platinum building in the Central Business District. The building clearly demonstrates outstanding total building performance where 70% of its interior office spaces are also certified to Green Mark Office Interior standards

Bottom:
The event also saw the launch of the "Built by Singapore" publication by Centre for Liveable Cities under the Urban System Studies research series, in collaboration with BCA and the Housing and Development Board (HDB)

A record number of 372 BCA Awards were given out at the BCA Awards 2015, to celebrate achievements in construction excellence, design and engineering safety, universal design, construction productivity

and green buildings. More than 2,470 guests attended the event, with then-Minister for National Development Mr Khaw Boon Wan as the Guest of Honour.





Right:
Mr Tan Chuan-Jin, Minister
for Social and Family
Development, was the
Guest-of-Honour to the
SUDW 2015

Bottom:
A total of \$55,000 was
raised for President's
Challenge 2015 through
the "See the World
Differently" fundraising
dinner



Active Dialogues At Singapore Universal Design Week (SUDW) 2015

The second SUDW, themed 'Shaping an Age-friendly Built Environment', was held in July 2015 at BCA Academy. SUDW 2015 featured seven key events, including a UD conference, design workshop, UD building tour, UD explorers exhibition, products showcase, UD Forum and a fund-raising dinner. All events provided excellent opportunities for active dialogue between policy makers, industry stakeholders and voluntary welfare organisations to share knowledge and exchange innovative practices for creating a more inclusive and friendly built environment

for seniors, families with young children and persons with disabilities.

Fostering Deeper UD Understanding Through Dine-in-the-Dark Dinner

BCA held its inaugural fundraising dinner, titled "See The World Differently", in 2015. Served by visually-impaired waitstaff, guests were treated to a full course dinner in complete darkness. The event aimed to encourage industry partners to re-examine prejudices and stereotypes, enhance their appreciation for UD and promote the incorporation of more UD features in their developments.





Global Green Trends – Singapore Green Building Week 2015

BCA celebrated a decade of achievements at the Singapore Green Building Week (SGBW) 2015. Conversations on smart cities and global green trends took centre stage as more than 30,000 participants from over 55 countries convened. The Week boasted a record total of 24 events, comprising 17 for industry practitioners, three for students and four for end-users.

Focus on Smart Living – International Green Building Conference (IGBC) 2015

The annual anchor event of the SGBW, IGBC played host to almost 30,000 delegates from more than 50 countries and provided a platform for congregation of ideas, collaboration, and learning. The theme for IGBC 2015 was “Build Green: Live Smart”. It complements Singapore’s Smart Nation vision, which calls for greener infrastructure and focuses on encouraging end users to use smart data meaningfully to live in a more sustainable and environmentally-responsible manner.



Top:
BCA CEO Dr John Keung
(in green) with panelists
at the International Green
Building Conference

Key Stats for SGBW 2015

MORE THAN
30,000
PARTICIPANTS



50
COUNTRIES



100
MODERATORS
AND SPEAKERS



3
PLENARY
SESSIONS



12
CONFERENCE
TRACKS



24
EVENTS DURING THE
WEEK INCLUDING

17 INDUSTRY
EVENTS

4 END USERS
EVENTS

3 STUDENTS
EVENTS



DEEPENING COLLABORATIONS



Right:

Students from the ITE, polytechnics, universities & BCA Academy posing with their eco-city models at the end of the Build Green: Student Edition, an activity held during SGBW. This activity was specially designed to let students learn about the green building agenda in Singapore

Bottom:

Lunchtime "concert" at the inaugural BCA Green Office Pop up event at Asia Square. Dr Chia Shi-Lu (third from left), Adviser to Tanjong Pagar GRC Grassroots Organisations, launched the interactive showcase on 31 August 2015 as part of the Singapore Green Building Week





Left:
Speakers at the Tenant
Workshop @ Green Living
Exhibition during SGBW 2015

Bottom:
IGBC participants at the
Green Mark Tour at Gardens
by the Bay





Top:
Launch of the fifth annual
Singapore Construction
Productivity Week in October
2015 at the Singapore Expo

Bottom:
More than 175 participated
at the IPE meeting on BIM
in the lead up to SCPW 2015

A Future-Ready Vision – Singapore Construction Productivity Week (SCPW) 2015

Themed “*Build Smart for a Future-Ready Singapore*”, the fifth annual SCPW was held in October 2015. SCPW is one of Singapore’s most important sectoral platforms for promoting productivity efforts.

In the lead-up to SCPW 2015, the third International Panel of Experts (IPE) meeting on BIM convened to review the second BIM Roadmap. The meeting focused on the adoption of Virtual Design & Construction (VDC) from early involvement of stakeholders in the design planning stage, to streamline construction downstream in the project lifecycle.

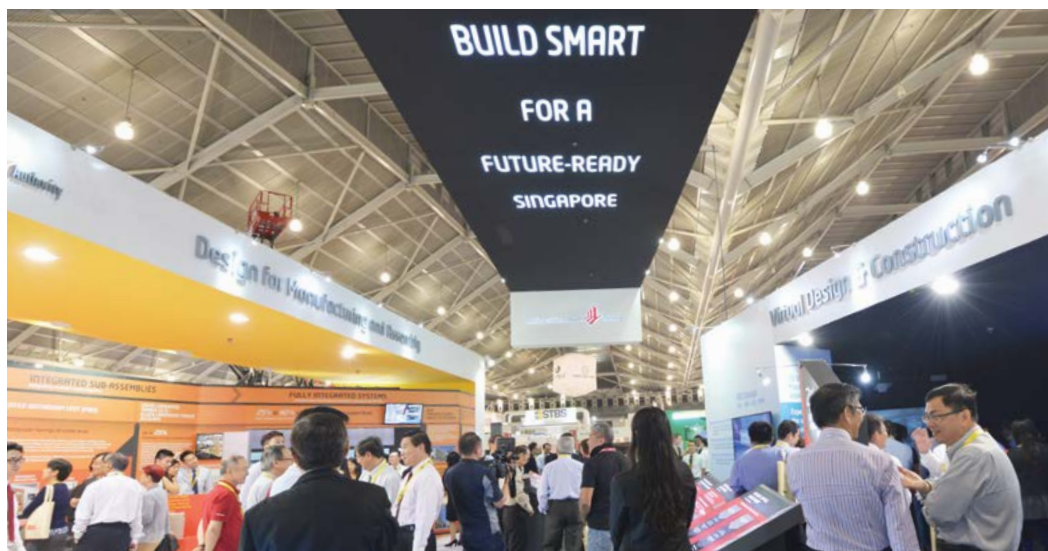
SCPW 2015 attracted over 6,000 visitors and participants. It also garnered extensive industry support with a total of nine sponsors. Several key events catered for the industry included

the Opening Ceremony, the BuildTech Asia (BTA) Exhibition, BTA guided tours, the Build Smart Conference, Government BIM Symposium and special site visits to milestone projects.

New features introduced at the BTA exhibition included an inaugural collaboration with the Infocomm Development Authority of Singapore (IDA) showcasing productive construction IT within the BCA Pavilion. Also on display was a revamped Skilled Builders Project (formerly Skilled Builders Competition) featuring a live demonstration of the construction of a Cross-Laminated Timber (CLT) and Glue Laminated Timber (Glulam) structural module.

Participants were also brought on site visits to local milestone projects featuring Singapore’s first Prefabricated Pre-finished Volumetric Construction (PPVC) project at the NTU North





Left:
The BCA booth at the BuildTech Asia exhibition 2015 showcasing Design for Manufacture and Assembly (DfMA) and Virtual Design & Construction (VDC)

Bottom:
SMS Desmond Lee flagged off the Productivity Race and also joined the students in participating in the race

Key Stats from SCPW 2015

FEATURED TOTAL OF

4

SHOWCASES

3

STUDENT ENGAGEMENT
EVENTS

2

SHARING PLATFORMS ALL
IN A WEEK

GARNERING THE SUPPORT OF

6,000

VISITORS AND PARTICIPANTS

Hill Hostel and SEF's Integrated Construction and Prefabrication Hub (ICPH), known as SEF SPACEHub.

More than 60 delegates from 16 countries within the Asia-Pacific region attended the two-day Government BIM Symposium to explore collaborative opportunities in applied BIM R&D and work towards harmonisation of BIM standards.

SCPW also represents a tremendous platform for engagement and outreach beyond local Institutes of Higher Learning (IHL). The annual BIM Competition was opened to international participants for the first time, attracting 21 teams of 129 student participants from four countries. The objective of the competition was to provide innovative solutions to challenges in a VDC project via online submission, within a four-day timeframe.

Participants benefitted greatly from actual BIM project management under the mentorship of BIM managers in their respective countries. Singapore Polytechnic emerged the winner, with second and third place taken by South Korean teams from Chosun University and Kyung Hee University respectively.

The BIM Shoot-Out is a BIM competition specially organised for students. In its second year, the Shoot-Out attracted 86 participants from five local IHLs, testing the modelling proficiency of students in the Architectural, Structural and Mechanical, Electrical and Plumbing (MEP) disciplines. In total, more than 400 IHL students and over 50 lecturers were reached through SCPW 2015 with a suite of specially designed events such as the IHL Tours, Productivity Workshop, Productivity Race, Productivity Challenge, International BIM Competition and BIM Shoot-out.



EXPANDING PUBLIC OUTREACH



Top and bottom:
The UD Explorers Exhibition held in conjunction with the SUDW 2015, was launched by Guest-of-Honour Ms Grace Fu, then-Minister in Prime Minister's Office

The three-day exhibition showcased selected artworks from some 500 students of 12 primary schools, who had toured UD-certified shopping malls and expressed their observations of UD features through artworks

Discovering UD with Primary School Students

UD Explorers is an outreach programme aimed at educating and enhancing awareness and interest in primary school students on UD features found in daily living and the impact of UD on Singapore's built environment. Between May and July 2015, BCA worked in partnership with selected shopping malls to host guided UD Tours of their premises to young UD Explorers.

Students recorded their observations through art, which was showcased in an exhibition at Westgate in Jurong East, from 31 July to 2 August 2015. More than 500 students from 12 primary schools participated in this educational programme.

BiG Day Out with Secondary and Tertiary Level Institutions

BiG Day Out was first launched in September 2011 to promote greater awareness and understanding of green





Left:
Members of the public
having fun at BCA's inaugural
"BiG Day Out" carnival

Bottom:
BCA CEO Dr John Keung
(in red), SGBC President
Mr Chia Ngiang Hong
(third from left) and former
Senior Minister of State for
National Development Lee
Yi Shyan (third from right)
together with students from
Woodgrove Secondary
School pledging their support
towards a greener built
environment

building among tertiary level students in Singapore. It has since been extended to secondary level students.

In 2015, 315 pledges from 12 secondary schools and nine tertiary institutions were written on pledge coasters and hung on a Singapore map at the inaugural "Build it Green (BiG) Day Out" carnival at Dhoby Ghaut Green. The pledges include the aspirations of students to pursue a green career, commitments and actions for a greener built environment, as well as ideas of what a green building should be.

Alongside the support from the public, seven organisations also pledged their support to the BCA Green Mark Portfolio Programme,

committing to green at least 20 of their tenant premises within three years.

They are:

- DBS Limited
- Dairy Farm Singapore
- CapitaLand
- City Developments Limited
- Keppel Land International Ltd
- McDonald's Restaurant Pte Ltd
- NTUC Fairprice Co-operative Limited

The event also saw the launch of BCA's first innovative storybook "The Adventures of Greco and Beco: The Glass House". Storytelling sessions for kids were subsequently held at four libraries.





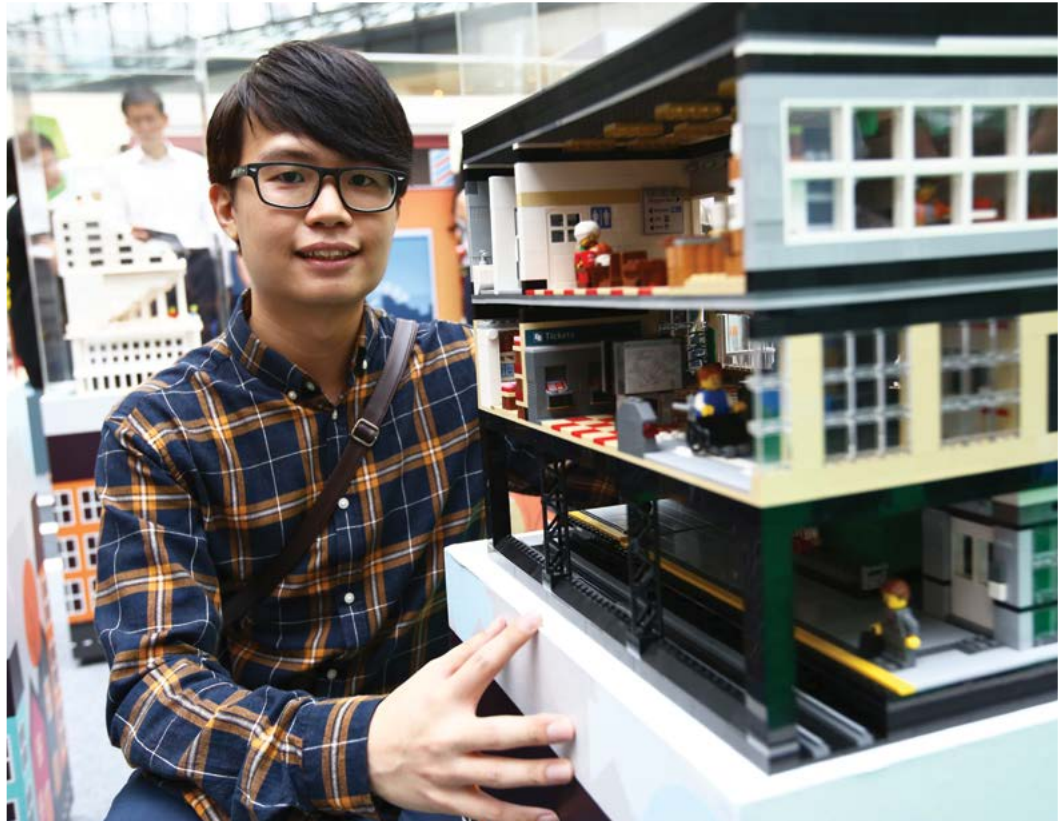
Right:

Artist Mr Kenneth Chen (above), 29, and his team were the big winners at the BCA Project BUILD 2015 competition, beating 500 other participants to claim the first prize with their intricate LEGO® creation of a universally-designed MRT station. Ms Denise Phua, Mayor of Central Singapore District, was the Guest-of-Honour at the launch of the exhibition.

Bottom:

"Dearest Ah Ma" tugged at the heartstrings of more than 14,000 online viewers

<https://www.facebook.com/BCASingapore/videos/939956446075738/>



BUILDing A Creative and Equitable Society

In celebration of SG50, BCA organised Project BUILD in partnership with Duck Learning and LEGO Education. The competition challenged participants to express their understanding of an accessible, inclusive and universally-designed built environment using LEGO bricks. Twenty of the most creative and inspired entries were exhibited at Raffles City for two weeks. Families and friends were also treated to various UD-themed experiential activities at the exhibition.

Championing Accessibility with a UD-Inspired Video

To commemorate the United Nations International Day of Persons with Disabilities on 3 December 2015, and 25 years of making Singapore's built environment inclusive and user-friendly, BCA produced a short film titled "Dearest Ah Ma". The video was released on 2 December 2015.





Left:

The top prize of the BCA-CDL Green Sparks Competition was won by "05-ARCHI" of Singapore Polytechnic. Participants hailed from seven local tertiary institutions including Nanyang Polytechnic, Temasek Polytechnic, Singapore Polytechnic, National University of Singapore, Nanyang Technological University, Singapore Institute of Technology, as well as Singapore University of Technology and Design

Bottom:

Artist's impression of City Square Mall's Sky Park

Sparking Ideas for a Sustainable Community Space.

The BCA-CDL Green Sparks Competition is a biennial national green built environment competition and public-private initiative by BCA and City Developments Limited (CDL). It aims to engage and nurture local tertiary students' effort to green Singapore's built environment, and to raise awareness of

best practices and solutions in green building amongst future practitioners.

In its third season, the BCA-CDL Green Sparks Competition 2015/2016 challenged participants to conceptualise a sustainable community space for City Square Mall's existing Sky Park at Level 6. A total of seven teams from local IHLs participated.



ELEVATING ORGANISATIONAL EXCELLENCE



A group of nine people, including Mr. Chan and Ms. Chan, are standing on a stage in front of a backdrop. The backdrop features logos for Wentworth, Forum, Goldbell Corporation, Power2 Motivate, and Sirotta. Mr. Chan is holding a trophy.

BCA has a suite of HR policies that create and sustain a supportive organisational culture and conducive environment to help staff better manage work and personal commitments. The accolades affirm BCA's value-based performance management system and innovative performance processes. BCA's comprehensive Employee Performance Management Framework involves establishing clear work targets and expectations, equipping officers with necessary skills/knowledge to accomplish targets, evaluating performance and taking corrective actions.



Recognition for Outstanding CSR Practices and Pro-enterprise Initiatives

In FY2015, BCA won a total of nine Human Resource (HR) & Corporate Social Responsibility (CSR) awards. Four of these were in new categories, recognising BCA's innovative and value-based performance management, support for work-life balance, fair employment and

commitment to CSR. BCA also successfully renewed its Service Class, Innovation Class and People Developer certifications with recognition for significant improvements achieved. Additionally, BCA won the Pro-Enterprise Initiatives Bronze Award 2015 for a programme series on building control requirements and processes to help new entrants to the industry.



Top left:
Outstanding in Corporate Social Responsibility Practices:
BCA won the HR Excellence Awards 2015 (Bronze) for Excellence in CSR Practices in recognition of its comprehensive CSR initiatives and partnerships with key industry stakeholders

Top right:
Fair Employment Practices:
BCA won a new award of "fair employment practices" at the Singapore HR Awards 2015, highlighting BCA's good practices in supporting fair employment and adopting the Tripartite Guidelines

Left:
BCA won the Pro-Enterprise Initiatives Bronze Award 2015



ELEVATING ORGANISATIONAL EXCELLENCE



Exemplifying Information Management Excellence

BCA was conferred the FutureGov Awards 2015 for Information Management excellence in its BCA CORENET application. A major IT initiative driven by BCA in collaboration with other public and private organisations, CORENET has successfully re-engineered business processes to cut down turnaround time

and increase productivity and quality in the construction industry.

Walking the Green Talk

BCA's data centre in JEM received the the BCA-IDA Green Mark Award (Platinum) for Data Centres in FY2015. First launched in October 2012, the award aims to encourage better management and improved energy efficiency of data centres in Singapore.





Swifter Customer Service

BCA continually seeks to enhance its service competency and customer service experience. In 2015, a new Customer Feedback Management Portal was piloted

in April 2015 and fully implemented by September 2015. Integrating five major BCA IT systems, the Portal has helped BCA achieve swifter responses to public enquiries.

Key Stats in FY2015

66,000

CALLS RECEIVED
ON HOTLINE



20,000

EMAILS



18,000

COUNTER
CUSTOMERS



350

MUNICIPAL CASES
FROM MUNICIPAL
SERVICES OFFICE



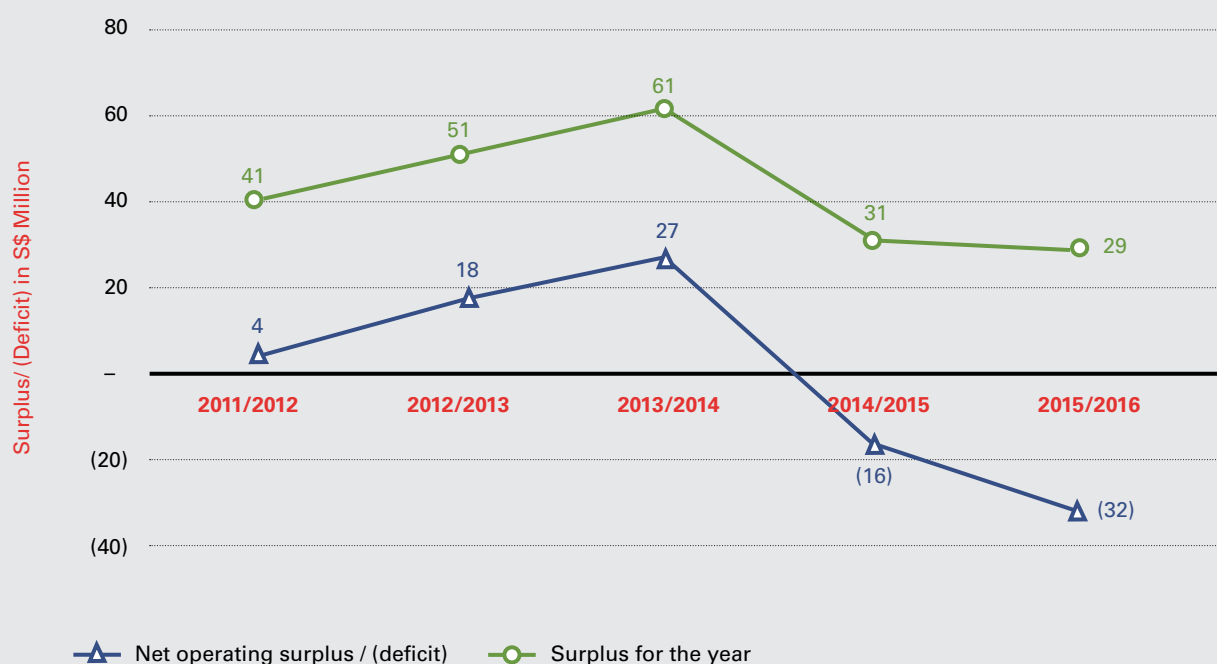
**ANNUAL
FINANCIAL REPORT**
2015/16

BUILDING AND CONSTRUCTION AUTHORITY AND ITS SUBSIDIARIES

Five-Year Financial Summary

FINANCIAL RESULTS	The Group				
	2011/2012 S\$' 000	2012/2013 S\$' 000	2013/2014 S\$' 000	2014/2015 S\$' 000	2015/2016 S\$' 000
Operating income	152,946	195,229	236,681	243,259	248,362
Operating expenditure	148,855	177,636	209,401	259,107	280,137
Net operating surplus / (deficit)	4,091	17,593	27,280	(15,848)	(31,775)
Non-operating income	1,766	1,801	1,836	2,028	4,875
Surplus / (Deficit) before Government Grants	5,857	19,394	29,116	(13,820)	(26,900)
Government Grants	43,568	42,251	44,988	51,002	62,291
Surplus before contribution to consolidated fund	49,425	61,645	74,104	37,182	35,391
Donations	(3)	(6)	-	(8)	-
Contribution to consolidated fund	(8,315)	(10,339)	(12,602)	(6,053)	(5,813)
Income tax expense	(57)	(64)	(57)	(82)	(119)
Surplus for the year	41,050	51,236	61,445	31,039	29,459
Other Comprehensive Income	-	-	797	-	-
Total Comprehensive Income	41,050	51,236	62,242	31,039	29,459

SURPLUS/(DEFICIT) FOR THE YEAR

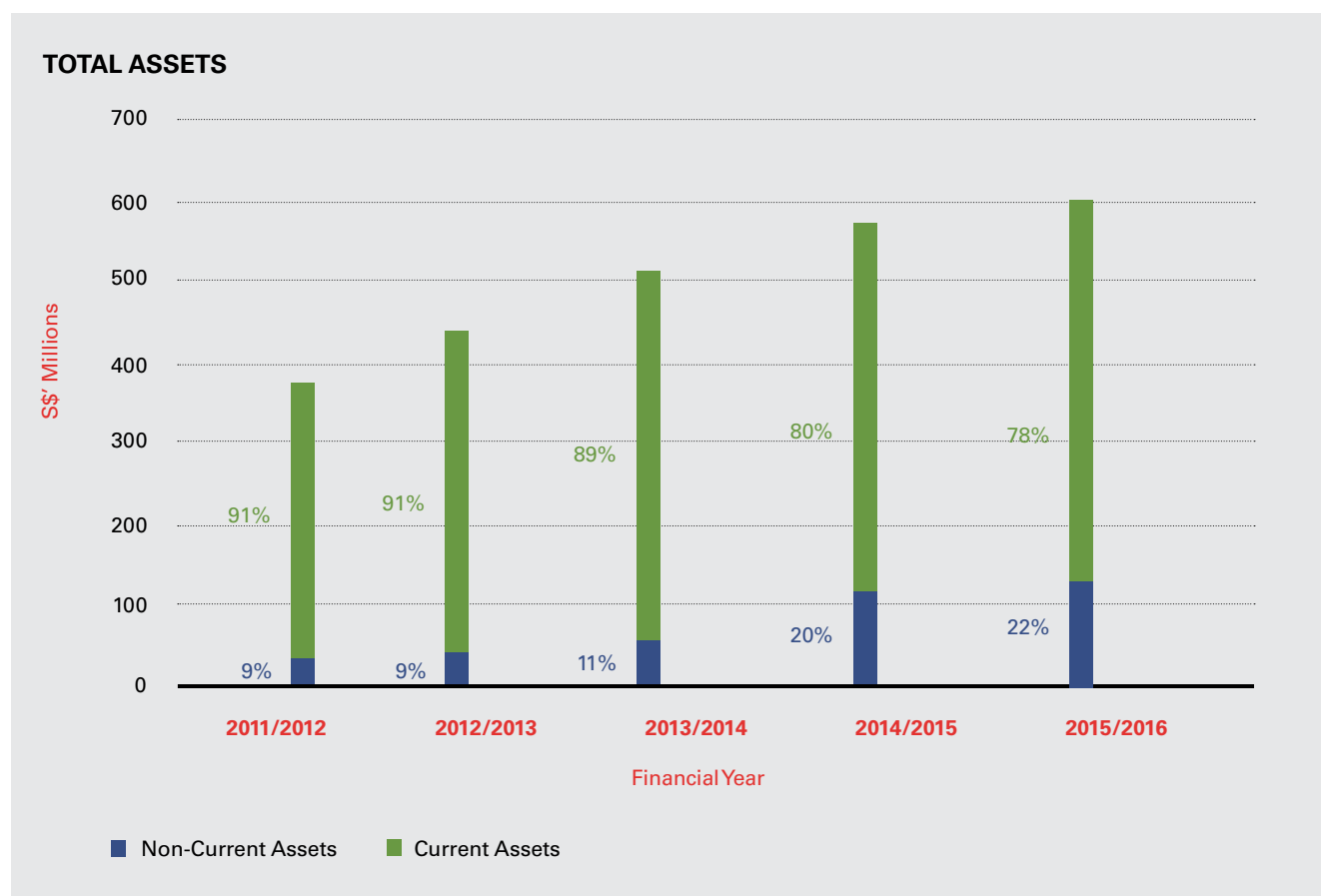


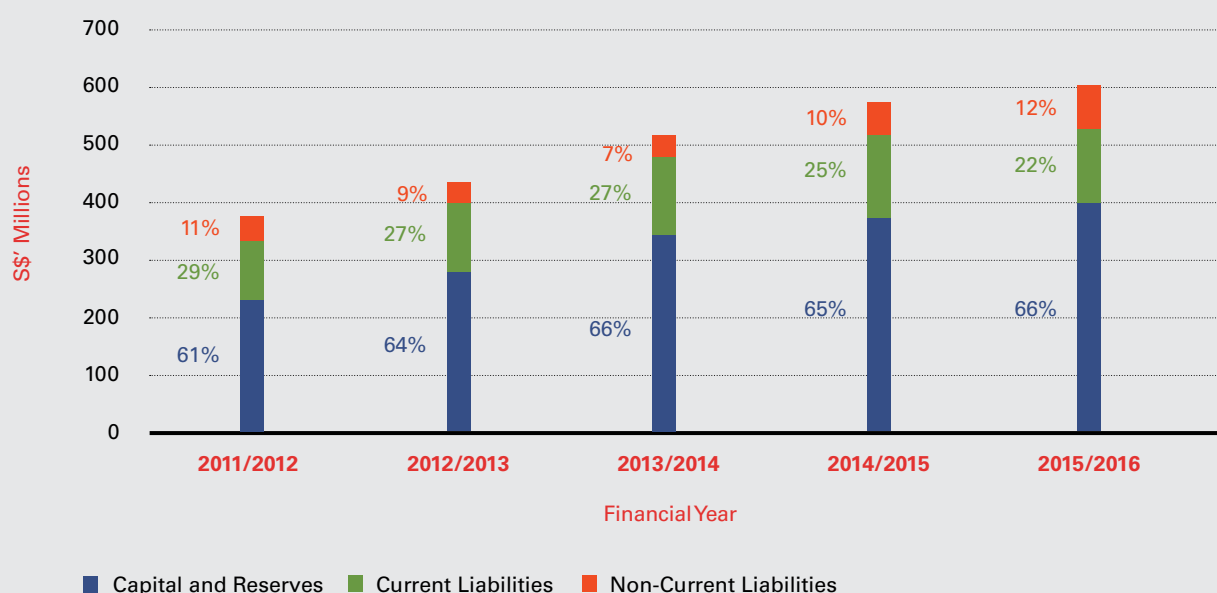
Five-Year Financial Summary

As at 31 March 2016, the Groups' total assets amounted to \$603M. This includes cash and bank balances of \$447M, which accounted for 74% of the total assets.

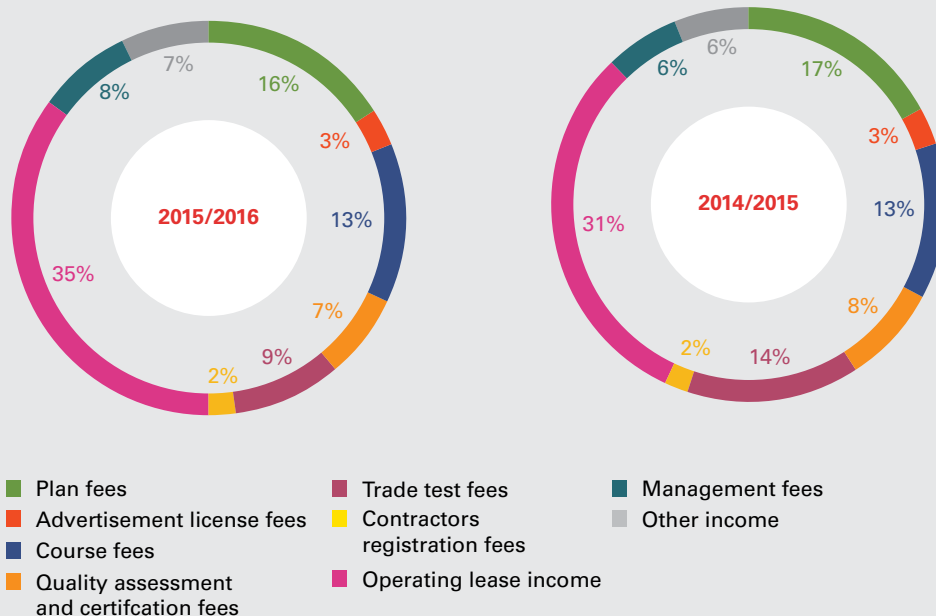
Capital, reserves and liabilities of the Group was \$603M as at 31 March 2016. This includes capital and reserves of \$397M and liabilities of \$206M.

FINANCIAL POSITION	The Group				
	2011/2012 S\$' 000	2012/2013 S\$' 000	2013/2014 S\$' 000	2014/2015 S\$' 000	2015/2016 S\$' 000
Non-Current Assets	34,910	40,859	55,228	116,943	133,737
Current Assets	340,235	396,690	459,429	456,218	469,460
	375,145	437,549	514,657	573,161	603,197
Capital and Reserves	229,824	278,792	341,033	372,072	397,392
Current Liabilities	103,480	120,083	136,819	142,263	130,396
Non-Current Liabilities	41,841	38,674	36,805	58,826	75,409
	375,145	437,549	514,657	573,161	603,197



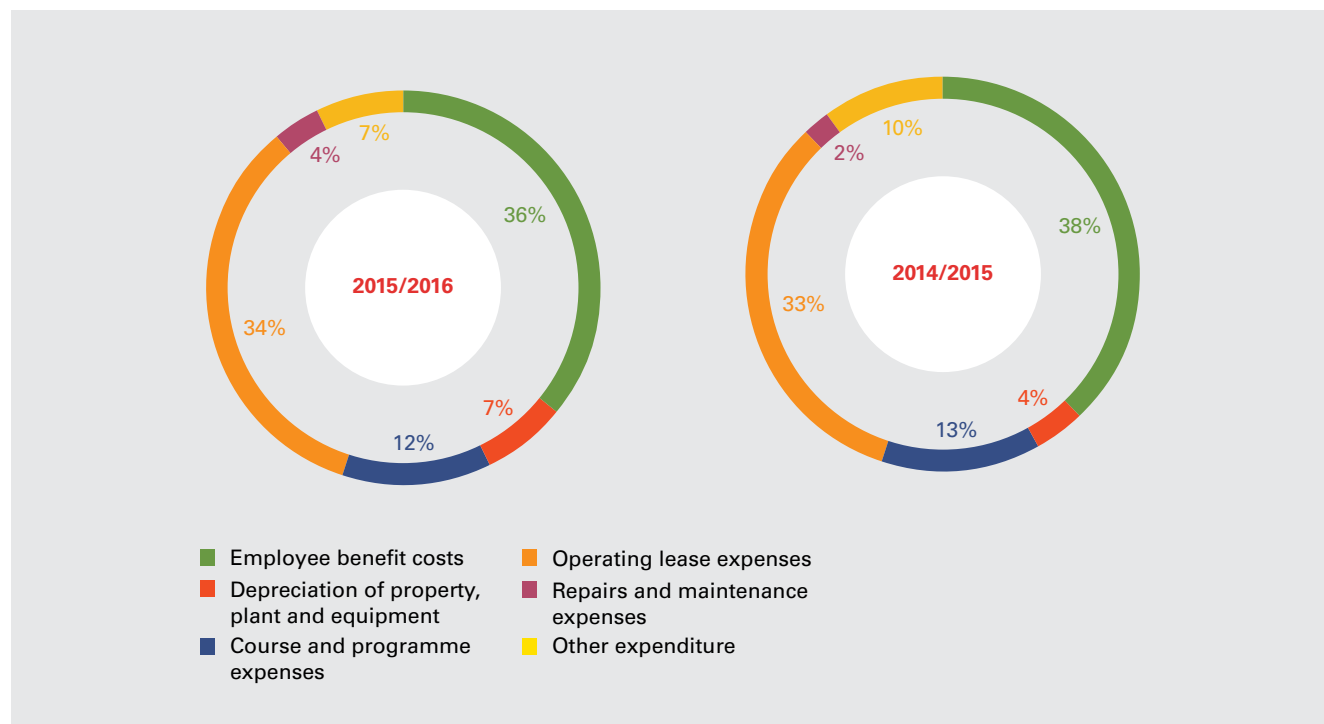
CAPITAL, RESERVES AND LIABILITIES**Operating Income for 2014/2015 & 2015/2016**

Operating income comprised mainly plan fees, course fees, quality assessment and certification fees, trade test fees, operating lease income and management fees. Operating income increased by \$5M from 2014/2015 to 2015/2016 due mainly to an increase in operating lease income and management fee, which was offset by a decrease in trade test fees.



Operating Expenditure for 2014/2015 & 2015/2016

Operating expenditure, which comprised mainly employee benefit costs, operating lease expenses and course and programme expenses, had increased by \$21M from 2014/2015 to 2015/2016. The increase was due to higher depreciation expense and operating lease expenses for foreign workers' dormitories. Employee benefit costs had also increased.



Five-Year Value Added Statement

FINANCIAL POSITION	2011/2012 S\$' 000	2012/2013 S\$' 000	2013/2014 S\$' 000	2014/2015 S\$' 000	2015/2016 S\$' 000
Value Added From:					
Revenue earned	152,946	195,229	236,681	243,259	248,362
Less bought in materials and services	77,912	94,524	114,691	152,072	159,406
Value Added From Operations	75,034	100,705	121,990	91,187	88,956
Government grants	43,568	42,251	44,988	51,002	62,291
Interest income	1,725	1,815	2,103	4,057	5,289
Gain/(Loss) on disposal of property, plant and equipment, including PPE written off/ expensed off	41	(13)	(267)	(2,029)	(413)
Total Value Added Available For Distribution	120,368	144,758	168,814	144,217	156,123
Distribution:					
To employees					
Salaries and other staff costs	64,920	76,991	88,474	97,490	101,741
To Government					
Contribution to consolidated fund	8,315	10,339	12,602	6,053	5,813
Income tax expense	57	64	57	82	119
Total Distribution	73,292	87,394	101,133	103,625	107,673
Balance retained for reinvestment and future growth					
Depreciation	6,026	6,128	6,236	9,553	18,991
Surplus	41,050	51,236	61,445	31,039	29,459
Total Value Added	120,368	144,758	168,814	144,217	156,123

**ANNUAL FINANCIAL
STATEMENTS**

31 MARCH 2016

**BUILDING AND
CONSTRUCTION
AUTHORITY AND
ITS SUBSIDIARIES**

Address

52 Jurong Gateway Road,
#11-01, Singapore 608550

Auditor

Ernst & Young LLP

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- 04 Independent Auditor's Report
- 06 Statements of Comprehensive Income
- 08 Balance Sheets
- 10 Statement of Changes in Reserves
- 11 Consolidated Cash Flow Statement
- 13 Notes to the Financial Statements

STATEMENT BY THE BOARD OF THE BUILDING AND CONSTRUCTION AUTHORITY

In our opinion:

- (a) the accompanying Statements of Comprehensive Income, Balance Sheets, Statements of Changes in Reserves and the Consolidated Cash Flow Statement of the Building and Construction Authority (the "Authority") and its subsidiaries (collectively, the "Group"), together with the notes thereon, are drawn up so as to present fairly, in all material respects, the financial position of the Authority and of the Group as at 31 March 2016 and the financial performance and changes in reserves of the Authority and the Group and cash flows of the Group for the financial year then ended, in accordance with the provisions of the Building and Construction Authority Act, Chapter 30A (the "Act") and Singapore Statutory Board Financial Reporting Standards;
- (b) at the date of this statement, there are reasonable grounds to believe that the Authority will be able to pay its debts as and when they fall due;
- (c) the accounting and other records required by the Act to be kept by the Authority have been properly kept in accordance with the provisions of the Act; and
- (d) the receipt, expenditure, investment of moneys and the acquisition and disposal of assets by the Authority during the financial year have been in accordance with the provisions of the Act.

The Board of the Building and Construction Authority has, on the date of this statement, authorised these financial statements for issue.

On behalf of the Board of Building and Construction Authority:



Lee Fook Sun
Chairman



Dr John Keung
Chief Executive Officer

15 July 2016

INDEPENDENT AUDITOR'S REPORT FOR THE FINANCIAL YEAR ENDED 31 MARCH 2016

INDEPENDENT AUDITOR'S REPORT TO THE BOARD OF BUILDING AND CONSTRUCTION AUTHORITY

We have audited the accompanying financial statements of the Building and Construction Authority (the "Authority") and its subsidiaries (collectively, the "Group"), which comprise the balance sheets of the Group and the Authority as at 31 March 2016, the statements of comprehensive income and statements of changes in reserves of the Group and of the Authority, and consolidated cash flows statement of the Group for the financial year then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the provisions of the Building and Construction Authority Act, Chapter 30A (the "Act") and Statutory Board Financial Reporting Standards ("SB-FRS") and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements of the Group and the balance sheet, statement of comprehensive income and statement of changes in reserves of the Authority are properly drawn up in accordance with the provisions of the Act and the Statutory Board Financial Reporting Standards so as to present fairly, in all material respects, the financial position of the Group and the Authority as at 31 March 2016 and of the financial performance and changes in reserves of the Group and the Authority and the cash flows of the Group for the financial year ended on that date.

INDEPENDENT AUDITOR'S REPORT FOR THE FINANCIAL YEAR ENDED 31 MARCH 2016 INDEPENDENT AUDITOR'S REPORT TO THE BOARD OF BUILDING AND CONSTRUCTION AUTHORITY

Report on Other Legal and Regulatory Requirements

Management's Responsibility for Compliance with Legal and Regulatory Requirements

Management is responsible for ensuring that the receipts, expenditure, investments of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act. This responsibility includes implementing accounting and internal controls as management determines are necessary to enable compliance with the provisions of the Act.

Auditor's Responsibility

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We conducted our audit in accordance with Singapore Standards on Auditing. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Act.

Our compliance audit includes obtaining an understanding of the internal control relevant to the receipts, expenditure, investment of moneys and the acquisition and disposal of assets; and assessing the risks of material misstatement of the financial statements from non-compliance, if any, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Because of the inherent limitations in any accounting and internal control system, non-compliances may nevertheless occur and not be detected.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management's compliance.

Opinion

In our opinion:

- (a) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by the Authority during the financial year are, in all material respects, in accordance with the provisions of the Act; and
- (b) proper accounting and other records have been kept, including records of all assets of the Authority whether purchased, donated or otherwise.

Ernst & Young LLP
Public Accountants and
Chartered Accountants
Singapore

15 July 2016

STATEMENTS OF COMPREHENSIVE INCOME

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For the financial year ended 31 March 2016

		Group		Authority	
	Note	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Operating income					
Plan fees		40,701,800	42,477,296	40,701,800	42,477,296
Advertisement licence fees		6,816,033	6,536,696	6,816,033	6,536,696
Course fees		33,059,858	31,318,038	32,950,911	31,159,038
Quality assessment and certification fees		18,539,744	18,296,839	16,478,844	16,728,839
Trade test fees		21,981,100	33,573,529	21,981,100	33,573,529
Contractors registration fees		4,212,813	4,088,300	4,212,813	4,088,300
Operating lease income		86,164,380	75,266,513	86,164,380	75,266,513
Management fees		19,015,342	15,864,576	19,015,342	15,864,576
Other income		17,871,217	15,837,215	17,656,801	15,533,985
Total operating income		248,362,287	243,259,002	245,978,024	241,228,772
Less: Operating expenditure					
Employee benefit costs	6	101,740,982	97,489,679	100,664,624	96,705,635
Depreciation of property, plant and equipment	7	18,991,067	9,553,322	18,991,067	9,553,322
Course and programme expenses		32,921,019	34,459,058	32,838,664	34,390,592
Operating lease expenses	23	94,772,566	84,814,730	94,772,566	84,814,730
Repairs and maintenance expenses		12,879,403	6,143,715	12,879,403	6,143,715
Other expenditure		18,832,673	26,646,906	18,757,170	26,232,732
Total operating expenditure		280,137,710	259,107,410	278,903,494	257,840,726
Net operating deficit		(31,775,423)	(15,848,408)	(32,925,470)	(16,611,954)
Non-operating income/(expenditure)					
Interest income		5,288,876	4,056,858	5,241,914	4,040,716
Gain on disposal of property, plant and equipment		3,377	98,399	3,377	98,399
Property, plant and equipment written-off/expensed		(416,800)	(2,127,480)	(416,800)	(2,127,480)
		4,875,453	2,027,777	4,828,491	2,011,635
Deficit before government grants brought forward		(26,899,970)	(13,820,631)	(28,096,979)	(14,600,319)

The accompanying accounting policies and explanatory information form an integral part of the financial statements.

STATEMENTS OF COMPREHENSIVE INCOME [CONTINUED]

For the financial year ended 31 March 2016

		Group		Authority	
	Note	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Government grants					
Operating and development grants	17	59,018,867	48,392,766	59,018,867	48,392,766
Deferred capital grants amortised	19	3,272,343	2,609,377	3,272,343	2,609,377
		62,291,210	51,002,143	62,291,210	51,002,143
Surplus before contribution to consolidated fund, donations and income tax		35,391,240	37,181,512	34,194,231	36,401,824
Donations		–	(7,500)	–	(7,500)
Contribution to consolidated fund	18	(5,813,020)	(6,052,847)	(5,813,020)	(6,052,847)
Income tax expense	4	(118,896)	(82,244)	–	–
Surplus for the year, representing total comprehensive income for the year	5	29,459,324	31,038,921	28,381,211	30,341,477

BALANCE SHEETS

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As at 31 March 2016

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	Note	Group 2015/2016 S\$	2014/2015 S\$	Authority 2015/2016 S\$	2014/2015 S\$
Assets					
Non-current assets					
Property, plant and equipment	7	89,734,714	89,797,247	89,734,714	89,797,247
Infrastructural project-in-progress	8	–	3,929,049	–	3,929,049
Investments in subsidiaries	9	–	–	2	2
Prepaid land lease	10	41,002,250	19,217,188	41,002,250	19,217,188
Fixed deposits	12	3,000,000	4,000,000	–	–
Total non-current assets		133,736,964	116,943,484	130,736,966	112,943,486
Current assets					
Trade and other receivables	11	18,000,170	20,138,143	17,448,279	19,696,977
Fixed deposits	12	4,000,000	1,800,000	–	–
Cash and bank balances	13	447,460,190	434,279,604	446,543,364	433,204,064
Total current assets		469,460,360	456,217,747	463,991,643	452,901,041
Total assets		603,197,324	573,161,231	594,728,609	565,844,527
Reserves and liabilities					
Current liabilities					
Fees received in advance	14	62,783,788	69,649,106	59,011,229	65,944,746
Trade payables	15	7,552,889	13,293,440	7,552,856	13,261,591
Other payables and accruals	15	51,424,906	49,936,895	51,406,899	49,919,751
Provision for pension costs	16(a)	2,283,336	2,360,193	2,283,336	2,360,193
Grants received in advance	17	419,016	752,999	419,016	752,999
Provision for contribution to consolidated fund	18	5,813,020	6,188,310	5,813,020	6,188,310
Income tax payables		118,896	82,244	–	–
Total current liabilities		130,395,851	142,263,187	126,486,356	138,427,590
Non-current liabilities					
Fees received in advance	14	56,334,203	37,255,643	56,334,203	37,255,643
Provision for pension costs	16(a)	3,848,139	5,722,744	3,848,139	5,722,744
Provision for reinstatement costs	16(b)	353,337	345,236	353,337	345,236
Grants received in advance	17	4,791,522	4,967,896	4,791,522	4,967,896
Deferred capital grants	19	10,081,710	10,534,759	10,081,710	10,534,759
Total non-current liabilities		75,408,911	58,826,278	75,408,911	58,826,278
Net assets		397,392,562	372,071,766	392,833,342	368,590,659
Net assets of trust and agency funds	20	17,968,408	20,057,093	17,968,408	20,057,093

The accompanying accounting policies and explanatory information form an integral part of the financial statements.

BALANCE SHEETS [CONTINUED]

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As at 31 March 2016

		Group		Authority	
	Note	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Capital and reserves					
Share capital	21	1,000	1,000	1,000	1,000
Capital account	22	30,816,526	30,816,526	30,816,526	30,816,526
Accumulated surplus		366,575,036	341,254,240	362,015,816	337,773,133
Total capital and reserves		397,392,562	372,071,766	392,833,342	368,590,659
Trust and agency funds					
	20	17,968,408	20,057,093	17,968,408	20,057,093

STATEMENTS OF CHANGES IN RESERVES

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For the financial year ended 31 March 2016

	Note	Share capital S\$	Capital account S\$	Accumulated surplus S\$	Total S\$
Group					
At 1 April 2014		1,000	30,816,526	310,215,319	341,032,845
Surplus for the year, representing total comprehensive income for the year		–	–	31,038,921	31,038,921
At 31 March 2015		1,000	30,816,526	341,254,240	372,071,766
Surplus for the year, representing total comprehensive income for the year		–	–	29,459,324	29,459,324
Less: Transfer of completed Infrastructural projects	8	–	–	(4,138,528)	(4,138,528)
At 31 March 2016		1,000	30,816,526	366,575,036	397,392,562
Authority					
At 1 April 2014		1,000	30,816,526	307,431,656	338,249,182
Surplus for the year, representing total comprehensive income for the year		–	–	30,341,477	30,341,477
At 31 March 2015		1,000	30,816,526	337,773,133	368,590,659
Surplus for the year, representing total comprehensive income for the year		–	–	28,381,211	28,381,211
Less: Transfer of completed Infrastructural projects	8	–	–	(4,138,528)	(4,138,528)
At 31 March 2016		1,000	30,816,526	362,015,816	392,833,342

CONSOLIDATED CASH FLOW STATEMENT

For the financial year ended 31 March 2016

	Group	
	2015/2016 S\$	2014/2015 S\$
Operating activities		
Deficit before government grants	(26,899,970)	(13,820,631)
Adjustments for:		
Depreciation of property, plant and equipment	18,991,067	9,553,322
Amortisation of prepaid land lease	1,103,939	549,062
Interest income	(5,288,876)	(4,056,858)
Gain on disposal of property, plant and equipment	(3,377)	(98,399)
Property, plant and equipment written-off/expensed	416,800	2,127,480
(Reversal)/allowance for doubtful debts	(252,709)	340,060
Provision for pension costs	434,848	335,676
Impairment of prepaid land lease	–	2,816,250
Operating cash flows before changes in working capital	(11,498,278)	(2,254,038)
Decrease/(increase) in trade and other receivables	6,351,127	(2,784,322)
Increase in fees received in advance	12,213,242	16,795,167
(Decrease)/increase in trade payables	(5,740,551)	6,118,003
Increase in other payables and accruals	2,710,569	259,306
Increase in cash held on behalf of related parties	(512,224)	(1,434,411)
Cash flows from operations	3,523,885	16,699,705
Payment for contribution to consolidated fund	(6,188,310)	(12,466,648)
Payment for income tax	(82,244)	(76,410)
Donations	–	(7,500)
Pension paid	(2,386,310)	(2,455,758)
Net cash flows (used in)/from operating activities	(5,132,979)	1,693,389
Investing activities		
Purchase of property, plant and equipment (Note A)	(20,508,988)	(37,478,931)
Proceeds from disposal of property, plant and equipment	4,523	98,635
Placement of fixed deposits	(1,200,000)	(1,200,000)
Interest received	3,528,431	2,640,363
Prepaid land lease	(22,889,001)	(22,582,500)
Payments made for infrastructural project-in-progress	(209,479)	(3,929,049)
Net cash flows used in investing activities	(41,274,514)	(62,451,482)
Financing activity		
Government grants received	59,075,855	53,251,872
Net cash flows from financing activity	59,075,855	53,251,872
Net increase/(decrease) in cash and cash equivalents	12,668,362	(7,506,221)
Cash and cash equivalents at 1 April	422,355,256	429,861,477
Cash and cash equivalents at 31 March (Note 13)	435,023,618	422,355,256

CONSOLIDATED CASH FLOW STATEMENT (CONTINUED)

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For the financial year ended 31 March 2016

Note A

Purchase of property, plant and equipment:

	Group	
	2015/2016	2014/2015
	S\$	S\$
Additions of property, plant and equipment (Note 7)	19,346,480	48,050,579
Add: Opening accruals for the purchase of property, plant and equipment (Note 15)	3,515,608	1,973,174
Less: Closing accruals for the purchase of property, plant and equipment (Note 15)	1,103,939	549,062
	(2,293,050)	(3,515,608)
Less: Fixed assets received from Ministry of National Development (Note 19)	(48,948)	(8,384,266)
Less: Other fixed assets received (Note 19)	(3,001)	(299,712)
Add: Opening provision for reinstatement costs (Note 16(b))	345,236	–
Less: Closing provision for reinstatement costs (Note 16(b))	(353,337)	(345,236)
	20,508,988	37,478,931

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

1. Domicile and activities

The Building and Construction Authority (the "Authority") is established as a statutory board in the Republic of Singapore under the Building and Construction Authority Act, Chapter 30A (the "Act").

The registered office of the Authority is located at 52 Jurong Gateway Road, #11-01, Singapore 608550.

The mission of the Authority is to shape a safe, high quality, sustainable and friendly built environment. The principal activities of the subsidiaries are disclosed in Note 9 to the financial statements.

2. Summary of significant accounting policies

2.1 Basis of preparation

The financial statements have been prepared in accordance with the provision of the Act and the Statutory Board Financial Reporting Standards ("SB-FRS"). SB-FRS includes Statutory Board Financial Reporting Standards, Interpretations of SB-FRS and SB-FRS Guidance Notes as promulgated by the Accountant-General.

The financial statements have been prepared on the historical cost basis, except as disclosed in the accounting policies below.

The financial statements are presented in Singapore Dollar ("SGD" or "S\$").

2.2 Changes in accounting policies

The accounting policies adopted are consistent with those of the previous financial year except in the current financial year, the Group has adopted all the new and revised standards and interpretation of SB-FRS ("INT SB-FRS") that are effective for annual periods beginning on or after 1 April 2015. The adoption of these standards and interpretations did not have any material effect on the financial performance or position of the Group and the Authority.

2.3 Standards issued but not yet effective

A number of new standards, amendments to standards and interpretations are not yet effective as at 1 April 2015, and have not been applied in preparing these financial statements. None of these are expected to have a significant effect on the financial statements of the Group, except for SB-FRS 109 and SB-FRS 115. The nature of the impending changes in accounting policy on adoption of SB-FRS 109 and SB-FRS 115 are described below.

SB-FRS 109 Financial Instruments

SB-FRS 109 introduces new requirements for classification and measurement of financial assets, impairment of financial assets and hedge accounting. Financial assets are classified according to their contractual cash flow characteristics and the business model under which they are held. The impairment requirements in SB-FRS 109 are based on an expected credit loss model and replace the SB-FRS 39 incurred loss model. Adopting the expected credit losses requirements will require the Group to make changes to its current systems and processes.

SB-FRS 109 is effective for annual periods beginning on or after 1 January 2018 with early application permitted. Retrospective application is required, but comparative information is not compulsory. The Group is currently assessing the impact of SB-FRS 109 and plans to adopt the standard on the required effective date.

SB-FRS 115 Revenue from Contracts with Customers

SB-FRS 115 establishes a five-step model that will apply to revenue arising from contracts with customers. Under SB-FRS 115, revenue is recognised at an amount that reflects the consideration which an entity expects to be entitled in exchange for transferring goods or services to a customer. The principles in SB-FRS 115 provide a more structured approach to measuring and recognising revenue when the promised goods and services are transferred to the customer i.e. when performance obligations are satisfied.

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.3 Standards issued but not yet effective (continued)

SB-FRS 115 Revenue from Contracts with Customers (continued)

Key issues for the Group include identifying performance obligations, accounting for contract modifications, applying the constraint to variable consideration, evaluating significant financing components, measuring progress toward satisfaction of a performance obligation, recognising contract cost assets and addressing disclosure requirements.

Either a full or modified retrospective application is required for annual periods beginning on or after 1 January 2017 with early adoption permitted. The Group is currently assessing the impact of SB-FRS 115 and plans to adopt the new standard on the required effective date.

2.4 Basis of consolidation

The consolidated financial statements comprise the financial statements of the Authority and its subsidiaries as at the end of the reporting period. The financial statements of the subsidiaries used in the preparation of the consolidated financial statements are prepared for the same reporting date as the Authority. Consistent accounting policies are applied to like transactions and events in similar circumstances.

All intra-group balances, income and expenses and unrealised gains and losses resulting from intra-group transactions are eliminated in full.

Subsidiaries are consolidated from the date of acquisition, being the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases.

Losses within a subsidiary are attributed to the non-controlling interest even if that results in a deficit balance.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction. If the Group loses control over a subsidiary, it:

- de-recognises the assets (including goodwill) and liabilities of the subsidiary at their carrying amounts at the date when control is lost;
- de-recognises the carrying amount of any non-controlling interest;
- de-recognises the cumulative translation differences recorded in equity;
- recognises the fair value of the consideration received;
- recognises the fair value of any investment retained;
- recognises any surplus or deficit in profit or loss;
- re-classifies the Group's share of components previously recognised in other comprehensive income to profit or loss or retained earnings, as appropriate.

2.5 Functional currency

Items included in the financial statements in the Group are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The consolidated financial statements are presented in Singapore Dollar, which is the Authority's functional currency.

The Authority and its subsidiaries determine its own functional currency and items included in the financial statements of each entity are measured using that functional currency.

Transactions and balances

Transactions in foreign currencies are measured in the respective functional currencies of the Authority and its subsidiaries and are recorded on initial recognition in the functional currencies at exchange rates approximating those ruling at the transaction dates. Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the end of the reporting period. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at the end of the reporting period are recognised in profit or loss.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.6 Property, plant and equipment

All items of property, plant and equipment are initially recorded at cost. Subsequent to recognition, property, plant and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses. The cost of an item includes its purchase price, any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by the management, the cost of replacing part of the property, plant and equipment and borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying property, plant and equipment. The cost of an item of property, plant and equipment is recognised as an asset if, and only if, it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably.

When significant parts of property, plant and equipment are required to be replaced in intervals, the Group recognises such parts as individual assets with specific useful lives and depreciation, respectively. Likewise, when a major inspection is performed, its cost is recognised in the carrying amount of the property, plant and equipment as a replacement if the recognition criteria are satisfied. All other repair and maintenance costs are recognised in profit or loss as incurred.

Depreciation is computed on a straight-line basis over the estimated useful lives of the assets as follows:

Leasehold land and office buildings	– 8 – 10 years and 29 years
Site office and land improvement	– 10 years
Office, photo printing and training equipment	– 5 – 10 years
Furniture, fittings and fixtures	– 8 years
Data processing equipment	– 3 – 5 years

Assets under construction included in property, plant and equipment are not depreciated as these assets are not yet available for use.

The carrying values of property, plant and equipment are reviewed for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable.

The residual value, useful life and depreciation method are reviewed at each financial year-end, and adjusted prospectively, if appropriate.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss on de-recognition of the asset is included in profit or loss in the year the asset is derecognised.

2.7 Infrastructural project-in-progress

Project cost incurred by the Authority is recognised as an asset at cost on the Balance Sheets as its accumulated surplus is used to fund the project. Upon completion of the project, the asset will be transferred to the designated government agency as contribution to the Government, with a corresponding reduction against the Authority's accumulated surplus.

2.8 Prepaid land lease

The prepaid land lease is initially measured at cost less impairment losses. Following initial recognition, the prepaid land lease is measured at cost less accumulated amortisation and any impairment loss. The prepaid land lease is amortised on a straight-line basis over the lease term of 30 years.

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.9 Impairment of non-financial assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when an annual impairment testing for an asset is required, the Group makes an estimate of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset or cash-generating unit exceeds its recoverable amount, the asset is considered impaired and is written-down to its recoverable amount. In assessing value in use, the estimated future cash flows expected to be generated by the asset are discounted to their present values using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used. These calculations are corroborated by valuation multiples or other available fair value indicators.

The Group bases its impairment calculation on detailed budgets and forecast calculations which are prepared separately for each of the Group's cash-generating units to which the individual assets are allocated. These budgets and forecast calculation generally cover a period of five years. For longer periods, an appropriate long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses of continuing operations are recognised in profit or loss in those expense categories consistent with the function of the impaired asset, except for assets that are previously revalued where the revaluation was taken to other comprehensive income. In this case, the impairment is also recognised in other comprehensive income up to the amount of any previous revaluation.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increase cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised previously. Such reversal is recognised in profit or loss.

2.10 Subsidiaries

A subsidiary is an investee that is controlled by the Group. The Group controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

In the Authority's separate financial statements, investments in subsidiaries are accounted for at cost less impairment losses.

2.11 Financial instruments

(a) Financial assets

Initial recognition and measurement

Financial assets are recognised when, and only when, the Group becomes a party to the contractual provisions of the financial instrument. The Group determines the classification of its financial assets at initial recognition.

When financial assets are recognised initially, they are measured at fair value, plus, in the case of financial assets not at fair value through profit or loss, directly attributable transaction costs.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.11 Financial instruments (continued)

(a) Financial assets (continued)

Subsequent measurement - Loans and receivables

Non-derivative financial assets with fixed or determinable payments that are not quoted in an active market are classified as loans and receivables. Subsequent to initial recognition, loans and receivables are measured at amortised cost using the effective interest method, less impairment. Gains and losses are recognised in profit or loss when the loans and receivables are derecognised or impaired, and through the amortisation process.

De-recognition

A financial asset is de-recognised where the contractual right to receive cash flows from the asset has expired. On de-recognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received and any cumulative gain or loss that had been recognised in other comprehensive income is recognised in profit or loss.

(b) Financial liabilities

Initial recognition and measurement

Financial liabilities are recognised when, and only when, the Group becomes a party to the contractual provisions of the financial instrument. The Group determines the classification of its financial liabilities at initial recognition.

All financial liabilities are recognised initially at fair value. In the case of financial liabilities not recognised at fair value through profit or loss, they are recognised at fair value net of attributable transaction costs.

Subsequent measurement

After initial recognition, financial liabilities that are not carried at fair value through profit or loss are subsequently measured at amortised cost using the effective interest method. Gains and losses are recognised in profit or loss when the liabilities are derecognised, and through the amortisation process.

De-recognition

A financial liability is de-recognised when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a de-recognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognised in profit or loss.

(c) Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheets, when and only when, there is a currently enforceable legal right to set off the recognised amounts and there is an intention to settle on a net basis, or to realise the assets and settle the liabilities simultaneously.

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.12 Impairment of financial assets

The Group assesses at each reporting date whether there is any objective evidence that a financial asset is impaired.

(a) Financial assets carried at amortised cost

For financial assets carried at amortised cost, the Group first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be recognised are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss on financial assets carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account. The impairment loss is recognised in profit or loss.

When the asset becomes uncollectible, the carrying amount of impaired financial assets is reduced directly or if an amount was charged to the allowance account, the amounts charged to the allowance account are written-off against the carrying value of the financial assets.

To determine whether there is objective evidence that an impairment loss on financial assets has been incurred, the Group considers factors such as the probability of insolvency or significant financial difficulties of the debtor and default or significant delay in payments.

If in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed to the extent that the carrying amount of the asset does not exceed its amortised cost at the reversal date. The amount of reversal is recognised in profit or loss.

2.13 Cash and bank balances

Cash and bank balances comprise cash at bank and on hand, demand deposits, and short-term, highly liquid investments that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

For the purpose of presentation in the financial statements, cash and bank balances comprise cash at bank, fixed deposits with financial institutions and cash balances with the Accountant-General Department which are subject to an insignificant risk of change in value. The cash at bank not available for general use is disclosed in Note 13 to the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.14 Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and the amount of the obligation can be estimated reliably.

Provisions are reviewed at the end of each reporting period and adjusted to reflect the current best estimate. If it is no longer probable that an outflow of economic resources will be required to settle the obligation, the provision is reversed. If the effect of the time value of money is material, provisions are discounted using a current pre tax rate that reflects, where appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

Provision for reinstatement cost

The provision for reinstatement costs from contractual obligation to restore the leased office to their original states are provided at the present value of expected costs to settle the obligation using estimated cash flows and are recognised as part of the cost of that particular asset. The cash flows are discounted at a current pre tax rate that reflects the risks specific to the reinstatement liability. The unwinding of the discount is expensed as incurred and recognised in profit or loss as a finance cost. The estimated future costs of reinstatement are reviewed annually and adjusted as appropriate. Changes in the estimated future costs or in the discount rate applied are added to or deducted from the cost of the asset.

2.15 Government grants

Government grants are recognised at their fair values where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. Where the grant relates to an asset, the fair value is recognised as deferred capital grant on the balance sheet and is amortised to profit or loss over the expected useful life of the relevant asset by equal annual instalments.

Government grant shall be recognised in profit or loss on a systematic basis over the periods in which the entity recognises as expenses the related costs for which the grants are intended to compensate. Grants related to income are presented as a credit in profit or loss.

2.16 Taxes

(a) Current income tax

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognised in the profit or loss except to the extent that it relates to a business combination, or items recognised directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the end of the reporting period, and any adjustment to tax payable in respect of previous financial years.

b) Deferred tax

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable income or loss, and differences relating to investments in subsidiaries to the extent that it is probable that they will not reverse in the foreseeable future.

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.16 Taxes (continued)

b) Deferred tax (continued)

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the end of the reporting period. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilised. Deferred tax assets are reviewed at the end of each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

(c) Sales tax

Revenues, expenses and assets are recognised net of the amount of sales tax except:

- Where the sales tax incurred in a purchase of assets or services is not recoverable from the taxation authority, in which case the sales tax is recognised as part of the cost of acquisition of the asset or as part of the expense item as applicable; and
- Receivables and payables that are stated with the amount of sales tax included.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the balance sheet.

2.17 Revenue

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured, regardless of when the payment is made. Revenue is measured at the fair value of consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes. The Group assesses its revenue arrangements to determine if it is acting as principal or agent. The Group has concluded that it is acting as a principal in all of its revenue arrangements. The following specific recognition criteria must also be met before revenue is recognised:

- Plan fees are recognised as income over the expected duration of individual projects;
- Advertisement licence fees are recognised as income over the validity periods of the licence;
- Course fees are recognised as income over the duration of the courses;
- Quality assessment and certification fees are recognised as income over the assessment period;
- Trade test fees are recognised as income on completion of trade tests;
- Contractors registration fees are recognised as income over the validity period of the registration;
- Operating lease income is recognised on a straight-line basis over the lease term;
- Management fees are recognised as income over the period of services rendered; and;
- Interest income is recognised using the effective interest method.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.18 Trust and agency funds

Trust and agency funds are government grants and contributions from other organisations where the Authority is not the owner and beneficiary of the funds. The Authority is merely administering the funds on behalf of the holders of these funds. Income and expenditure of these funds are taken directly to the funds. The net assets relating to the funds are shown as a separate line item in the balance sheets.

Trust and agency funds are accounted for on a cash basis.

2.19 Employee benefit

(a) Defined contribution plans

The Group makes contributions to the Central Provident Fund ("CPF") scheme in Singapore, a defined contribution pension scheme. Contributions to defined contribution pension schemes are recognised as an expense in the period in which the related service is performed.

(b) Employee leave entitlement

Employee entitlements to annual leave are recognised as a liability when they accrue to the employees. The estimated liability for leave is recognised for services rendered by employees up to the end of the reporting period.

(c) Defined benefit retirement obligations

Provision for pension benefits is made for pensionable officers transferred to the Authority on 1 April 1999. Defined benefit retirement obligations due to pensionable officers are recognised in the balance sheets in accordance with the Pensions Act, Chapter 225.

The Authority had engaged an actuarial to assess the provision for pension costs for the first time in the previous financial year.

An actuarial valuation is conducted once every four years or as and when required to determine the cost of pension benefits due to these officers using the Projected Unit Credit Method.

Defined benefit costs comprise the following:

- Service cost
- Interest cost on the provision for defined benefits
- Re-measurements of the provision for defined benefits

Service costs which include current service costs, past service costs and gains or losses on non-routine settlements are recognised as expense in income or expenditure. Past service costs are recognised when plan amendment or curtailment occurs.

Interest cost on the provision for defined benefits is the change during the period in the provision that arises from the passage of time which is determined by applying the discount rate based on the Singapore Government bond yield to the provision. Interest cost on the provision is recognised in income or expenditure.

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.19 Employee benefit (continued)

(c) Defined benefit retirement obligations (continued)

Re-measurements comprising actuarial gains and losses are recognised immediately in other comprehensive income in the period in which they arise. Re-measurements are recognised in accumulated surplus within equity and are not reclassified to income or expenditure in subsequent periods.

(d) Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognised for the amount expected to be paid under short-term cash bonus if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

2.20 Lease

The determination of whether an arrangement is, or contains a lease is based on the substance of the arrangement at inception date: whether fulfilment of the arrangement is dependent on the use of a specific asset or assets and the arrangement conveys a right to use the asset, even if that right is not explicitly specified in an arrangement.

For arrangements entered into prior to 1 January 2005, the date of inception is deemed to be 1 January 2005 in accordance with the transitional requirements of INT FRS 104.

(a) As lessee

Operating lease payments are recognised as an expense in profit or loss on a straight-line basis over the lease term. The aggregate benefit of incentives provided by the lessor is recognised as a reduction of rental expense over the lease term on a straight-line basis.

(b) As lessor

Leases where the Group retains substantially all the risks and rewards of ownership of the asset are classified as operating leases. Initial direct costs incurred in negotiating an operating lease are added to the carrying amount of the leased asset and recognised over the lease term on the same basis as rental income. Contingent rents are recognised as revenue in the period in which they are earned.

2.21 Statutory contribution to consolidated fund

The Authority is required to contribute to the Consolidated Fund based on a percentage of the net surplus of the Authority (before donations) for each financial year. The percentage of contribution is determined by the Ministry of Finance.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

2. Summary of significant accounting policies (continued)

2.22 Contingencies

A contingent liability is:

- (a) a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group; or
- (b) a present obligation that arises from past events but is not recognised because:
 - (i) It is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
 - (ii) The amount of the obligation cannot be measured with sufficient reliability.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group.

Contingent liabilities and assets are not recognised on the balance sheet of the Group, except for contingent liabilities assumed in a business combination that are present obligations and which the fair values can be reliably determined.

2.23 Related parties

For the purpose of these financial statements, parties are considered to be related to the Authority if the Authority has the ability, directly or indirectly, to control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Authority and the party are subject to common control or common significant influence. Related parties may be individuals or other entities.

The Authority is a statutory board under the purview of Ministry of National Development ("MND") and is an entity related to the Government of Singapore. Accordingly, the Authority's related parties include Government-related entities such as Ministries, Organs of State and other Statutory Boards.

In accordance with Paragraph 28A of SB-FRS 24 *Related Party Disclosures*, the Authority is exempted from disclosing transactions with government-related entities other than Ministries, Organs of State and other Statutory Boards, unless there are circumstances to indicate that these transactions are unusual and their disclosure would be of interest to readers of the financial statements.

The Authority also applies the exemption in Paragraph 25 of SB-FRS 24 *Related Party Disclosures*. Required disclosures of transactions and outstanding balances with government-related entities are limited to the following information to enable users of the Authority's financial statements to understand the effect of the related party transactions on the financial statements:

- (i) the nature and amount of each individually significant transaction with Ministries, Organs of State and other Statutory Boards; and
- (ii) for other transactions with Ministries, Organs of State and other Statutory Boards that are collectively but not individually significant, a qualitative or quantitative indication of their extent.

For the financial year ended 31 March 2016

3. Significant accounting judgements and estimates

The preparation of the Group's financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent liabilities at the end of each reporting period. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in the future periods.

3.1 Key sources of estimation uncertainty

The key assumptions concerning the future and other key sources of estimation uncertainty at the end of each reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below. The Group based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

(a) Impairment of loans and receivables

The Group assesses at the end of each reporting period whether there is any objective evidence that a financial asset is impaired. To determine whether there is objective evidence of impairment, the Group considers factors such as the probability of insolvency or significant financial difficulties of the debtor and default or significant delay in payments.

Where there is objective evidence of impairment, the amount and timing of future cash flows are estimated based on historical loss experience for assets with similar credit risk characteristics. The carrying amount of the Group's loans and receivables at the end of the reporting period is disclosed in Note 11 to the financial statements.

(b) Depreciation of plant and equipment

Plant and equipment are depreciated on a straight-line basis over their estimated economic useful lives. Management estimates the useful lives of these plant and equipment to be within 3 to 10 years. Changes in the expected level of usage and technological developments could impact the economic useful lives and the residual values of these assets, therefore future depreciation charges could be revised. The estimated useful lives used in determining the value of plant and equipment and sensitivity analysis for property, plant and equipment are disclosed under Notes 2.6 and 7 to the financial statements.

The carrying amount of the Group's and Authority's plant and equipment at 31 March 2016 was S\$45,356,683 (2014/2015: S\$20,088,388).

(c) Provision for pension costs

The Group recognised a provision for pension cost for employees who are under the pension scheme. The provision has been computed based on certain assumptions and estimates as disclosed in Note 16(a) to the financial statements and revisions to the assumptions and estimates could impact the provision made.

As at 31 March 2016, provision for pension costs amounted to S\$6,131,475 (2014/2015: S\$8,082,937).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

4. Income tax expense

The subsidiaries of the Authority are subject to tax under Section 13(1)(e) of the Singapore Income Tax Act as follows:

	Group 2015/2016 S\$	2014/2015 S\$
Current income taxation	118,896	82,244

Relationship between tax expense and accounting profit of the subsidiaries

A reconciliation between tax expense and the product of accounting profit of its subsidiaries multiplied by the applicable corporate tax rate for the financial years ended 31 March 2016 and 2015 is as follows:

	Group 2015/2016 S\$	2014/2015 S\$
Surplus before contribution to consolidated fund and taxation	35,391,240	37,181,512
Less: The Authority's surplus before contribution to consolidated fund and income tax expense	(34,194,231)	(36,401,824)
The subsidiaries' surplus before income tax expense	1,197,009	779,688
Tax at statutory rate of 17% (2014/2015: 17%)	203,492	132,547
Adjustments:		
Tax exempt income	(93,925)	(25,925)
Corporate income tax rebate	(20,571)	(20,000)
Deferred tax assets not recognised	29,900	–
Utilisation of deferred tax assets previously not recognised	–	(4,378)
Income tax expense recognised in profit or loss	118,896	82,244

In respect of deferred tax assets not recognised, the unutilised tax losses of approximately S\$340,000 (2014/2015: S\$164,000) are available for offset against future taxable profits, subject to compliance with the relevant provisions of the Singapore Income Tax Act.

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5. Surplus for the year

The following items have been included in arriving at surplus for the financial year:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Builders licensing fees	(2,050,230)	(2,117,872)
Importers licensing fees	(3,329,279)	(3,693,052)
Royalty fees	(2,213,660)	(1,392,188)
Revenue from Sars Quarantine House	(2,710,236)	(3,099,216)
(Reversal)/allowance for doubtful debts	(252,709)	340,060
Staff training	1,242,209	1,281,692
Property tax	1,112,449	761,950
Publicity materials expense	4,116,081	3,275,705
Board members' allowances	124,144	123,750
Foreign exchange loss	25,953	16,005
Impairment loss for prepaid land lease	—	2,816,250
Input GST disallowed	3,821,081	9,624,529

6. Employee benefit costs

	Group		Authority	
	2015/2016	2014/2015	2015/2016	2014/2015
	S\$	S\$	S\$	S\$
Salaries, allowances and bonus	89,077,140	86,169,999	88,000,782	85,385,955
Central Provident Fund contribution	12,073,491	10,836,793	12,073,491	10,836,793
Pension benefits (Note 16(a))	434,848	335,676	434,848	335,676
Other staff costs	155,503	147,211	155,503	147,211
	101,740,982	97,489,679	100,664,624	96,705,635

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7. Property, plant and equipment

Group and Authority	Leasehold land S\$	Office building S\$	Site office and land improvement S\$	Office, photo and training equipment S\$	Furniture, fittings and fixtures S\$	Data processing equipment S\$	Assets under construction S\$	Total S\$
Cost:								
At 1 Apr 2014	15,029,724	25,439,887	1,131,436	8,039,788	22,433,569	10,303,375	24,857,575	107,235,354
Additions	-	-	38,050	600,753	9,374,416	1,780,162	36,257,198	48,050,579
Reclassification	-	4,333,984	61,800	554,048	572,956	509,496	(6,032,284)	-
Disposals	-	-	-	(505,649)	(7)	(588)	-	(506,244)
Written-off	-	-	(209,591)	(490,570)	(852,851)	(126,545)	-	(1,679,557)
Adjustment *	-	(261,920)	-	-	(2,250,417)	-	-	(2,512,337)
At 31 March 2015	15,029,724	29,511,951	1,021,695	8,198,370	29,277,666	12,465,900	55,082,489	150,587,795
Additions	-	2,779,929	12,000	2,678,221	3,698,370	3,066,237	7,111,723	19,346,480
Reclassification	45,287	25,245,994	1,597,062	16,453,080	7,663,268	3,296,293	(54,300,984)	-
Disposals	-	-	-	-	(12,090)	(683,352)	-	(695,442)
Written-off	-	-	-	(417,395)	(838,093)	(291,208)	-	(1,546,696)
Adjustment *	-	(189,696)	-	-	(12,640)	(35,445)	31,494	(206,287)
At 31 March 2016	15,075,011	57,348,178	2,630,757	26,912,276	39,776,481	17,818,425	7,924,722	167,485,850

* Adjustment to cost upon completion of projects.

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For the financial year ended 31 March 2016

7. Property, plant and equipment (continued)

Group and Authority	Leasehold land S\$	Office building S\$	Site office and land improvement S\$	Office, photo printing and training equipment S\$	Furniture, fittings and fixtures S\$	Data processing equipment S\$	Assets under construction S\$	Total S\$
Accumulated depreciation/impairment:								
At 1 Apr 2014	8,242,943	18,263,546	841,013	6,013,806	13,109,572	7,336,768	–	53,807,648
Depreciation for the year	1,310,461	2,098,355	108,691	743,198	3,484,912	1,807,705	–	9,553,322
Disposals	–	–	–	(505,617)	–	(391)	–	(506,008)
Written-off	–	–	(209,592)	(477,859)	(725,997)	(100,966)	–	(1,514,414)
Reversal of impairment loss	–	–	–	–	(550,000)	–	–	(550,000)
At 31 March 2015	9,553,404	20,361,901	740,112	5,773,528	15,318,487	9,043,116	–	60,790,548
Depreciation for the year	793,653	5,260,922	269,598	4,642,092	4,333,207	3,691,595	–	18,991,067
Disposals	–	–	–	–	(11,916)	(682,380)	–	(694,296)
Written-off	–	–	–	(416,502)	(628,475)	(291,206)	–	(1,336,183)
At 31 March 2016	10,347,057	25,622,823	1,009,710	9,999,118	19,011,303	11,761,125	–	77,751,136
Net carrying amount								
At 31 March 2015	5,476,320	9,150,050	281,583	2,424,842	13,959,179	3,422,784	55,082,489	89,797,247
At 31 March 2016	4,727,954	31,725,355	1,621,047	16,913,158	20,765,178	6,057,300	7,924,722	89,734,714

A 5% difference in the expected useful lives of these assets from management's estimates would result in approximately 3% (2014/2015: 1%) or S\$999,579 (2014/2015: S\$502,789) variance in the Group's and Authority's surplus before contribution to consolidated fund.

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8. Infrastructural project-in-progress

During the year, the completed Tuas Concrete Site was transferred to Ministry of National Development as contribution to the Government, with a corresponding reduction against the Authority's accumulated surplus.

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
At 1 April	3,929,049	–
Additions	209,479	3,929,049
Transfer upon completion	(4,138,528)	–
At 31 March	–	3,929,049

9. Investments in subsidiaries

	Authority	
	2015/2016	2014/2015
	S\$	S\$
Unquoted shares, at cost	2	2

The subsidiaries at 31 March 2016 are:

Name of subsidiaries	Country of incorporation	Principal activities	Percentage of ownership interest	
			2015/2016	2014/2015
			%	%
BCA International Private Limited	Singapore	Construction related consultancy and advisory services	100	100
BCA Centre for Sustainable Buildings Ltd	Singapore	Research and consultancy services for sustainable building policies and climate change	100	100

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10. Prepaid land lease

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Cost:		
At 1 April	19,766,250	–
Additions	22,889,001	22,582,500
Less: Impairment loss	–	(2,816,250)
At 31 March	42,655,251	19,766,250
Accumulated amortisation:		
At 1 April	549,062	–
Amortisation for the year	1,103,939	549,062
At 31 March	1,653,001	549,062
Net carrying amount	41,002,250	19,217,188
Amount to be amortised:		
– Not later than one year	1,421,842	658,875
– Later than one year but not later than five years	5,687,367	2,635,500
– Later than five years	33,893,041	15,922,813

The Authority leases industrial lands for the development of the Integrated Construction and Precast Hub and in turn the lands are leased out to a third party.

The industrial land leased from Housing and Development Board has a remaining tenure of 28 years (2014/2015: 29 years). The industrial land leased from Singapore Land Authority has a remaining tenure of 29 years and the lease started from 2015/2016.

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11. Trade and other receivables

	Group		Authority	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Trade receivables	9,586,027	14,479,906	8,872,013	13,689,562
Other receivables	5,120,781	4,445,097	5,077,025	4,433,929
Grant receivable from Ministry of National Development ("MND")	2,200,000	–	2,200,000	–
Amounts due from subsidiaries				
– non-trade	–	–	273,478	421,085
Deposits	1,824	9,863	1,824	9,863
Prepayments	1,091,538	1,203,277	1,023,939	1,142,538
Total trade and other receivables	18,000,170	20,138,143	17,448,279	19,696,977
Less: Prepayments	(1,091,538)	(1,203,277)	(1,023,939)	(1,142,538)
Add: Fixed deposits (Note 12)	7,000,000	5,800,000	–	–
Add: Cash and cash equivalents (Note 13)	435,023,618	422,355,256	434,106,792	421,279,716
Total loans and receivables	458,932,250	447,090,122	450,531,132	439,834,155

Trade and other receivables are denominated in Singapore Dollar.

Trade receivables

Trade receivables are non-interest bearing and are on 30 days' terms. They are recognised at their original invoice amounts which represent their fair values on initial recognition.

Amounts due from subsidiaries

The non-trade amounts due from subsidiaries are unsecured, interest-free, repayable on demand and are to be settled in cash.

Receivables that are past due but not impaired

The Group and the Authority have trade and other receivables amounting to S\$1,995,329 and S\$1,423,083 (2014/2015: S\$7,776,549 and S\$7,243,969), respectively that are past due at the end of the reporting period but not impaired. These receivables are unsecured and the analysis of their aging at the end of the reporting period is as follows:

Receivables that are past due but not impaired

	Group		Authority	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Receivables past due but not impaired				
– < 3 months	1,293,938	5,114,433	1,019,952	5,036,573
– 3 months to 6 months	149,957	1,929,856	54,657	1,762,386
– 6 months to 12 months	139,330	559,747	90,230	381,187
– > 12 months	412,104	172,513	258,244	63,823
	1,995,329	7,776,549	1,423,083	7,243,969

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11. Trade and other receivables (continued)

Receivables that are impaired

The Group's trade receivables that are impaired at the end of the reporting period and the movement of the allowance accounts used to record the impairment are as follows:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Trade receivable - nominal amount	344,389	597,098
Less: Allowance for impairment	(344,389)	(597,098)
	—	—
Movement in allowance accounts:		
At 1 April	597,098	257,038
(Reversal)/charge for the year (Note 5)	(252,709)	340,060
At 31 March	344,389	597,098

12. Fixed deposits

	Group	
	2015/2016	2014/2015
	S\$	S\$
Fixed deposits with financial institutions	7,000,000	5,800,000
Represented by:		
Current	4,000,000	1,800,000
Non-current	3,000,000	4,000,000
	7,000,000	5,800,000

Fixed deposits with financial institutions are made for periods of 18 months (2014/2015: 18 months). The weighted average effective interest rates for the year ended 31 March 2016 for the Group were 0.50% to 1.37% (2014/2015: 0.50% to 1.15%).

Fixed deposits are denominated in Singapore Dollar.

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13. Cash and bank balances

	Group		Authority	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Cash at bank	16,920,539	12,684,001	16,003,713	11,608,461
Cash with the AGD	430,539,651	421,595,603	430,539,651	421,595,603
	447,460,190	434,279,604	446,543,364	433,204,064
Less: Cash at bank not available for general use	(12,436,572)	(11,924,348)	(12,436,572)	(11,924,348)
Cash and cash equivalents	435,023,618	422,355,256	434,106,792	421,279,716

Cash and cash equivalents are denominated in Singapore Dollar.

Cash at bank not available for general use

The Group acts as a collection agent for various parties on certain projects and collects payments on their behalf.

Cash with the AGD

On 2 November 2009, the Accountant-General's Department ("AGD") issued a Circular No. 4/2009 to centrally manage the cash of all Statutory Boards and Ministries under the Centralised Liquidity Management ("CLM") scheme. This scheme aims to achieve higher returns and to better manage credit risk at the Whole-of-Government level. The Authority has participated in the CLM scheme since 25 March 2010.

The weighted average CLM yield for the year ended 31 March 2016 is 1.26% (2014/2015: 0.85%).

14. Fees received in advance

	Group		Authority	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Balance at 1 April	106,904,749	90,109,582	103,200,389	87,324,022
Add: Fees received	145,420,890	157,187,074	144,390,553	155,494,077
Less: Fees recognised as revenue	(133,207,648)	(140,391,907)	(132,245,510)	(139,617,710)
Balance at 31 March	119,117,991	106,904,749	115,345,432	103,200,389
Represented by:				
Current	62,783,788	69,649,106	59,011,229	65,944,746
Non-current	56,334,203	37,255,643	56,334,203	37,255,643
	119,117,991	106,904,749	115,345,432	103,200,389

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15. Other payables and accruals

	Group		Authority	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
Other payables and accruals (current):				
Amounts due to MND	11,789,109	11,376,585	11,789,109	11,376,585
Maintenance deposits	89,019	89,019	89,019	89,019
Sundry creditors	1,690,183	2,244,251	1,690,183	2,244,251
Accruals for unconsumed leave	3,695,314	3,575,870	3,695,314	3,575,870
Accruals for operating expenses	12,868,173	11,604,600	12,850,166	11,587,456
Accruals for the purchase of property, plant and equipment	2,293,050	3,515,608	2,293,050	3,515,608
Security/tender deposits	16,352,440	16,065,166	16,352,440	16,065,166
Scholarships	2,647,618	1,465,796	2,647,618	1,465,796
Total other payables and accruals	51,424,906	49,936,895	51,406,899	49,919,751
Add: Trade payables	7,552,889	13,293,440	7,552,856	13,261,591
Less: Accruals for unconsumed leave	(3,695,314)	(3,575,870)	(3,695,314)	(3,575,870)
Less: GST payable	(1,388,698)	(6,680,940)	(1,388,698)	(6,680,940)
Total financial liabilities carried at amortised costs	53,893,783	52,973,525	53,875,743	52,924,532

The amounts due to MND mainly pertain to the amounts collected on their behalf by the Authority for certain projects which the Group acts as an agent and other non-trade payables. These balances are unsecured, interest-free, repayable on demand and are to be settled in cash.

Sundry creditors are non-interest bearing and normally have an average term of six months.

Included in security/tender deposits is an amount of S\$14,182,094 (2014/2015: S\$13,840,803) collected under the Green Mark Gross Floor Area Incentive Scheme.

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16. Provisions

(a) Provision for pension costs

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
At 1 April	8,082,937	10,203,019
Add: Amount provided during the year (Note 6)	434,848	335,676
	8,517,785	10,538,695
Less:		
Pension paid during the year	(2,386,310)	(2,455,758)
At 31 March	6,131,475	8,082,937
Represented by:		
Current	2,283,336	2,360,193
Non-current	3,848,139	5,722,744
	6,131,475	8,082,937

The above provision includes the provision for pension costs for 12 (2014/2015: 12) pensioners who have exercised the option for reduced pension with gratuity payment under the pension scheme other than CPF. There are also currently 7 (2014/2015: 10) employees of the Group who have not exercised any pension options under the pension scheme. The pension amount to be paid to each employee upon retirement under the pension scheme is dependent on, among other factors, the number of years of service and the last drawn salary. The total pension costs are shared between the Group and the AGD. The Group is only liable for the pension costs for the period of service completed by the employee with the Group.

The employees are entitled to select one of the following pension options upon retirement:

- (i) Annual pension payments;
- (ii) Reduced pension with gratuity payment; or
- (iii) Lump sum gratuity payment.

The defined retirement benefits obligations due to pensionable officers are determined based on the last drawn salaries of the respective pensionable officers and the pensionable officers' cumulative service period served with the Authority at the time of retirement, assuming that all pensionable officers work till the age of 62 years and have a 40% and 60% probability of choosing the option for reduced pension with gratuity payment and option for lump sum gratuity payment respectively.

The provision has been estimated by management based on the valuation of the pension scheme performed by an independent firm of professional actuaries.

The principal assumptions used by the professional actuaries in determining the pension costs are:

- Discount rate – Gratuity : 0.36% per annum
- Discount rate – Pension : 3.20% per annum
- Expected salary increment : 3.00% per annum
- Mortality rate : S0408 Singapore Mortality Table
- Expected retirement age : 62

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16. Provisions (continued)

(a) Provision for pension costs (continued)

The sensitivity analysis below has been determined based on reasonably possible changes of each significant assumption on the provision for pension costs as of the end of the reporting period, assuming if all other assumptions were held constant:

	Group and Authority			
	2015/2016		2014/2015	
	Increase/ (Decrease)	S\$	Increase/ (Decrease)	S\$
Discount rates	+ 25 basis points	(110,863)	+ 25 basis points	(146,147)
	- 25 basis points	115,602	- 25 basis points	152,394
Expected salary increment	+ 0.25%	24,239	+ 0.25%	31,953
	- 0.25%	(24,081)	- 0.25%	(31,745)

(b) Provision for reinstatement costs

Provision for reinstatement cost is the estimated cost of restoring the leased offices to their original states. The amount has been capitalized in the cost of the property, plant and equipment.

	Group and Authority	
	2015/2016 S\$	2014/2015 S\$
At 1 April	345,236	—
Add: Amount provided during the year	8,101	345,236
At 31 March	353,337	345,236
Represented by:		
Non-current	353,337	345,236

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17. Grants received in advance

Group and Authority	Operating grants		Development grants		Total	
	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$	2015/2016 S\$	2014/2015 S\$
At 1 April	62,493	353,155	5,658,402	752,578	5,720,895	1,105,733
Government grants received/receivable	59,063,901	48,227,220	11,954	5,154,266	59,075,855	53,381,486
Reversal of government grants receivable	–	(46,092)	–	(83,522)	–	(129,614)
Reclass to operating grants	5,144,270	–	(5,144,270)	–	–	–
Transfer to deferred capital grants (Note 19)	(174,528)	(50,586)	(392,817)	(193,358)	(567,345)	(243,944)
Transfer to profit or loss	(59,006,744)	(48,421,204)	(12,123)	(55,084)	(59,018,867)	(48,476,288)
Reversal of government grants receivable	–	–	–	83,522	–	83,522
Net (transfer to)/reversal from profit or loss (operating and development grants)	(59,006,744)	(48,421,204)	(12,123)	28,438	(59,018,867)	(48,392,766)
At 31 March	5,089,392	62,493	121,146	5,658,402	5,210,538	5,720,895
Represented by:						
Current	297,870	62,493	121,146	690,506	419,016	752,999
Non-current	4,791,522	–	–	4,967,896	4,791,522	4,967,896
	5,089,392	62,493	121,146	5,658,402	5,210,538	5,720,895

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18. Provision for contribution to consolidated fund

The Authority is required to make contributions to the Consolidated Fund in accordance with the Statutory Corporations (Contributions to Consolidated Fund) Act, Chapter 319A and in accordance with the Finance Circular Minute No. M5/2005 with effect from 1 April 2004. The contribution is based on a percentage, as decided by the Ministry of Finance, of the net surplus of the Authority (before donations) for the financial year. The percentage for FY2015/16 is prevailing corporate tax of 17% (2014/2015: 17%).

The total contribution for the year can be reconciled to the total comprehensive income (before donations) as follows:

	Group and Authority 2015/2016 S\$	2014/2015 S\$
Surplus of the Authority before donation and contribution to consolidated fund, representing surplus subject to contribution	34,194,231	36,401,824
Contribution at 17% (2014/2015: 17%)	5,813,020	6,188,310
Over provision in respect of prior years	–	(135,463)
Contribution to consolidated fund recognised in profit or loss	5,813,020	6,052,847

19. Deferred capital grants

	Group and Authority 2015/2016 S\$	2014/2015 S\$
At 1 April	10,534,759	4,216,214
Add: Government grants received/receivable		
- Transferred from grants received in advance (Note 17)	567,345	243,944
- Allocation from MND for assets additions in current year (Note 7)	48,948	8,384,266
- Assets funded from MND Research Fund	2,200,000	–
- Other assets received	3,001	299,712
Less: Amortisation of deferred capital grants	(3,272,343)	(2,609,377)
At 31 March	10,081,710	10,534,759

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20. Net assets of trust and agency funds

The trust and agency funds comprise 17 funds (2014/2015: 17 funds) managed by the Authority on behalf of other agencies.

The following funds were set up using grants provided by the Ministry of National Development:

(a) MND Research Fund

The MND Research Fund is used for providing support for applied Research and Development projects to raise the quality of life in Singapore. The Authority is both the administrator and a recipient of the MND Research Fund.

(b) Accessibility Fund

The Accessibility Fund is used for providing support to the private sector building owners for voluntary upgrading of barrier-free accessibility in buildings with the provision of basic accessibility features.

(c) Green Mark Incentive Scheme (New Buildings)

The Green Mark Incentive Scheme (New Buildings) is used for providing support to encourage developers and owners in the private sector to attain higher Green Mark ratings for their developments by the adoption of Green Building technologies in new construction projects.

(d) Green Mark Incentive Scheme (Existing Buildings)

The Green Mark Incentive Scheme (Existing Buildings) is used for providing support to private developers and building owners to improve energy efficiency of the existing building stock.

(e) Green Mark Incentive Scheme (Design Prototype)

The Green Mark Incentive Scheme (Design Prototype) supports efforts invested into the design stage of green buildings to achieve a higher energy efficient building.

(f) Green Mark Incentive Scheme (Existing Buildings and Premises)

The Green Mark Incentive Scheme (Existing Buildings and Premises) is used for providing support to SME building owners and tenants to embark on environmental sustainability and improving energy efficiency (EE) standards of their buildings and premises.

(g) Sustainable Construction Capability Development Fund

The Sustainable Construction Capability Development Fund has been set up to develop capabilities of the industry in delivering sustainable materials and adopting sustainable construction methods.

(h) Building Retrofit Energy Efficiency Financing Scheme

The Building Retrofit Energy Efficiency Financing Scheme is used for providing financial assistance to the less financially strong building owners, MCST and Energy Services Companies to carry out building retrofits.

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20. Net assets of trust and agency funds (continued)

The following fund was granted by the Productivity Fund Administration Board:

(i) Construction Productivity and Capability Fund

The Construction Productivity and Capability Fund aims to steer the construction sector towards higher productivity and enhanced capability in complex civil engineering and complex building projects.

The following funds were granted by the Singapore Workforce Development Agency with the aim to meet the long term requirements of the building and construction industry for different groups of professionals:

(j) SMU-BCA Advanced Management Programme Course Fee Grant

The SMU-BCA Advanced Management Programme Course Fee Grant provides support to firms for developing the strategic management capabilities of senior executives to build sustainable competitive advantages for their firms.

(k) Workplace Safety and Health Professionals Workforce Skills Qualifications Framework Grant

The Workplace Safety and Health (WSH) Professionals Workforce Skills Qualifications (WSQ) Framework Grant is aimed at building the pool of skilled workers to meet the long term requirements of the WSH professionals by offering Training and Assessment and Assessment-Only-Pathway leading to qualifications under the WSQ system.

(l) Train-and-Place Professional Conversion Programmes Grant

The Train-and-Place Professional Conversion Programmes Grant provides support to skilled Professionals, Managers, Executives and Technicians (PMETS) from other industries who wish to join the construction industry.

(m) Professional Conversion Programme for Sustainable Design Consultants Grant

The Professional Conversion Programme for Sustainable Design Consultants Grant provides support to firms in building up their expertise and capabilities in the area of green building design.

(n) Core Plus Programme Grant

The CORE Plus Programme Grant aims to train a pipeline of skilled construction tradesmen who are looking to upgrade their skills or considering a career in the construction and built environment industry.

(o) CORE Plus + Programme Grant

The CORE Plus + Programme Grant aims to train a pipeline of skilled construction tradesmen who are looking to upgrade their skills or considering a career in the construction and built environment industry.

The following fund was set up using grants provided by Ministry of National Development and Sino-Singapore Tianjin Eco-City Administrative Committee (ECAC):

(p) MND-ECAC Research Fund

The MND-ECAC Research Fund was set up to support Green building research and development projects between Singapore and China in the Sino-Singapore Tianjin Eco-City.

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20. Net assets of trust and agency funds (continued)

The following fund was set up using grants provided by the National Research Fund:

(q) Energy Innovation Research Programme for Building Energy Efficiency Grant

The Energy Innovation Research Programme for Building Energy Efficiency Grant is meant for the administration and managing of the Energy Innovation Research Programme (EIRP) funding in the area of Building Energy Efficiency and to champion and coordinate green building R&D.

Details of the trust and agency funds are set out below and have been prepared from the records of the trust and agency funds and reflect only transactions handled by the Group and the Authority:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
At 1 April	20,057,093	9,544,346
Add: Receipts		
Grants received	90,737,768	84,021,580
Interest income	39,055	16,148
Others	49,568	15,949
	90,826,391	84,053,677
Less: Disbursements		
Grants disbursed to		
- External Parties	(82,950,625)	(56,639,067)
- The Authority	(2,533,024)	(12,497,973)
Secretariat fee paid to the Authority	(7,428,467)	(4,400,000)
Amounts paid as bank charges	(2,960)	(3,890)
	(92,915,076)	(73,540,930)
At 31 March	17,968,408	20,057,093
Represented by:		
Cash at bank	8,904,685	13,977,623
Cash with AGD	9,063,723	6,079,470
Total cash representing net assets as at 31 March	17,968,408	20,057,093

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21. Share capital

	Group and Authority			
	2015/2016		2014/2015	
	No. of Shares	S\$	No. of Shares	S\$
Group and Authority				
1 April / 31 March	1,000	1,000	1,000	1,000

The shares are held by the Ministry of Finance, a body corporate incorporated by the Minister for Finance (Incorporation) Act (Chapter 183).

The holders of these shares are entitled to receive dividends as and when declared by the Authority. These shares carry neither voting rights nor par value.

22. Capital account

The Capital Account comprises the carrying amount of property, plant and equipment transferred from the former Building Control Division of the Public Works Department and the net value of assets and liabilities transferred from the former Construction Industry Development Board when the Authority was established on 1 April 1999.

23. Commitment

(a) Operating lease commitments – as lessee

Non-cancellable operating lease rentals are payable as follows:

	Group and Authority	
	2015/2016 S\$	2014/2015 S\$
Within one year	70,968,157	91,473,832
Between one year and five years	47,117,038	96,978,571
More than five years	65,834,285	67,371,477
	183,919,480	255,823,880

Details of the leases are as follows:

(1) Foreign workers' dormitories

The Group leases a number of dormitories under operating leases. The leases typically run for a period of 3 years, with an option to renew the lease after that date. The leases are sublet by the Group to external parties. The lease and sublease expires in between 2016 to 2018.

(2) Integrated Construction and Precast Hubs

The Group leases land for the development of the Integrated Construction and Precast Hubs to the precast industry. The lease is sublet by the Group to external parties. The lease runs for a period of 30 years and expires in 2043.

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23. Commitment (continued)

(a) Operating lease commitments – as lessee (continued)

(3) Approved Training and Testing Centre

The Group leases land to the industry to set up and operate the training facility for crane operation courses. The lease runs for a period of 3 years.

(4) Office

The Group leases its office/storage space under operating lease for a period of 5 years, with an option to renew the lease after the date.

During the financial year ended 31 March 2016, the Group recognised the following operating lease expenses in the consolidated statement of comprehensive income:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Foreign workers' dormitories	83,661,273	73,718,288
Integrated Construction and Precast Hubs	2,308,695	1,663,908
Approved Training and Testing Centre	465,731	117,790
Office	7,654,591	7,249,978
Rental of IT equipment	682,276	2,064,766
Total	94,772,566	84,814,730

(b) Operating lease commitments – as lessor

The Group leases out the foreign workers' dormitories held under operating leases. The Group also leases out the land for the development of the Integrated Construction and Precast Hubs and for the development of the Approved Training and Testing Centre. The future minimum income receivables under non-cancellable leases are as follows:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Within one year	67,738,550	90,499,750
Between one year and five years	30,717,323	78,125,215
More than five years	67,642,408	69,262,099
	166,098,281	237,887,064

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23. Commitment (continued)

(b) Operating lease commitments – as lessor (continued)

During the financial year ended 31 March 2016, the Group recognised the following operating lease income in the consolidated statement of comprehensive income:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Foreign workers' dormitories	83,677,428	73,701,852
Integrated Construction and Precast Hubs	2,021,221	1,448,179
Approved Training and Testing Centre	465,731	116,482
Total	86,164,380	75,266,513

(c) Capital commitments

Capital expenditure approved by the Group but not provided for in the financial statements is as follows:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Amount approved and committed	6,097,823	34,951,422
Amount approved but not committed	124,000	431,000

(d) Other commitments

The Authority had committed to provide a fund of S\$2,800,000 to BCA Centre for Sustainable Buildings Ltd (the "subsidiary") as funding of the operational cost of the subsidiary from the financial years ended 2013 to 2019. As at 31 March 2016, S\$1,800,000 has not been drawn down by the subsidiary.

24. Related party transactions

In addition to the related party information disclosed elsewhere in the financial statements, significant transactions between the Group and related parties took place at terms agreed between the parties during the financial year. The balances are unsecured, interest-free, repayable on demand and to be settled in cash, unless otherwise stated.

Transactions with government-related entities

The Singapore Government has control over the Authority, as well as Ministries, Organs of States and other Statutory Boards.

Nature and amount of individually significant transaction

The Authority has funded a total amount of S\$4,138,528 from its accumulated surplus for the development of the Tuas Concrete Site, which is an infrastructural project under the Ministry of National Development ("MND"). The project was completed during the year and was transferred to MND as contribution to the Government.

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24. Related party transactions (continued)

Collectively, but not individually significant transactions

The Authority is a Statutory Board under the Ministry of National Development ("MND"), championing the development of an excellent built environment for Singapore. "Built environment" refers to buildings, structures and infrastructure in our surroundings that provide the setting for the community's activities.

The Authority charges fees for the services provided. Collectively, income generated from the fees received from and provision of training and other services to Ministries, Organs of States and other Statutory Boards constitute 8% (2014/2015: 7%) of the total operating income. Purchase of supplies and services from Ministries, Organs of States and other Statutory Boards constitute 35% (2014/2015: 37%) of the total operating expenditure.

These transactions are conducted in the ordinary course of the Authority's business on terms comparable to those with other entities that are not government-related.

Transactions with other related parties

During the financial year, the Group entered into the following transactions with related parties (i.e. entities in which the Board members have control or joint control) which are not government-related entities:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Advertisement licence fees	8,692	9,027
Quality assessment and certification fees	820,587	617,418
Course fees	388,134	357,139
Trade test fees	443,156	888,965
Staff training expense	(35,986)	(25,969)
Purchase of office building	(296,642)	(882,673)
Site office and improvement expense	(12,000)	—

Transactions with key management personnel

Key management personnel of the Group are those persons having the authority and responsibility for planning, directing and controlling the activities of the entity. The Board members and executive key management are considered as key management personnel of the Group. Executive key management comprises Chief Executive Officer ("CEO"), Managing Director ("MD"), Deputy CEOs, Executive Director, Group Directors (including Acting Group Director), Senior Technical Director and Deputy MD.

The compensation to key management personnel is as follows:

	Group and Authority	
	2015/2016	2014/2015
	S\$	S\$
Short-term benefits	6,371,567	6,107,859
CPF contributions	219,628	179,390
Post-employment benefits	889,469	25,390
Total	7,480,664	6,312,639

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25. Fair values of financial instruments

The fair value of financial instruments is the amount at which the instrument could be exchanged or settled between knowledgeable and willing parties in an arm's length transaction, other than in a forced or liquidation sale.

Financial instruments whose carrying amount approximates fair value

Management has determined that the carrying amounts of trade and other receivables, amounts due from its subsidiaries, cash and bank balances, trade and other payables reasonably approximate their fair values because these are mostly short-term in nature. The carrying amounts of the fixed deposits approximate their fair value as the implicit interest rate are based on the prevailing market interest rate.

26. Financial risk management objectives and policies

The Group and the Authority is exposed to financial risks arising from its operations and the use of financial instruments. The Group has documented financial risk management policies. These policies set out the Group's overall business strategies and its risk management philosophy. The Group's overall financial risk management programme seeks to minimise potential adverse effects of financial performance of the Group. Such written policies are reviewed annually by the management and periodic reviews are undertaken to ensure that the Group's policy guidelines are complied with. The key financial risks arising from the Group's financial instruments are liquidity risk and credit risk.

The Group does not hold or issue derivative financial instruments for trading purposes. The board reviews and agrees policies for managing each of these risks and they are summarised below:

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting financial obligations due to shortage of funds. The Group's exposure to liquidity risk arises primarily from mismatches of the maturities of financial assets and liabilities. The Group manages the liquidity risk by maintaining sufficient cash and cash equivalents to enable them to meet their normal operating commitments.

As at 31 March 2016 and 2015, other than the non-current fixed deposits, the financial assets (Total loans and receivable in Note 11 to the financial statements) and financial liabilities (Total financial liabilities carried at amortised cost in Note 15 to the financial statements) have maturity dates of no more than twelve months.

The non-current fixed deposits as at 31 March 2016 have tenors of 18 months (2014/2015: 18 months) and will mature in the year ended 18 September 2017 (2014/2015: 31 March 2017).

Credit risk

Credit risk is the risk of loss that may arise on outstanding financial instruments should a counterparty default on its obligations. The Group's and the Authority's exposure to credit risk arise primarily from trade and other receivables. For other financial assets (including cash and cash equivalents), the Group and the Authority minimise credit risk by dealing exclusively with high credit rating counterparties.

Before accepting any new customer, the Group assesses the potential customer's credit quality and defines credit limits by customer. A majority of the Group's receivables that are neither past due nor impaired are credit worthy counterparties with good track record of credit history.

In determining the recoverability of a receivable, the Group considers any change in the credit quality of the receivable from the date credit was initially granted up to the end of the reporting period. If the financial condition of the customers were to deteriorate, the Group would be required to record additional impairment losses. Credit risk is limited due to management's on-going evaluation of the credit worthiness of the Group's customers and given that the majority of the Group's trade receivables are within their expected cash collection cycle.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2016

26. Financial risk management objectives and policies (continued)

Credit risk (continued)

Credit risk concentration profile

The Group determines concentration of credit risk by monitoring customer profile of its trade and other receivables on an ongoing basis.

At the end of the financial year, approximately 22% (2014/2015: 48%) of the Group's trade and other receivables were due from 2 (2014/2015: 3) major customers with a total balance of S\$2,801,114 (2014/2015: S\$8,087,157) located in Singapore.

Financial assets that are neither past due nor impaired

Trade and other receivables that are neither past due nor impaired are creditworthy debtors with good payment record with the Authority. Cash and cash equivalents are placed with reputable financial institutions with high credit ratings and no history of default.

Financial assets that are either past due or impaired

Information regarding financial assets that are either past due or impaired is disclosed in Note 11 to the financial statements.

27. Capital management

The capital structure of the Authority consists of share capital, capital account and accumulated surplus. The Authority manages its capital to ensure it will be able to continue as a going concern and in accordance with the Capital Management Framework formulated by the Ministry of Finance. The framework sets out the basis of equity contribution by the Government to the Authority and the principle of dividend distribution to the Government. The Authority's overall strategy remains unchanged from the previous financial year.

28. Authorisation of financial statements for issue

The financial statements of the Authority and its subsidiaries for the year ended 31 March 2016 were authorised for issue by the Board Members of the Authority on 15 July 2016.



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

52 Jurong Gateway Road
#11-01, Singapore 608550

