



The Homes We Envision

HDB Annual Report 2019/ 2020



The Homes We Envision

What makes a home? Home is laughter shared, memories made, and traditions passed across generations. Home is solace and stability—a space where you return to recharge and retreat. An HDB home has nature at its doorstep, and will be smart-enabled to help improve daily living. At HDB, we continually strive to create the best possible homes for Singaporeans, and make their dream of owning a home they envision a reality.



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A professional portrait of Mr Ng Chee Meng, the Chairman of HDB. He is a middle-aged man with grey hair and glasses, wearing a dark grey suit, a white shirt, and a patterned tie. He is smiling and looking towards the camera. The background shows a modern residential area with several multi-story apartment buildings and greenery.

Chairman's Statement

For six decades, HDB has steadfastly built quality homes and vibrant heartland communities for Singaporeans. Today, 80% of Singapore's population live in flats, and about 9 in 10 of them own their homes, cementing HDB living as a quintessential part of the Singaporean way of life.

This Financial Year (FY), HDB continued our mission to fulfil Singaporeans' housing aspirations. We formulated and refined our policies to meet changing needs, improved residents' living environments, and forged strong community ties.

Affordable and Accessible Homes

HDB serves a very diverse population with varying housing needs, aspirations, and lifestyles. As such, the policy enhancements we made this year were aimed at helping even more Singaporeans achieve their home ownership dreams. For example, the Enhanced CPF Housing Grant and raised income ceilings improved housing affordability and accessibility, while a new sales mode gave buyers quicker access to a new flat all year round.

Also, among the new measures are targeted assistance to supplement the retirement adequacy of seniors and to make housing more accessible for unmarried parents and second-timer families.

Quality, Future-Ready Homes

As the largest housing developer in Singapore, HDB plays an important role in developing towns that are eco-friendly and smart to support the nation's sustainable development goals.

The HDB Green Towns Programme, which we announced this FY, aims to bring sustainable and green living to all existing HDB towns by 2030, through large-scale implementation of green features. Separately, our SolarNova programme has also accelerated solar adoption across the whole of Government. Having already surpassed the previous solar target of 220 megawatt-peak (MWp), we have set a new solar target of 540 MWp by 2030 that is equivalent to powering about 135,000 4-room flats with clean energy and could potentially reduce carbon emissions by 324,000 tonnes per year.

Existing flats and towns will continue to undergo upgrading. This FY, we enhanced our popular Home Improvement Programme (HIP) to include better quality fittings and finishes, such as improved water-efficient sanitary fittings for bathrooms. HDB also announced the fourth batch of towns—Bukit Merah, Queenstown, Choa Chu Kang and Ang Mo Kio—to be systematically and comprehensively transformed under the Remaking Our Heartland programme. Residents and community stakeholders can look forward to opportunities to co-create plans for these towns, as part of the Singapore Together movement.

A Sense of Ownership

Beyond bricks and mortar, our flats are endearing homes because of the community that is thriving within the neighbourhoods. For many years now, HDB has been actively collaborating with partners and residents to build friendships and community ties, so as to boost the vibrancy of the living environment. This FY, we consolidated our ground-up place-making efforts, namely the HDB Friendly Faces, Lively Places Fund and Build-a-thon, and re-branded them under the Lively Places Programme.

Under the Lively Places Programme, residents can obtain up to \$20,000 in funding to realise programmes and activities that can enliven their community spaces. In this FY alone, we received more than 80 applications to initiate community-driven place-making projects. We disbursed close to \$220,000 to support these efforts in enlivening the community spaces and promoting community bonding. A high-tech hydroponics community garden and a void deck that has been transformed into an Instagram-worthy hang-out spot are some of the projects that have drawn residents together.

Keeping Faith

Over the years, HDB has undergone continuous innovation and transformation to consistently deliver quality and excellence in many key areas, from building affordable homes to going the extra mile in delivering services to our customers.

As a testament to our ongoing efforts, the Public Service Division had recently awarded HDB the Transformative Agency of the Year Award. We were chosen for having innovatively transformed our services, operations, functions, and policies to put Singaporeans and their housing needs at the heart of all we do.

This was a milestone year for HDB as we marked our 60th anniversary. The COVID-19 pandemic has, however, shown us that even the best laid plans can be disrupted by unforeseen challenges. It has also uncovered opportunities in designing and planning future homes, especially in the areas of health and wellness. With our fingers on the pulse of the built environment, HDB will remain resilient and focused on our goal of developing the best possible homes for Singaporeans.

I would like to thank the HDB Board Members and the Management for their strong leadership, and also extend my heartfelt appreciation to all our staff for their continued dedication to serving the nation. It is heartening to know that we can rely on our strong fundamentals—an agile workforce, bold leadership, and clear sense of collective purpose—to see us through challenging times like these.

HDB will move forward with confidence to overcome the challenges, and continue to deliver on our promise to provide affordable and quality homes that Singaporeans will cherish.



Mr Bobby Chin Yoke Choong
Chairman



CEO's Word

Dr. Cheong Koon Hean
Chief Executive Officer

The HDB story began in 1960, when we were set up to address the acute housing needs of a young nation. Today, as Singapore's largest housing developer, we have come a long way from providing basic housing to transforming the living environment and skyline here through public housing.

Cherished Homes for Life

Through the decades, a key priority for HDB has been to provide quality and affordable homes for Singaporeans at every stage of their lives. In this FY, we delivered on our building programme as planned, launching about 14,500 Build-to-Order (BTO) flats and 7,500 balance flats under the Sale of Balance Flats exercises and Re-Offer of Balance Flats exercise. We also introduced a new sales mode to help buyers get a home quicker, when they book a flat from a pool of unselected flats at any time of the year.

To make public housing even more affordable and accessible, we raised the monthly household income ceiling from \$12,000 to \$14,000 for families and from \$6,000 to \$7,000 for singles. We also introduced a new Enhanced CPF Housing Grant (EHG), which replaced the Additional CPF Housing Grant and the Special CPF Housing Grant. The EHG provides up to \$80,000 in housing grants for eligible first-timer families, when they buy a new or resale flat of any flat type, in any location. First-timer singles can also enjoy up to \$40,000 in housing grants under the EHG. With more choices, buyers stand to benefit from this grant.

We continued to refine our policies to meet diverse housing needs. The Silver Housing Bonus was simplified and enhanced to further help elderly households supplement their retirement income when they unlock the value of their property by moving to another 3-room or smaller flat. Unmarried parents aged 21 and above can now buy a 3-room flat in a non-mature estate, compared to only a 2-room flat previously. By expanding their housing options, we hope to support them in their housing needs, providing their children with a stable home to grow up in.

Towards Better Public Housing

Even as we delivered on our building programme, we have not let up in our efforts to design, plan and build modern, self-sufficient towns and estates. Guided by our Roadmap to Better Living, we continued to create well-designed, sustainable, and community-centric homes that are relevant to Singaporeans' lifestyle needs.

Recognising the evolving tastes of home owners, especially in the last 10 years, HDB introduced BTO flats with more modern and better quality fittings this FY. The improvements include water-efficient bathroom sanitary fittings, laminated timber doors and sleeker steel entrance gates with thumb-turn knobs.

HDB also continued to pursue innovative solutions to ensure our towns remain highly liveable and sustainable.

This FY, we achieved a breakthrough with the setting up of the largest 3D concrete printer in South-east Asia. Successful printing trials have produced room-sized volumetric components in just 13 hours. Building on these efforts, HDB will look into technologies to enhance the print quality and automate the end-to-end processes from printing to finished product. This will help to improve the overall productivity and reduce the number of workers needed to produce room-size prefabricated volumetric components.

As we strive to build greener and safer homes for Singaporeans, we have also embarked on other research collaborations with industry leaders and partners. These include a collaboration with Evonik (SEA) Pte Ltd to study how to mitigate heat gain in HDB buildings and another with V-Key Pte Ltd to develop the infrastructure that can support a variety of smart home solutions in HDB's smart-enabled flats.

People at the Heart

A vibrant, cohesive community is the lifeblood of our towns, and forging strong ties among neighbours is key to our mission. This FY, we continued to create myriad opportunities for residents to mingle and bond, such as events held during HDB Community Week 2019 as well as MyNiceHome Roadshows. Residents who wish to initiate community projects can tap on the re-branded Lively Places Programme for funding, or participate in other outreach activities to promote gracious, harmonious, and responsible heartland living under the Friends of Our Heartlands (FOH) network.

While the COVID-19 pandemic has kept us physically apart and changed the way we interact with one another, we continued to engage with our residents by moving our roadshows online, ensuring they are still able to learn more about their future homes and pick up useful information on HDB living. Even as we continuously innovate and drive our digital transformation, we will ensure that our residents remain at the heart of it all.

2020 is a significant year for HDB as it marks our 60th anniversary—60 years of planning, designing, and building quality homes for Singaporeans. Behind the scenes, countless people—from staff to residents—have worked hard in helping us achieve our vision of world-class public housing. From HDB staff Shimin, who guides rental tenants to progress to a home of their own, to 15-year-old community volunteer Dhanya who conducts eco-tours around Punggol for her schoolmates, they tell us of the homes they envision, may it be within the four walls of the HDB flat, or the world beyond. You can read some of their stories in this year's Annual Report.

As we turn the page to a new chapter and look beyond 60, HDB reaffirms our commitment to push the boundaries to take public housing to the next level and provide the best homes for Singaporeans. We will continue to seek out new and bold ideas, innovate and improve, to create homes for life that Singaporeans will cherish and be proud of.

A Place to Call Their Own

After many years of renting a flat from HDB, Mr Lee finally felt ready to buy one of his own with his wife and young child. He had started his own business after working hard in various odd jobs. “He said that another family might need the rental flat more urgently than them,” Estate Manager Tan Shimin recalls. “His never-give-up spirit and consideration for the needs of others touched me deeply.”



The family is now a step closer to achieving their home ownership dreams, as Shimin has been working hand-in-hand with them on their housing budget and flat options, and helping them to navigate the processes involved, from application to key collection.

Dedicated and Holistic Support

Shimin is a member of the Home ownership Support Team (HST), formed in 2019 to help rental households progress towards home ownership. HDB recognised that offering personalised support and a human touch can make a big difference to these families.

“People enter rental housing for various reasons, such as financial difficulties due to loss of employment, or unexpected life events like divorce or the sudden loss of a family member,” Shimin says.

As each family’s circumstances are unique, HST officers seek to identify the targeted help they need, and work closely with partners such as the Ministry of Social and Family Development, Ministry of Manpower, Community Link, and Family Service Centres, to offer solutions.

“If we don’t address the fundamental issues, these problems might persist even after the family moves into their own flat,” Shimin explains.

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– Estate Manager Tan Shimin

A Personal Connection

She understands the challenges all too well, having personally walked the journey from living in a rental flat in Circuit Road to achieving home ownership. “The rental flat was a safe space where my family could be together under one roof. Before that, I was staying apart from them and moving from place to place,” she reminisces.

Shimin was a temporary staff at HDB during the time that her family decided to take the leap into home ownership, and they received valuable advice on how to do so from her colleagues at Tampines Branch. She describes the moment that her family first stepped into their own home, as surreal.

“My mother simply said ‘Finally, we have our own flat’, but I understood the magnitude of her words and how much hard work it took for us to get there,” she recalls.

Achieving home ownership represented a new beginning for Shimin and her family, something she hopes for the rental households she helps as well.

“I have met many amazing rental tenants in the course of my work. They are resilient and undefeated by their challenges in life. Instead, they persevere to resolve them, such as working hard to rebuild their finances,” Shimin shares.

“Having a place to call their own can give them a fresh start and uplift their lives. A home also represents hope. The HST will do all we can to help them achieve this,” she smiles.

Over the next few years, the HST aims to reach out to 1,000 rental households.

A HOME FOR LIFE

For many Singaporeans, an HDB flat is a cherished home for life. This FY, HDB rolled out several initiatives to help even more buyers—from first-timers to the elderly—realise their home ownership aspirations and dreams.

In Financial Year (FY) 2019, HDB launched 4 Build-To-Order (BTO) exercises, comprising 15 projects with 14,524 flats across mature and non-mature towns. These include the first batch of flats in Tengah's Garden district.

In addition, HDB offered 6,867 flats for sale in 2 Sale of Balance Flats (SBF) exercises, as well as 716 flats under a Re-Offer of Balance Flats (ROF) exercise. A new sales mode, open booking of flats, was introduced in June 2019 to help buyers get their homes faster. This provides flat buyers a new option to book a flat as early as the next working day, from a pool of unselected flats anytime throughout the year.

A total of 13,093 flats were completed in this FY. Of these, 12,301 were BTO units, including HDB's first 2 projects in Bidadari—Alkaff Vista and Alkaff LakeView. Another 489 units under the Selective En bloc Redevelopment Scheme (SERS), and 303 rental units were also completed. As of 31 March 2020, 72,121 BTO and SERS flats, and 1,432 rental flats were under construction.

Helping Fulfil Housing Aspirations

To make flats more affordable, HDB introduced the Enhanced CPF Housing Grant (EHG) in September 2019. The grant, which replaces the Additional CPF Housing Grant and Special CPF Housing Grant, benefits more first-timers as it

is availed to those buying a new or resale flat of any flat type and in any location. Eligible families can receive up to \$80,000 in housing grants if the lease of the flat covers the buyers and their spouses to the age of 95. The grant amount would be pro-rated otherwise. Singles aged 35 and above who are eligible can receive up to \$40,000 in housing grants.

The monthly household income ceiling was raised with effect from 11 September 2019 to give more citizen households access to affordable housing.

- From \$12,000 to \$14,000 for eligible families buying a new flat, or a resale flat on the open market with the CPF Housing Grant
- From \$6,000 to \$7,000 for eligible first-timer singles aged 35 and above buying a 2-room Flexi flat from HDB, or up to a 5-room resale flat on the open market with the CPF Housing Grant

The income ceiling for a citizen family buying an Executive Condominium unit from property developers was also increased from \$14,000 to \$16,000.

HDB also helped young couples get their first homes sooner, by reducing the BTO balloting timeline from 6 weeks to 3 weeks with effect from the May 2019 BTO exercise.



HDB provides various grants and schemes to help Singaporeans buy a home for life

Buying a Home for Life

To provide more flexibility for Singaporeans to buy a home for life while ensuring that they will have adequate CPF savings for retirement, HDB worked with MND, MOM and CPF Board to update the rules on CPF usage and HDB housing loans in May 2019. The updated rules take into account the changing needs and higher life expectancy of Singaporeans. Under the new rules, home buyers can draw up to the maximum amount from their CPF savings and obtain the maximum HDB housing loan if the remaining lease of the home covers the youngest buyer until the age of 95. The amount will be pro-rated for those who buy a home that does not meet the criteria.

The new EHG also included a similar feature to encourage buyers to choose a flat that can cover them and their spouse to the age of 95.



HDB offers seniors various housing and monetisation options to meet their needs

Supporting Vulnerable Families

During the 2020 Committee of Supply debate, it was announced that unmarried parents aged 21 and above can buy a new 3-room flat in non-mature estates, compared to only a 2-room flat in non-mature estates and resale flats previously. By expanding their housing options, we hope to support them in their housing needs, and provide their children with a stable home to grow up in.

In May 2019, HDB extended the coverage of the \$15,000 Step-Up CPF Housing Grant (SUHG). Owners of subsidised 2-room flats in non-mature estates can now choose to buy a 3-room resale flat in non-mature estates with the grant. Previously, these families were only eligible for the grant when they bought a 3-room new flat in non-mature estates. The SUHG was also extended to second-timer families living in public rental flats, when they buy a 2-room or 3-room, new or resale flat in non-mature estates.

HDB's dedicated Home ownership Support Team (HST) was set up to offer closer and more personalised guidance for rental families who are ready for home ownership. This team works with families to understand their home ownership aspirations and advises them on their housing budget and options, grants and schemes available, as well as guides them through the flat-buying process. As of March 2020, HST has reached out to over 200 families, on track towards the target of 1,000 families by 2024.

Helping Seniors Age with Confidence

HDB enhanced two key schemes—the Silver Housing Bonus (SHB), and the Lease Buyback Scheme (LBS)—to give seniors greater financial assurance and supplement their income in retirement. The SHB, a cash bonus given to eligible seniors, was increased from \$20,000 to \$30,000 when they right-size to a 3 room or smaller flat. They must also use their sales proceeds to make a one-time top-up of \$60,000 to their CPF Retirement Account and join CPF LIFE. Previously, seniors needed to sell a larger flat, and might have to make a second top-up depending on their remaining proceeds and RA balances, in order to qualify for the SHB.

The maximum Lease Buyback Scheme (LBS) bonus was also increased. Previously, owners of 3-room or smaller flats, 4-room flats, and 5-room or larger flats could get a maximum cash bonus of \$20,000, \$10,000, and \$5,000 per household, respectively, if they sold the tail-end of their flat's lease to HDB. This FY, the maximum bonus quantum was increased by 50% to \$30,000, \$15,000 and \$7,500 respectively.

To help seniors age in place comfortably, HDB together with MND and MOH, announced a new typology for seniors where housing will be integrated with care services. For the pilot development in Bukit Batok, the block will be designed with large communal spaces on every floor, and flats will come with elder-friendly fittings, larger bathrooms, and other features to accommodate those with mobility needs.

Improving Flat Designs

As part of continual efforts to build well-designed homes that meet changing lifestyle needs, HDB announced that flats sold from the February 2019 BTO sales exercise will include new and improved fittings. These include laminated timber doors, steel entrance gates to replace wrought iron ones, and sanitary fittings of better finishes and quality.

In addition, HDB introduced 3-room flats with an integrated kitchen/ utility space. The flexible layout makes it easier for home owners to configure the area according to their tastes and needs. Seniors buying short-lease 2-room Flexi flats with flexible space, can also choose to take up an Optional Component Scheme (OCS) package that includes a folding door, amongst other elderly-friendly fittings, enabling them to use the space to accommodate a caregiver or for entertainment when family members or friends visit.



Constructing A World of Possibilities

At first glance, with its concrete walls and floor, the room looked like any other newly-constructed room of a Build-To-Order (BTO) flat. It is, however, no ordinary room, as it was printed by the largest 3D concrete printer in South-east Asia, at HDB's Centre of Building Research (CBR).

Senior Engineer Lim Emiko (right) and Engineer Chew Jia Han (left) standing inside HDB's first 3D-printed room

A Game Changer

The foray into 3D printing is part of HDB's ongoing efforts to embrace game-changing construction innovations, such as Prefabricated Bathroom Units and Prefabricated Prefinished Volumetric Construction (PPVC), in its continual quest to enhance construction productivity and build better quality homes.

Construction using 3D concrete printing combines digital Building Information Modelling (BIM) technology with additive manufacturing techniques, a process in which objects are constructed by adding layers of materials. Leading HDB's 3D concrete printing initiative is a team from HDB's Building and Research Institute, which includes engineers Lim Emiko and Chew Jia Han.

"3D concrete printing lets us create objects with intricate details or geometric forms that would be near impossible with conventional precast construction methods," explains Emiko. "The entire process is highly automated, and could help us achieve even greater construction productivity."

Unlocking the Potential of 3D Concrete Printing

The technology, however, is still emerging in terms of its application in concrete building construction. "When it comes to 3D concrete printing, we are dealing with many unknowns," Jia Han shares. "A lot of factors and parameters can affect the entire printing session. For instance, the printer nozzle can get clogged, and we would need to configure the machine before printing can continue."

Unfazed by the challenges, the team persevered and its efforts eventually paid off—after many printing trials, HDB's first 3D printed room was successfully completed in just 13 hours. Including the insertion of reinforcement bars, the process took about 6 days. "All of us breathed a huge sigh of relief

when the printing was completed," Jia Han says. "It's something that has never been done before, and we are proud to be part of this pioneer team."

The free-form production of concrete elements opens up a whole new world of possibilities. For a start, HDB will trial the use of 3D concrete printing for precinct design features at selected Build-To-Order projects in Tengah and Bidadari.

"Free-form and bespoke designs in landscape furniture and architectural features can offer greater variety in the look, feel, and texture of the housing developments," Emiko explains.

Homes of the Future

Building on these efforts, HDB's research will expand to other areas to enhance the printer's capabilities, such as using multiple nozzles to increase printing productivity, and developing a robotic system to place steel reinforcements into the concrete during the printing process for structurally sound construction. To help HDB best leverage the potential of this advanced technology, the team constantly keeps itself up-to-date with the latest research, and learning from experts worldwide.

"This technology can potentially change the way we build homes, and this successful trial serves as a prelude to more exciting things to come," Jia Han smiles. "At the end of the day, our goal is always to build safer, smarter, and better homes for Singaporeans."

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- Engineer Chew Jia Han

FUTURE-READY TOWNS

HDB continued to embrace innovation and sustainability in the way it designs and builds homes, to achieve its goal of creating vibrant and liveable towns for generations to come.

Greening through Innovation

HDB continued to explore innovative solutions to ensure its towns remain highly liveable and sustainable. The HDB Green Towns programme, a 10-year plan to make all HDB towns more sustainable and liveable by 2030, was announced in March 2020. The programme focuses on reducing energy consumption, recycling rainwater and cooling HDB towns to improve residents' quality of life.

While some of the initiatives are new, for example cool coating on buildings, others leverage HDB's existing capabilities, such as harnessing solar energy. HDB is the largest driver for installation of solar photovoltaic (PV) systems in Singapore, and in FY19, it awarded the fourth SolarNova tender to install solar PV systems at 1,218 HDB blocks and 49 government sites. HDB also called the fifth tender covering systems across 1,154 HDB blocks and 46 government sites. These programmes will reap a solar PV capacity of 130 megawatt-peak (MWP) combined. Having already surpassed the previous solar target of 220 MWP, HDB increased its solar target to 540 MWP by 2030. The step up is part of HDB's commitment to generate more clean energy and help achieve the new national solar target of at least 2GWp by 2030.



Over the years, HDB has implemented various innovative ways of weaving greenery into our estates and towns

Realising Towns of the Future

Plans for Bidadari estate are gradually taking shape with the completion of its first housing parcels, Alkaff Vista and Alkaff LakeView. Residents can look forward to the new Bidadari Park, a multi-agency collaboration with the National Parks Board (NParks), National Heritage Board (NHB) and PUB, Singapore's National Water Agency. The regional park will feature wooded experiential trails, open lawns, a Heritage Walk that links Woodleigh MRT station to a new Memorial Garden, and a new Alkaff Lake that is inspired by the former Alkaff Lake Garden.

In Punggol, the remaining two housing projects in Punggol Point District were launched this FY. The design of these new housing projects was inspired by the old Ponggol Zoo and fishing villages that once occupied the area. Drawing inspiration from natural habitats, the housing projects will be designed with thematic zones and creative landscaping to foster a strong sense of place and identity.



Bidadari is being transformed into an urban oasis



Garden Vale @ Tengah, the first housing project launched in Garden District, will feature blocks with staggered heights, creating the impression of valleys nestled amid garden spaces

Nature will also play a big part in the plans for Tengah, our newest HDB town. All five housing districts in Tengah will incorporate biophilic design in their landscapes, so residents will enjoy a greener, more liveable environment, and a strong sense of place and well-being. Following the launch of the first parcel in Plantation District in November 2018, three more parcels in Plantation District and the first two parcels in Garden District have also been launched. In line with the concept of Tengah, Garden District will see greenery and water features intertwine seamlessly with housing. A key feature of the district will be the Garden Farmway, which meanders through the housing precincts. With recreational, social and communal facilities lining both sides, the farmway will serve as a green recreational corridor linking the precincts in Garden District together.

Innovative Partnerships

HDB embarked on several research collaborations with industry partners, leveraging their expertise to further enhance HDB's construction capability and capacity.

It achieved a major breakthrough with the successful trial of a 3D-printed volumetric component. At about the size of an HDB room, it was printed with the largest 3D concrete printer in South-east Asia, set up at the HDB Centre of Building Research. The success of this 3D concrete printing trial opens up new design possibilities, such as unconventional curvilinear features, which were previously limited by traditional precast building methods. More research is being conducted to develop improved materials that can be used for such advanced manufacturing methods.

HDB is also studying ways to leverage Artificial Intelligence (AI) to enable continuous and real-time monitoring of hazards and automatically detect high-risk situations in construction sites. The research seeks to develop and test-bed a new tool that integrates CCTV footage with an AI system, that can automatically identify safety lapses and detect potentially unsafe behaviours in real time. At completed projects, façade inspections could get smarter with the future adoption of drones and visual analytics. Research is underway to study how technology can be further tapped to provide greater visibility, inspection accuracy, and safety, while ensuring privacy of residents.

To help mitigate the effects of rising temperatures due to climate change, HDB entered into a new research collaboration this FY to study how high-performance insulation materials can reduce the heat transmitted into HDB buildings, to enhance the thermal comfort for residents.



HDB has set up the largest 3D concrete printer in South-east Asia at the HDB Centre of Building Research



With a lush rooftop garden right at their doorstep, residents of Alkaff Vista can relax in a garden-like setting

Boosting Construction Productivity

With the implementation of innovative technology and initiatives, HDB achieved an overall productivity improvement of 21.1%, compared to the base year of 2010.

To reduce manpower and time needed to construct HDB projects, HDB scaled up the implementation of the Design for Manufacturing and Assembly (DfMA) technologies, which moves more work from on-site locations to off-site factory environments.

Prefabricated Bathroom Units (PBU) were implemented in all new flats launched from Calendar Year (CY) 2019 onwards, with the bathroom units pre-assembled off-site complete with sanitary finishes.

The use of Prefabricated Prefinished Volumetric Construction (PPVC) was expanded to 35% of new flats launched in 2019. HDB's first PPVC project at the Valley Spring @ Yishun BTO project has been completed on time, achieving manpower savings of 37% compared to conventional construction.

Driving Sustainable and Smart HDB Towns

HDB also leveraged technology in its push towards creating smart towns and smart-enabled homes. This FY, HDB embarked on a research collaboration under the Cool Ideas Enterprise initiative, to study how smart home solutions across different commercial providers can be installed by residents in a convenient, secure and seamless manner, via smart distribution boards.

To support Singapore's Smart Nation drive, HDB announced plans to install around 6,000 Digital Display Panels (DDP) at common areas such as inside lifts and lift lobbies on the ground floor. These panels will help residents receive community and municipal messages in a more timely way.

Upgrading Homes and Towns

HDB's renewal programmes remain on track as part of continual efforts to rejuvenate homes and towns. Since the launch of the Remaking Our Heartland (ROH) programme in 2007, HDB has embarked on comprehensive rejuvenation works in 9 towns and estates, including Dawson, Yishun, and Jurong Lake area. In March 2020, HDB announced that Bukit Merah, Queenstown, Choa Chu Kang and Ang Mo Kio will also benefit from ROH.

Upgrading works under the Home Improvement Programme (HIP) were completed for 54 HDB precincts, helping over 42,700 households address common maintenance issues in their flats. HDB announced that the first batch of flats, comprising about 55,000 flats built between 1987 and 1997, will be offered the extended HIP. In March 2020, the HIP package was enhanced to include better quality fittings and finishes, such as improved water-efficient sanitary fittings for bathrooms. New improvement items, such as a retractable clothes drying rack, will also be offered under the package.

As of FY19, about 146,400 households have opted for the Enhancement for Active Seniors (EASE) programme as part of HIP. EASE aims to create a safer and more comfortable living environment for seniors through the installation of elderly-friendly fittings at subsidised rates. Close to 80,000 households have applied for EASE directly since its pilot launch in July 2012.

The Neighbourhood Renewal Programme (NRP) focuses on precinct and block-level improvements. In the FY 19 NRP projects were announced and 9 NRP projects were completed. This brings the total number of completed projects to 82 since the programme was implemented in 2007.

The Lift Upgrading Programme (LUP) has been implemented at over 5,100 blocks to date, bringing convenience to residents with direct lift access to their homes. Another 10 blocks are undergoing construction as of end March 2020.

Managing Commercial Properties

As of FY19, HDB manages 17,811 commercial properties, with average occupancy rate remaining high at 96%. A total of 461 commercial units were allocated and 62 shops/eating houses were completed.

In light of the COVID-19 pandemic, HDB extended assistance in the form of rental flexibility for commercial tenants, and a one-off rental rebate equivalent to half-month rental in March 2020 for qualifying commercial tenants.

HDB and Enterprise Singapore launched the Heartland Enterprise Upgrading Programme (HEUP) to accelerate precinct rejuvenation and the transformation of heartland enterprises. Under the programme, more co-funding support will be provided for projects such as common area upgrading, place-making activities, and capability-building at the precinct level. HDB is also reviewing the Revitalisation of Shops (ROS) scheme, with a view to allow upgrading works to proceed if at least 75% of shop owners are supportive of the upgrading proposal, instead of the 100% support currently required.

HDB's shopping complexes are upgraded to ensure that they remain vibrant. Some of the works this FY include converting Admiralty Place into an air-conditioned mall, and the completion of improvement works at Loyang Point, such as the construction of a carpark shelter. Shoppers at Pasir Ris West Plaza and Sunshine Place can also expect new food and beverage shops, construction of shelters for community spaces and replacement of escalators.

Friends of Our Heartlands

"When I was a young boy living in Punggol, I had to fill buckets with water from the kampung's communal well, before lugging them home to be used for bathing or general washing," Peter Lo tells his young audience.



Dhanya (left) and Peter (right) are volunteer eco-guides for HDB's 'Friends of Our Heartlands' (FOH) network

"Today, we can easily get water from taps in our homes. And thanks to green innovations, the taps in some housing projects in Punggol can even help us conserve water," he continues.

Peter has been a volunteer HDB eco-guide for 6 years now, conducting tours in Punggol for hundreds of students, where he explains to them the town's myriad eco-features while dishing out titbits about its history. "By sharing these stories, I hope the students will develop a greater appreciation for Singapore's transformation and progress," he explains.

Inspiring Change

At 74 years old, Peter is one of the most senior contributors in HDB's 'Friends of Our Heartlands' (FOH) network, which draws passionate volunteers like him to help build strong communities in the heartlands through HDB's wide range of community building and volunteering programmes. Since its launch in 2017, the FOH network has drawn close to 7,900 volunteers and reached out to more than 118,000 residents across Singapore.

So passionate is Peter about volunteering that he happily travels from his home in Sembawang to Punggol, where he brings groups on 3-hour-long walks around the town. The sprightly senior laughs off concerns that the tours might be too strenuous for him, calling them a "good exercise".

Peter has always taken an interest in caring for his living environment, and recalls with pride an ongoing ground-up recycling initiative in his neighbourhood which he spearheaded 11 years ago. "I have seen for myself the amazing things that can be achieved when the community comes together," he says.

"I became an eco-guide because I hope to inspire the students to care for their communities and make their own positive impact on their living environment to benefit future generations."

Change Makers of Tomorrow

The FOH network also attracts young volunteers like 15-year-old Yandapalli Sri Dhanya. Like Peter, Dhanya conducts eco-tours around Punggol, but mainly for her peers from St. Margaret's Secondary School.

"I wanted to spread awareness about eco-friendly living within our school, especially on how local communities can make a difference in conserving the environment," Dhanya shares. "In doing so, I hope more people will play their part to reduce the impact of climate change."

Dhanya has seen first-hand the positive impact of volunteering—one of her friends said that the eco-tour had inspired her to start leading a greener lifestyle. The same friend also started an Instagram page to share eco-friendly tips and create greater awareness for the environmental cause.

Closer to home, Dhanya has also begun encouraging her neighbours to recycle more. "As we share our common interest in caring for the environment, we get to know one another better," she says. "Home, to me, is a community that cares, be it for the environment or for one another—and I hope to do my part in making our home a better place to live."

"Home, to me, is a community that cares, be it for the environment or for one another—and I hope to do my part in making our home a better place to live."

— Yandapalli Sri Dhanya

CARING COMMUNITIES, HARMONIOUS LIVING

Strong community bonds form the ‘heartware’ of HDB towns. This FY, HDB spearheaded initiatives that encourage residents to take the lead in building vibrant and cohesive communities.

Facilitating Community Participation

HDB continued to drive place-making as an integral part of its community-building efforts. This FY, HDB organised the third run of Build-a-thon, which drew the highest participation since its inception. Build-a-thon is an innovation challenge for residents, offering them an opportunity to create innovative projects that promote community bonding and enliven heartland spaces. HDB partnered Republic Polytechnic to conduct Design Thinking workshops, which helped to refine the proposals put forth by the participants to make the neighbourhood even more vibrant. Some \$145,000 was set aside from HDB’s Friendly Faces, Lively Places (FFLP) fund to prototype selected ideas, such as a hydroponic community garden and rejuvenated void deck with 3D wall murals.

In October 2019, the FFLP fund and the Build-a-thon were consolidated under an umbrella programme called the Lively Places Programme (LPP). Under it, HDB received over 80 applications in the past FY and disbursed close to \$220,000 to support these community-driven projects. The Build-a-thon was also renamed as Lively Places Challenge (LPC).



Residents come together to plant and harvest their own edible greens at community gardens



Friends of Our Heartlands volunteers from Jurong Pioneer Junior College interacting with the elderly during the HDB Community Week

Celebrating Heartland Life

The HDB Community Week, held from 25 May to 2 June 2019, brought 11,260 residents together over a week of events and ground-up community activities that encouraged residents to take greater ownership in strengthening community ties.

As part of the events, 14 National (Open and Student) Recipients and 2 Most Active Schools were recognised with the Good Neighbour Award (GNA) at the GNA Ceremony held at Oasis Terraces. Co-organised with People’s Association (PA) and Singapore Kindness Movement (SKM), it attracted 3,052 nominations.

76% of those who participated in the HDB Community Week 2019 survey said they picked up tips on neighbourliness, while close to half said they were willing to organise activities for the community.

Getting Youths Involved

HDB continued to grow youth involvement in community-building efforts. In 2019, HDB signed a Memorandum of Understanding (MOU) with Temasek Polytechnic (TP), to promote active ageing in HDB estates.

Supported by the Lively Places Programme, students planned a Silver Fitness and Wellness Carnival at Bedok Town Square in conjunction with HDB Community Week 2019. The students who majored in Gerontology put into practice their learnings and organised activities aimed at helping the elderly remain healthy and involved in the community. Over 5,200 elderly residents participated in activities such as mass stretching, a talk on ‘Mindfulness’, and workshops during the carnival. In addition to the carnival, TP students befriended 763 seniors through a series of physical activities in the FY, as part of their curriculum.

HDB’s Project SPHERE (Students, Singapore Pools, and HDB Enriching and Reaching out to the Elderly) saw more than 2,200 students and adult volunteers interacting with elderly tenants in HDB’s rental flats, through activities such as spring cleaning and gate painting. HDB also organised 64 OHYAY! (Outreach to Young and Youth) roadshows in schools to raise students’ awareness about neighbourliness and caring for the environment.



HDB towns are designed with a variety of community spaces for residents of all ages to interact and bond

Strengthening Bonds

About 15,862 soon-to-be-homeowners attended the 20 MyNiceHome roadshows organised by HDB as of March 2020. The roadshows aim to give new neighbours the opportunity to build bonds and familiarise themselves with their living environment, even before they move into their new homes. To help them better visualise the interiors of their flats, HDB also rolled out a new 360-degree virtual tour function in March 2020.

In addition, HDB surveyed 700 future residents of Tengah to better understand their expectations of their future living environment. HDB will use these findings to develop community-building programmes in the new town.

All in the Family

It was in March 1976 when Zaleha Mansor stepped into Princess House to report for her first day of work at HDB's then-headquarters. Zaleha initially started out in a parking enforcement role, but has since undertaken various other positions within the organisation during her 44-year career, to provide endearing homes for Singaporeans.



Through their work in HDB, mother-daughter pair Zaleha (right) and Noryusnita (left) help other families achieve their home ownership dreams.

United by a Mission

Zaleha's current role at the Bedok Branch requires her to attend to feedback and appeals from the public on a range of estate matters. "I applied to work at HDB as I felt it would offer me job stability, and stayed on for so long because I find the job meaningful. I can make a difference in helping to make the living environment more comfortable for the residents," Zaleha says.

Besides the people she works with in Bedok Branch, Zaleha also counts her daughter, Noryusnita Md Yatim, as her colleague. Noryusnita, who has been with HDB for 22 years, said her decision to apply for a job with HDB was partly influenced by the job satisfaction that she saw her mother derive from working in the organisation.

Noryusnita works in the HDB sales department and conducts eligibility checks for buyers of Build-To-Order (BTO) flats. During BTO launches, she also guides customers who need help with submitting their flat applications electronically. For her efforts in creating positive service experiences, Noryusnita was recognised with a M.A.G.I.C (Making a Great Impact on Customers) Award. The awards are given out by HDB to recognise service role models within the organisation.

"I am always happy when I see families get their own homes. I feel honoured to know that I have contributed in some way to help them achieve their home ownership dreams," she says.

Through the Decades

Between them, the mother-daughter pair has contributed more than 60 years of service to HDB, and seen the organisation evolve through the many challenges it faced, while remaining steadfast in its mission of delivering affordable, quality, and well-designed public housing.

Similarly, the HDB workforce has over the years transformed in step with the organisation.

"When I first started working, everything was done manually and in hard copy," Zaleha recalls. "Today, we are much more forward-looking, innovative, and productive. Now, many things are done digitally, with a click of a button. Although it was difficult to adapt at first, I have become comfortable with technology. It's certainly more convenient to have online systems."

Despite the organisational transformation over the years, the teamwork and camaraderie among colleagues have remain unchanged. "The friends I have made in HDB have enriched my life and given me lots of wonderful memories," Zaleha says. "As I now work in the Branch, I always look forward to attending courses at HDB Hub, so that I can meet and catch up with my old friends from other departments."

Noryusnita echoes her mother's sentiments. "My wedding was like an HDB Family Day," she recalls with a laugh. "My mum's colleagues, both old and new, as well as my colleagues—they were all there to celebrate with me. It was wonderful to see everyone that day."

"Home to us, is a place where families can live comfortably and create happy memories together," Zaleha and Noryusnita say. "We are lucky to be able to help families achieve their vision of an ideal home through the work that we do."

"I am always happy when I see families get their own homes. I feel honoured to know that I have contributed in some way to help them achieve their home ownership dreams."

*- Higher Administrative Executive
Noryusnita Md Yatim*

PURSUING EXCELLENCE

HDB, guided by its corporate values, constantly strives to achieve high standards across its key functions to deliver on its mission to build cherished homes for Singaporeans.

Aligning Service and Technology

HDB continued to forge ahead in its digital transformation journey this FY, leveraging technology to serve customers better. HDB introduced new e-Services and enhanced existing ones, such as those for season parking, to provide customers with convenience on-the-go. HDB call centres were also equipped with capabilities to analyse phone call interactions and trends, which can help HDB anticipate issues and better understand customers' needs.

To bring greater convenience to residents, HDB expanded the deployment of cash payment kiosks at HDB branches. These kiosks offer residents round-the-clock access to self-payment services and help to reduce traditional counter transaction volume.

A new Electronic Queue Management System began operations in November 2019. Customers can register, or re-register in the case of missed queues, at any of the self-service kiosks in the



HDB constantly strives to deliver quality and excellence as it builds cherished homes for Singaporeans

HDB Sales Atrium. Roving service ambassadors can also issue queue numbers on-the-go via hand-held devices.

The Ask Judy chatbot was enhanced with more in-depth information to facilitate self-help among home owners and provide easy access to useful information such as using drywalls, internal clothes drying rack, and guides to home maintenance.

Building a Future-Ready Workforce

To ensure a future-ready workforce, HDB continued to upskill in areas such as Business Analytics and digital literacy, as well as build capabilities in engineering and ICT, in tandem with the Public Service Division's initiative to strengthen these capabilities across the public service. Training programmes and roadmaps were developed in the FY, with competency-based learning roadmaps formulated and continually reviewed to ensure that they remain relevant. Role-based competency training frameworks were also developed to strengthen HDB's Building Information Modeling and geospatial capabilities.

HDB continued to attract new talent through its scholarship programmes. In 2019, a total of 485 scholarship applications were received, with 16 scholarships awarded for a wide range of disciplines, including Architecture, Landscape Architecture, Civil Engineering, Mechanical Engineering, Geography/ Urban Planning, Sociology, Economics, and Computer Science.

Besides strengthening workforce competencies, HDB put in place programmes and initiatives to enhance staff well-being in the workplace and promote healthy lifestyles. 1,860 staff took part in the annual HDB Steps Challenge with the goal of achieving 10,000 steps daily.



Oasis Terraces was recognised by the industry for its distinctive design and landscape

Telling the Public Housing Story

HDB hosted over 120 visits in the FY, sharing Singapore's public housing story with about 2,200 local and overseas visitors, including several distinguished foreign dignitaries and Mayors from major cities around the world. The LIVINGSPACE gallery at HDB Hub, which showcases HDB's journey in housing a nation, received over 370,000 visitors in the FY.

In the FY, HDB also continued to explore new ways of sharing Singapore's public housing story, launching a series of short films which celebrate ubiquitous heartland common spaces such as the void deck, fitness corner and linkway, as well as the vibrant and liveable homes that HDB has designed to meet residents' needs now, and in the future.

Accolades

HDB received international and local awards in the FY, as a continued affirmation of its commitment to excellence.

Kampung Admiralty and The Pinnacle@Duxton were recognised at the Council on Tall Buildings and Urban Habitat (CTBUH) Awards. The Pinnacle@Duxton received the 10-Year Award for its proven value and performance over the last decade. Kampung Admiralty emerged top in two award categories; the Urban Habitat: Single Site Scale and Best Tall Mixed-Use Building. The integrated development also received the ASEAN Energy Award for good practices in energy efficiency and energy management.

Oasis Terraces, Waterway Terraces I & II, Keat Hong Neighbourhood and Woodleigh Neighbourhood won awards from the International Federation of Landscape Architects (IFLA) Asia Pacific, for excellence in landscape architecture. Oasis Terraces also attained the Silver Award at the MIPIM Asia Awards 2019, which celebrates excellence and innovation in the Asian property industry.

HDB emerged as a Global Silver Winner of the Green World Award 2019, in recognition of efforts to encourage green commuting in

Punggol Eco-Town, including the planning of a comprehensive cycling network and innovations such as the dual bicycle rack system.

On the engineering front, the Integrated Environment Modeller (IEM) developed by HDB and the Agency for Science, Technology and Research (A*STAR) was awarded the ASEAN Outstanding Engineering Achievement Award. The IEM uses 3D city models to simulate climatic conditions and their combined effects on the surrounding urban landscape, helping HDB planners better understand how environmental conditions interact with town design, and in turn create a comfortable living environment for its residents.

HDB's floating solar system received the Excellence in Environmental Engineering and Science (E3S) Honor Award in the Small Projects category at the 2019 American Academy of Environmental Engineers and Scientists (AAEES) Awards Luncheon & Conference. This award recognises projects that demonstrate the best in environmental engineering and science practices. HDB's floating solar system for open sea conditions was based on its award-winning floating modular system that was designed to hold wetland plants in Punggol. The system has since been deployed to hold solar panels at a test bed in Tengeh Reservoir.



HDB's floating solar system received international acclaim for demonstrating excellence in environmental engineering and science practices



Our Corporate Story

VISION

An outstanding organisation with people committed to fulfilling aspirations for homes and communities all are proud of.

MISSION

We provide affordable homes of quality and value.
We create vibrant and sustainable towns.
We promote the building of active and cohesive communities.
We inspire and enable each other to give of our best.

SHARED VALUES

Integrity

We perform our duties with honesty, fairness and courage, so as to uphold the public's trust in us.

Learning

We practise life-long learning, share our knowledge, and constantly seek ways to do our work better.

Teamwork

We share and respect different views, and build on each other's strengths to achieve our vision and goals.

Excellence

We take pride in what we do, and deliver quality work for our organisation and customers.

Care

We care for our colleagues, the community and the environment.

MEMBERS OF THE BOARD

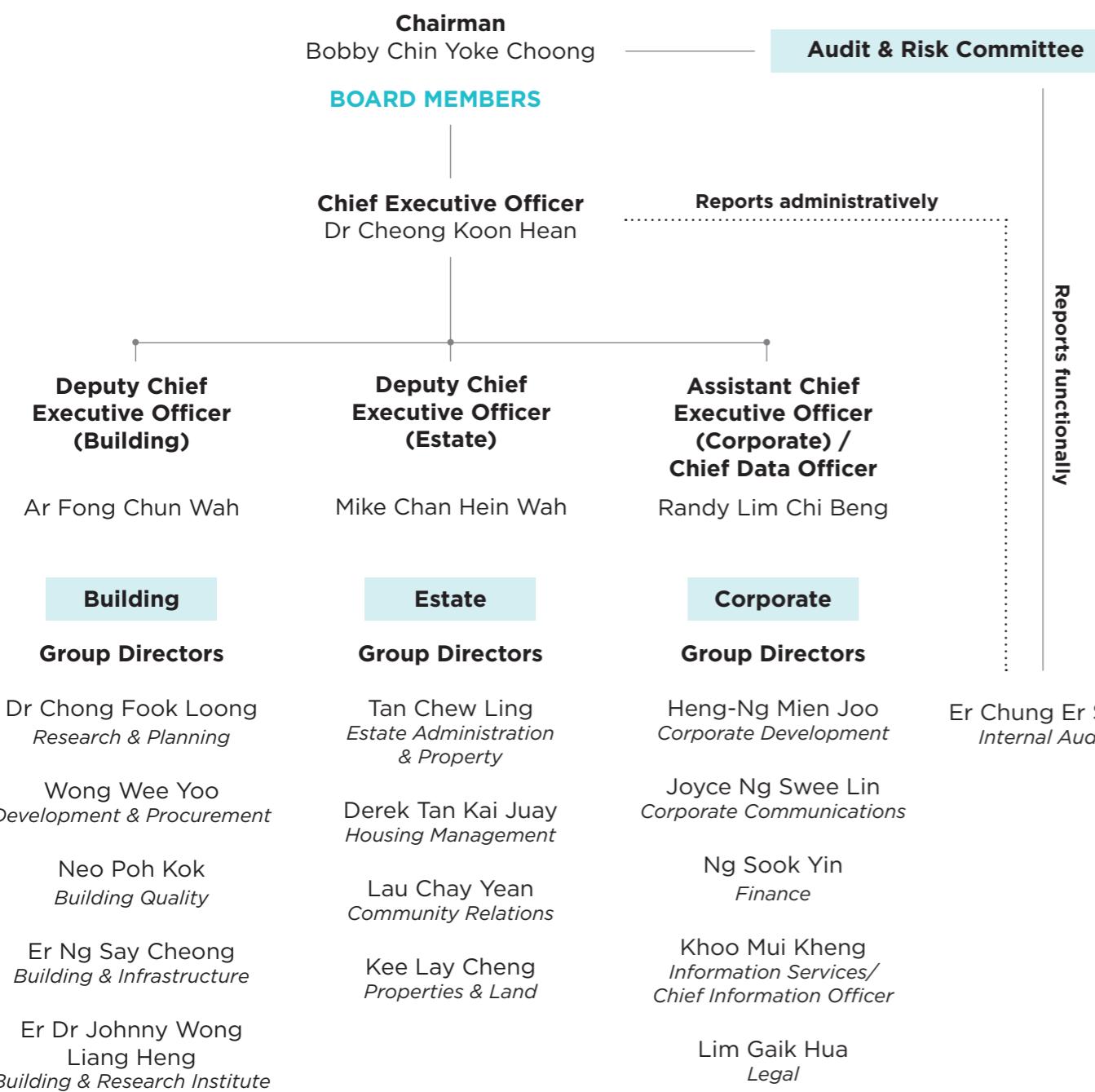
Chairman

Mr Bobby Chin Yoke Choong

Board Members

Dr Cheong Koon Hean	Dr Sudha Nair
Mr Tham Sai Choy	MG Goh Si Hou
Mr Mohd Sa'at bin Abdul Rahman	Mr Stephen Lim
Professor Heng Chye Kiang	Ms Jacqueline Loh
Professor Lily Kong	Mr Patrick Tay

ORGANISATION CHART



AWARDS

Architecture, Landscape Architecture and Environmental Sustainability

International

ASEAN Energy Awards

- Kampung Admiralty (Large Building Category)

ASEAN Outstanding Engineering Achievement Awards 2019

- Integrated Environmental Modeller (IEM) for Urban Microclimate Prediction and Planning with a Multi-physics approach *

Council of Tall Buildings and Urban Habitat (CTBUH) Award 2019

- The Pinnacle@Duxton (10 Year Award)
 - Kampung Admiralty (Best Tall Building under 100 meters 2019 Award of Excellence)
 - Kampung Admiralty (Best Tall Building [Mixed-Use Building category])
 - Kampung Admiralty (Urban Habitat [Single Site Scale category])

**Environmental Sustainability Honor Award
(American Academy of Environmental
Engineers & Scientists)
(Small Projects Category)**

- Development of Floating Solar for use in Reservoir and Coastal Marine Conditions

Local

19th SIA Architectural Design Awards 2019

- Kampung Admiralty (Commercial Project Category)

IES Prestigious Engineering Achievement Awards 2019

- Integrated Environmental Modeller (IEM) for Urban Microclimate Prediction and Planning with a Multi-physics approach *
 - Floating Solar Module
 - Implementation of Pneumatic Waste Conveyance System (PWCS) at Yuhua

Land Transport Excellence Merit Awards 2019

- Green Commuting in Punggol [Dual Bicycle Rack System (DBRS)] (Best Car-Lite Advocate Category)

LIAS Award of Excellence 2019 - Gold Award

- Oasis Terraces (Implementation - Non-Residential Category)
 - Kampung Admiralty (Implementation - Non-Residential Category)

* Jointly submitted with the Agency for Science, Technology and Research (A*STAR).

AWARDS

► Architecture, Landscape Architecture and Environmental Sustainability

Local

LIAS Award of Excellence 2019 -

Best of Category

- Tampines GreenRidges (Implementation - Residential Category)

Minister's Award (Team) 2019

- Master Planning of Tengah Town
- Enabling Commercial Urban Farms in the Heartlands through a Forward-looking AVA-HDB Model
- Construction of Land Reclamation at Changi East
- Cyclical Maintenance Management System for Better Oversight of Town Councils' Cyclical Works
- Quarantine Housing Operations for Monkeypox Disease

Minister for National Development R&D Awards 2019

- HDB Smart Hub (Distinguished Award)
- Research and Implementation of the HDB Biophilic Town Framework (Merit Award)
- Integrated Environmental Modeller (Merit Award) *

National Energy Globe Award 2019

- A Cycling Friendly Town-Punggol

President's Science & Technology Award 2019

- Development of Integrated Environmental Modeller (IEM), a Multi-physics Approach for Urban Microclimate Modelling and City Planning *

Public Sector Pro-Enterprise Initiatives Winning Entry for the period Jan 2019 to Jun 2019

- Pro-enterprise business model to seed commercial urban farms in HDB heartlands

Public Sector Transformation 2019 Citizen Engagement Excellence Award

- Build-A-Playground @ Canberra

SGBC-BCA Sustainability Leadership Awards 2019

- Kampung Admiralty (Leadership in Sustainable Design & Performance (Institutional) Category)

Singapore Institute of Planners (SIP) 2019 Gold Award

- Punggol Town Planning (Best Planning Project Category)
- My Waterway@Punggol (Best Infrastructure Planning Project Category)
- Bedok Town Centre (Best Urban Design Project Category)

Singapore Landscape Architecture Awards (SLAA) Outstanding Award

- Kampung Admiralty (Civic & Institutional Landscape Category)

Singapore Landscape Architecture Awards (SLAA) Gold Award

- Bidadari Green & Blue Masterplan (Analysis & Planning Category)
- Tampines GreenRidges (N6 C1A, 1B & NP) (Residential Landscape Category)

Singapore Landscape Architecture Awards (SLAA) Silver Award

- Punggol Northshore District Landscape Master Plan (Analysis & Planning Category)
- Woodleigh Neighbourhood (Analysis & Planning Category)
- West Rock @ Bukit Batok (N4 Park) (Parks & Recreational Landscape Category)

Singapore Landscape Architecture Awards (SLAA) Merit Award

- Tampines N6 C4, 5 & Park (Analysis & Planning Category)
- Keat Hong Thematic Parks (CCK N8 NP) (Parks & Recreational Landscape Category)
- Buangkok Square & Park (Parks & Recreational Landscape Category)

► Architecture, Landscape Architecture and Environmental Sustainability

Local

BCA Green Mark (Gold Plus) for New Residential Buildings

- Bedok Beacon
- Bedok North Woods
- Sky Vista @ Bukit Batok
- Senja Ridges
- Clementi Gateway
- West Coast Parkview
- Dakota Breeze
- Buangkok Square
- Jurong East Vista
- Waterway Sunrise I
- Waterway Sunrise II
- Matilda Sundeck
- Northshore Cove
- Northshore Residences I & II
- Northshore StraitsView
- Northshore Trio
- Waterfront I & II @ Northshore
- Ghim Moh Edge
- Sun Breeze
- Fernvale Acres

BCA Green Mark (Gold) for New Residential Buildings

- Ang Mo Kio Court
- Bedok North Vale
- Bedok South Horizon
- West Edge @ Bukit Batok
- West Plains @ Bukit Batok
- West Quarry @ Bukit Batok
- West Scape @ Bukit Batok
- City Vue @ Henderson
- Senja Valley
- Teck Whye View
- Clementi Crest
- Clementi NorthArc
- Clementi Peaks
- Buangkok Woods
- Hougang RiverCourt
- Golden Lavender
- EastCreek @ Canberra
- Anchorvale Plains
- Fernvale Woods
- Tampines GreenBloom

BCA Green Mark (Platinum) for Existing Non-Residential Buildings

- Gek Poh Shopping Centre

BCA Green Mark (Gold Plus) for Existing Non-Residential Buildings

- Sembawang Mart

BCA Green Mark (Gold) for Existing Non-Residential Buildings

- Kitchener Complex
- Elias Mall
- Woodlands Mart
- Yew Tee Square

BCA Universal Design Mark Award 2019 (Gold Plus under New Residential Development Category)

- Oasis Terraces
- West Rock @ Bukit Batok

BCA Universal Design Mark Award 2019 (Gold under New Residential Development Category)

- Buangkok ParkVista

- Tampines Green Foliage
- Tampines GreenVerge
- Tampines GreenView
- Tampines Greenvines
- Tampines GreenWeave
- Alkaff Oasis (Contract 6)
- Alkaff Oasis (Contract 7)
- Woodleigh Village
- Valley Spring @ Yishun

- Tampines GreenEdge
- Tampines GreenFlora
- Admiralty Flora
- Sun Natura
- FernGrove @ Yishun
- Forest Spring @ Yishun
- Meadow Spring @ Yishun
- Melody Spring @ Yishun

- 888 Plaza
- Pioneer Mall

AWARDS

► Construction Excellence and Productivity

Local

BCA Construction Excellence Award 2019 (Residential Buildings – Below \$1,800 /m² Category)

- The Verandah @ Matilda
- Tampines N4 C28 (Tampines GreenEdge)
- Toa Payoh N4 C28 (Toa Payoh Crest)
- Bukit Batok N4 C14 & C15 (West Valley)
- Hougang N3 C14 (Hougang Meadow)
- SkyPeak @ Bukit Batok (Bukit Batok N2 C22)
- Eastbrook @ Canberra
- Golden Ginger (Serangoon North C18)
- Punggol Vue (Punggol West C32)
- Park Grove @ Yishun
- Kampung Admiralty

BCA Construction Productivity Award 2019 (Platinum under Residential Non-Landed Buildings [for projects with GFA > 25,000 m²] Category)

- The Verandah @ Matilda

BCA Construction Productivity Award 2019 (Gold under Residential Non-Landed Buildings [for projects with GFA > 25,000 m²] Category)

- Matilda Court
- Buangkok Edgeview

BCA Construction Productivity Award 2019 (Platinum under Mixed Development Category)

- Kampung Admiralty

► Service Delivery, Stakeholder Partnerships, Organisational Development

Local

Community Chest Awards

- Charity Platinum Award

Municipal Services Awards (MSA) 2019

- Common Enforcer Scheme
- Design for Maintainability Guide for Municipal Infrastructure
- Improving Lighting at Dawson Estate
- Silver Zone at Commonwealth
- Quick Response Team at Braddell Heights to Address Municipal Issues
- Rejuvenating Sungei Pinang and Enhancing Connectivity to Punggol Park
- Assistance Rendered to Squatters at Thomson Flyover
- Management of Hoarding Case at Pending Road
- Management of Cat Hoarding and Pest Infestation Case at Choa Chu Kang Street 52

NTUC Workplace Safety and Health (WSH) LM U SAFE Champion Award

Ong Teng Cheong Labour Leadership Institute Workplace Partnership Award (Double Platinum)

Singapore HEALTH (Helping Employees Achieve Life-Time Health) Excellence Award 2019

CORPORATE GOVERNANCE

► Board Members

The HDB Board derives its strength from its depth and diversity of expertise, providing the necessary guidance to HDB to navigate towards its mission. The Board Members are respected individuals in their fields with extensive public and corporate sector experience. All Board Members are non-executive members, except for the Chief Executive Officer.

► Internal Control Framework

HDB's internal control system ensures that assets are safeguarded, proper accounting records are maintained, and financial information is reliable. The overall control framework includes clearly defined authority, delegation limits, reporting mechanisms, appropriate terms of reference for management of core policy areas, comprehensive policies/procedures relating to operations and financial controls, and an annual budgeting and monthly financial reporting system for all operating units.

► Audit & Risk Committee

The Audit & Risk Committee assists the Board in maintaining a high standard of corporate governance, particularly in the areas of financial reporting, risk governance and the internal control systems of HDB. Consisting of members from the HDB Board, the Audit & Risk Committee considers any matter which, in its opinion, should be brought to the Board's attention and has explicit authority to independently investigate any matter within its terms of reference.

► Fraud and Wrongful Practices Reporting Channel

HDB has a Fraud and Wrongful Practices Reporting Channel to reinforce HDB's commitment to a culture of integrity and transparency within the organisation. The channel is a confidential avenue for HDB staff to report suspected fraudulent incidents and wrongful practices directly to the Chairman of the Audit & Risk Committee of the Board, who would oversee incidents reported and investigated.

► Internal Audit Function

HDB's Internal Audit Group advises all levels of management on the quality of HDB and its Subsidiary's operations with particular emphasis on systems of internal control. Reporting directly to the Audit & Risk Committee, it conducts risk-based audits and addresses its findings and recommendations to the appropriate level of management who are able to take the necessary action. It adheres to the Standards and Guidance of The Institute of Internal Auditors.

► Annual Audit

The audit findings by the External Auditor in the course of the annual financial audit are reported to the Audit & Risk Committee, the Board, and the Ministry of National Development (MND). The annual financial statements are endorsed by the Audit & Risk Committee for the Board's approval.

► Business and Ethical Conduct

HDB staff are obliged to comply with practices that reflect the highest standards of behaviour and professionalism. These include safeguarding official information under the Official Secrets Act (Cap 213), and abiding by the HDB Code of Conduct, and Conduct and Discipline Rules.

► Block Leave Policy

To complement HDB's existing risk management practices and align our internal control measures with industry practice as well as to promote work-life integration, HDB staff who perform job functions that are prone to fraud are subject to Mandatory Block Leave (MBL) of five consecutive working days per calendar year.

► Dissemination of Public Information

HDB's audited annual financial statements are available at the HDB InfoWEB and the Singapore Exchange (SGX) website. The HDB InfoWEB also contains corporate information such as Annual Reports, latest developments, and press releases.

ENVIRONMENTAL POLICY

HDB, the leading property developer and owner in Singapore, is committed to be the leader in environmental management. In line with our shared value to care for the environment, we shall:

COMPLY with all applicable environmental laws, regulations and other relevant requirements.

COMMIT to prevent pollution by

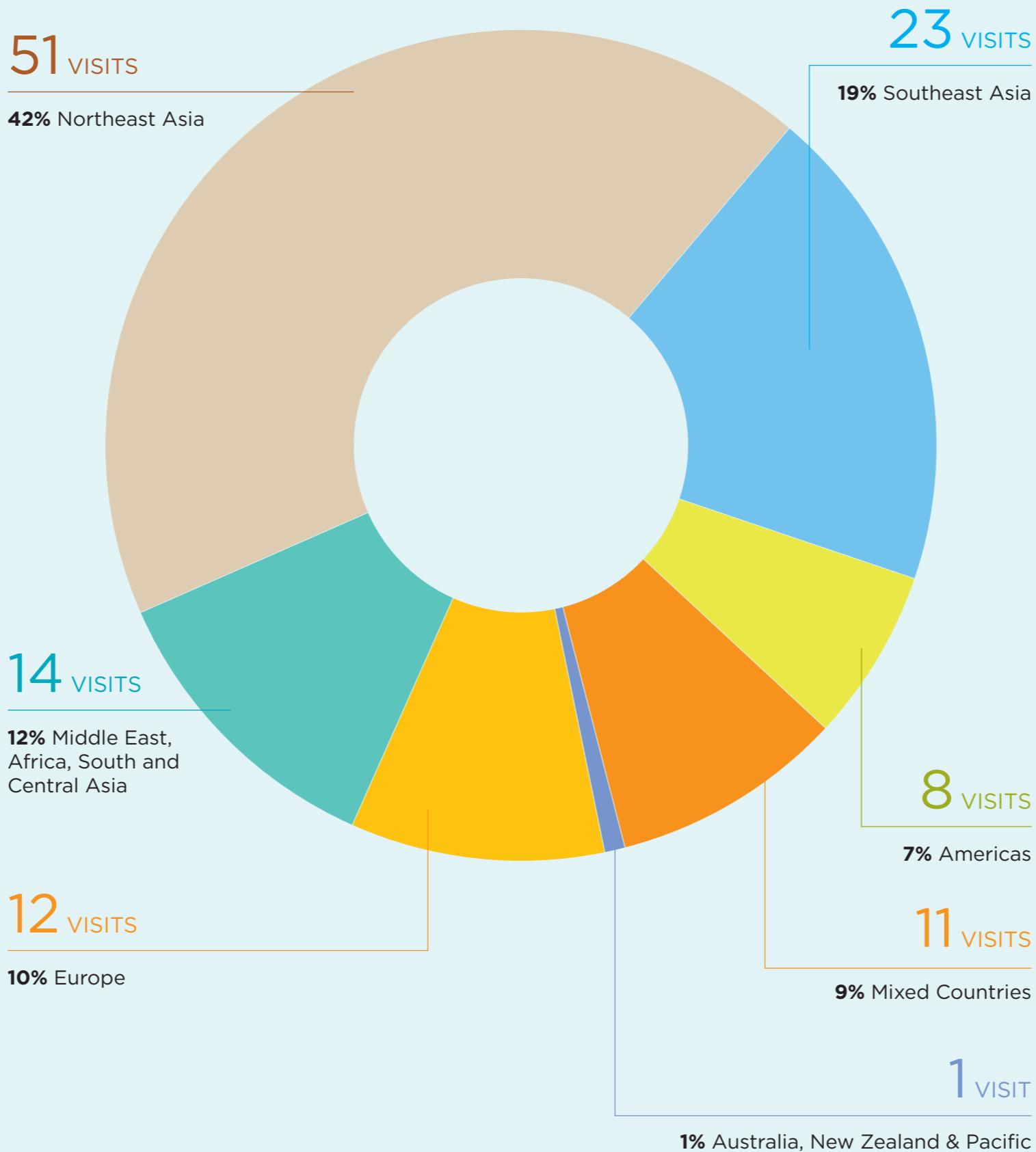
- Promoting conservation of energy and efficient use of resources in policy formulation, planning, development, management and maintenance of public housing and commercial buildings
- Considering environmental requirements in land use and procurement of goods and services and
- Reducing, re-using and recycling materials and wastes, where possible.

CONTINUALLY improve our environmental performance by setting and reviewing environmental objectives and targets.

COMMUNICATE with and educate all persons working for or on behalf of HDB, business partners, customers and the public to achieve our environmental goals.

VISITORS

HDB has the honour of hosting distinguished visitors from various countries and territories who are interested to learn more about Singapore's successful public housing programme. From April 2019 to March 2020, HDB welcomed 2,200 visitors over 120 visits.



AGENCY PROJECTS

► Major Infrastructure Works

A total of \$138 million was spent in FY 2019/2020 on major infrastructure works for public housing development programme. 72 Infrastructure and road-related facilities projects in HDB towns were implemented on time to serve the BTO developments. The major areas of works are in the towns of Bidadari, Tampines North and South, Punggol North, Tengah, Kallang Whampoa, Woodlands, Yishun, and Sembawang.

► Land Reclamation Projects

HDB is the agent to MND to carry out land reclamation works. Ongoing land reclamation projects include the \$1.03 billion contract for the Construction & Management of Staging Grounds & Infilling Works (Phase 1) and \$602 million contract for the Construction & Management of Staging Grounds & Infilling Works (Phase 2), which are scheduled to be completed by August 2020 and March 2023 respectively. The \$418 million contract for the Construction and Management of Staging Ground and Infilling Works (Phase 3) commenced on 24 February 2020 and is scheduled to be completed by May 2026.

Other ongoing land reclamation projects include the \$1.23 billion contract for the Construction of Polder at Areas A & C of Pulau Tekong, which is scheduled to be completed in April 2022.

The Environmental Monitoring & Management Plan (EMMP) contracts supporting these land reclamation projects to monitor and ensure that the construction works will not cause any adverse impacts to the environment are also ongoing.

Construction for Land Reclamation at Changi East was carried out successfully, creating a total of 48ha of land. The reclaimed land has been proclaimed by the President as state land in 3 plots, with Plots 1 and 2 proclaimed on 12 June 2019 and Plot 3 proclaimed on 20 November 2019 respectively.

SUBSIDIARY AND ASSOCIATED COMPANIES

► National Strategic Stockpiles

The Ministry of National Development (MND) has re-appointed HDB as the agent to carry out the infrastructure and development works related to the national strategic stockpiles in FY2019. The agency agreement is extended for 3 years. HDB is managing 3 ongoing distant-sourced sand stockpiling contracts in FY2019.

► Solar Capacity

The solar capability building programme for public housing started with a wide-scale solar photovoltaic (PV) test-bedding in new and existing precincts. The test-bed has enabled HDB to achieve various developmental objectives. These include studying the performance of solar PV system based on different block configurations, geographical settings and technologies in a tropical setting; gathering and learning from its design and development; helping the industry build technical expertise and capability; and developing more cost-effective solar PV systems.

As the largest stakeholder in the installation of the solar PV system in Singapore, HDB has progressively rolled out the test bedding in both new and existing HDB precincts. To date, HDB has committed a total of about 278 MWp of Solar PV systems for some 5,500 public housing blocks across Singapore. Of these, more than 2,000 HDB blocks have been installed with solar PV systems so far.

► Solar Leasing Model and the SolarNova programme

The solar leasing model is an enhancement of HDB's solar capability building programme, and a continuation of HDB's ongoing efforts to test-bed solar energy to promote sustainable development.

The solar leasing model involves leasing solar PV systems from private solar system developers who will design, finance, install, operate and maintain the solar PV systems. The solar PV developers will recover their cost from the solar energy sold and consumed by the Town Councils, at a preferential rate that is not higher than the retail electricity tariff rate. The solar leasing model has also been expanded to include implementation in projects such as HDB Greenprint @ Yuhua and Greenprint @ Teck Ghee.

The SolarNova programme was launched in 2014 by HDB and EDB to encourage government agencies to come together to harness solar energy to power their activities and to spur the growth of the solar industry in Singapore.

Taking the lead in the SolarNova programme, HDB aggregates solar PV demand from across the whole of government, and allows government agencies with solar PV demand to ride on its solar leasing tenders, thus achieving greater economies of scale and better discount rates of the prevailing tariff for solar energy purchased.

In 2015, HDB awarded the first SolarNova tender, which saw a solar PV capacity of 76 MWp spanning across 831 HDB blocks and 8 government agency sites. SolarNova Phase 2

was awarded in June 2017 and has a tender capacity of 40 MWp across 636 HDB blocks and 31 government agency sites. SolarNova Phase 3 was awarded in June 2018 and has a tender capacity of 39MWp from HDB across an estimated 848 HDB blocks and 11 MWp from 29 government agencies sites. SolarNova Phase 4 tender was awarded in October 2019 and has a tender capacity of 70 Wp, consisting of about 40 MWp from HDB across an estimated 1,218 HDB blocks and about 30 MWp from 49 government agencies sites.

The latest SolarNova Phase 5 tender was launched in December 2019 and has a capacity of 60 MWp across 1,154 HDB blocks and 46 government agencies sites, creating more clean energy and helping to reduce carbon emissions, thereby helping to mitigate the effects of climate change.

The SolarNova programme initially aimed to implement 350 MWp of solar PV capacity across the public buildings in Singapore by 2020, of which, 220 MWp was committed by HDB. HDB has since met our target in December 2018 with the launch of the SolarNova Phase 4 tender.

With the government's new 2 GWp solar target by 2030 announced at Singapore International Energy Week (SIEW) 2019, HDB has extended the SolarNova programme up to 2030, and will continue to be the lead driving agency for solar PV deployment on public sector rooftops. Correspondingly, HDB has also increased our commitment to install 540 MWp of solar PV across 70% of HDB buildings by 2030.

EM Services was formed in 1988 to offer estate management, engineering, contracts administration and project management services to Town Councils. HDB holds a 75% stake in the subsidiary, while Keppel Land Ltd holds the remaining 25% stake.

During the year, EM Services maintained its position as the largest managing agent for public housing in Singapore. It managed about 740,000 units of residential and commercial properties on behalf of Town Councils. The company provided essential maintenance and lift maintenance services to Town Councils, property management services to both private and Government agencies, and also housing agency services. In addition, it installed and upgraded lifts in various HDB housing estates under the Lift Upgrading Programme.

The total revenue and management fees of the company for FY2019/ 2020 was \$122 million.

Financial Highlights

FINANCIAL HIGHLIGHTS OF HDB

	\$ million				
	2019/ 2020	2018/ 2019	Increase/ (Decrease)	2017/ 2018	2016/ 2017
OVERALL INCOME AND EXPENDITURE					
Total income	1,431	2,125	(694)	2,625	2,852
Less : Net operating expenditure	(4,096)	(4,111)	15	(4,342)	(4,041)
Deficit	(2,665)	(1,986)	(679)	(1,717)	(1,189)
Capital expenditure	7,316	6,552	764	7,978	8,890
RESULTS BY SEGMENT					
Deficit from :					
Home ownership	(2,232)	(1,421)	(811)	(1,383)	(861)
Upgrading	(440)	(557)	117	(639)	(482)
Residential ancillary functions	(312)	(342)	30	(338)	(428)
Rental flats	(115)	(116)	1	(92)	(79)
Mortgage financing	(21)	(23)	2	(23)	(26)
<i>Elimination of inter-segment transactions</i>	9	11	(2)	9	9
Housing total deficit	(3,111)	(2,448)	(663)	(2,466)	(1,867)
Surplus from :					
Other rental and related businesses	454	472	(18)	753	641
Agency and others	1	1	-	5	46
<i>Elimination of inter-segment transactions</i>	(9)	(11)	2	(9)	(9)
Other Activities total surplus	446	462	(16)	749	678
Overall Deficit	(2,665)	(1,986)	(679)	(1,717)	(1,189)

FINANCIAL HIGHLIGHTS OF HDB

	\$ million				
	2019/ 2020	2018/ 2019	Increase/ (Decrease)	2017/ 2018	2016/ 2017
FINANCIAL POSITION					
Property, plant and equipment, and investment properties	26,787	25,477	1,310	24,517	23,744
Loans receivable	40,279	40,392	(113)	40,727	39,617
Properties under development and for sale	15,759	15,175	584	15,587	18,023
Other assets	4,616	3,622	994	4,085	9,137
Total assets	87,441	84,666	2,775	84,916	90,521
Less:					
Loans payable	66,205	64,040	2,165	64,761	70,502
Other liabilities	6,006	5,395	611	4,961	4,964
Total net assets	15,230	15,231	(1)	15,194	15,055
Capital and reserves	15,230	15,231	(1)	15,194	15,055
FINANCING OF PUBLIC HOUSING					
Government grant to HDB	2,692	2,032	660	2,006	1,194
Government loans drawn during the year					
- mortgage financing	3,428	4,089	(661)	5,353	5,826
- upgrading financing	4	-	4	4	9
- housing development	-	-	-	-	-
Outstanding loans payable					
Government loans					
- mortgage financing	40,317	40,414	(97)	40,583	39,532
- upgrading financing	28	32	(4)	39	47
- housing development	-	-	-	182	4,557
Bonds	24,357	22,983	1,374	22,343	22,776
Bank loans	1,329	355	974	1,353	3,337

Financial Review

FINANCIAL RESULTS

HDB provides Singaporeans with affordable homes and a quality living environment, through its role as the master planner and developer of Singapore's public housing towns and estates.

To help Singaporeans become home owners, the Government subsidises HDB flats with price discounts for new flats and by offering a variety of housing grants. HDB also offers housing loans at concessionary interest rates to help eligible Singaporeans own their homes. For needy, low income Singaporeans, HDB provides heavily subsidised rental flats.

To ensure that HDB towns continue to be renewed and cater to the changing needs of residents, HDB rejuvenates its towns and flats through programmes such as the Remaking Our Heartland (ROH) Programme, Home Improvement Programme (HIP), Neighbourhood Renewal Programme (NRP), and Lift Upgrading Programme (LUP). In addition, HDB develops and manages commercial properties like neighbourhood centres to provide a range of amenities and employment opportunities in HDB towns.

To reflect the full spectrum of HDB's operations, the financial results are presented under 'Housing' and 'Other Activities' in the audited financial statements. 'Housing' consolidates the results of housing programmes implemented. It comprises the Home Ownership, Upgrading, Residential Ancillary Functions, Rental Flats, and Mortgage Financing segments. 'Other Activities' comprises the Other Rental and Related Businesses segment, and Agency and Others segment which are commercial in nature.

In Financial Year (FY) 2019/ 2020, HDB incurred a net deficit of \$2,665 million, before the government grant, as compared with \$1,986 million in FY 2018/ 2019. The net deficit comprised the deficit from the 'Housing' activities of \$3,111 million, offset by the surplus from the 'Other Activities' of \$446 million in FY 2019/ 2020.

HDB received a grant of \$2,692 million in FY 2019/ 2020 from the Government to finance its deficit, and to protect the reserves of the past governments in accordance with the Constitution of the Republic of Singapore. The retained earnings of HDB as at 31 March 2020 remained at zero after the transfers to the capital gains reserve to protect past reserves.

HOUSING RESULTS

The Home Ownership segment covers the development and sale of flats to eligible buyers under the various home ownership schemes for public housing. The Home Ownership segment reported a deficit of \$2,232 million in FY 2019/ 2020 as compared with \$1,421 million in FY 2018/ 2019.

HDB recorded a lower gross loss of \$721 million for the sales completed (i.e. keys issued to buyers) in FY 2019/ 2020. The number of sales completed in FY 2019/ 2020 was 11,609 units as compared with 16,608 units in FY 2018/ 2019.

The provision for foreseeable loss of \$659 million that was made in the previous years was released on the completion of the sale of flats in FY 2019/ 2020. On the other hand, \$1,477 million of additional foreseeable loss was provided mainly for the new building contracts awarded. As a result, there was a net increase of \$818 million in the provision for foreseeable loss.

HDB also disbursed \$631 million of CPF housing grants to eligible buyers of resale flats and Executive Condominiums (ECs) in FY 2019/ 2020 as compared with \$532 million in FY 2018/ 2019.

The Upgrading segment reported a deficit of \$440 million in FY 2019/ 2020. The programmes are the Home Improvement Programme, Neighbourhood Renewal Programme, and Lift Upgrading Programme for housing estates. The decrease in the deficit was due to a lower expenditure for the Home Improvement Programme, as compared to last year.

The Residential Ancillary Functions segment includes lease administration, provision and management of ancillary facilities such as car parks in housing estates, and planning and building administration. It reported a deficit of \$312 million in FY 2019/ 2020.

The Rental Flats segment recorded a slightly lower deficit of \$115 million in FY 2019/ 2020.

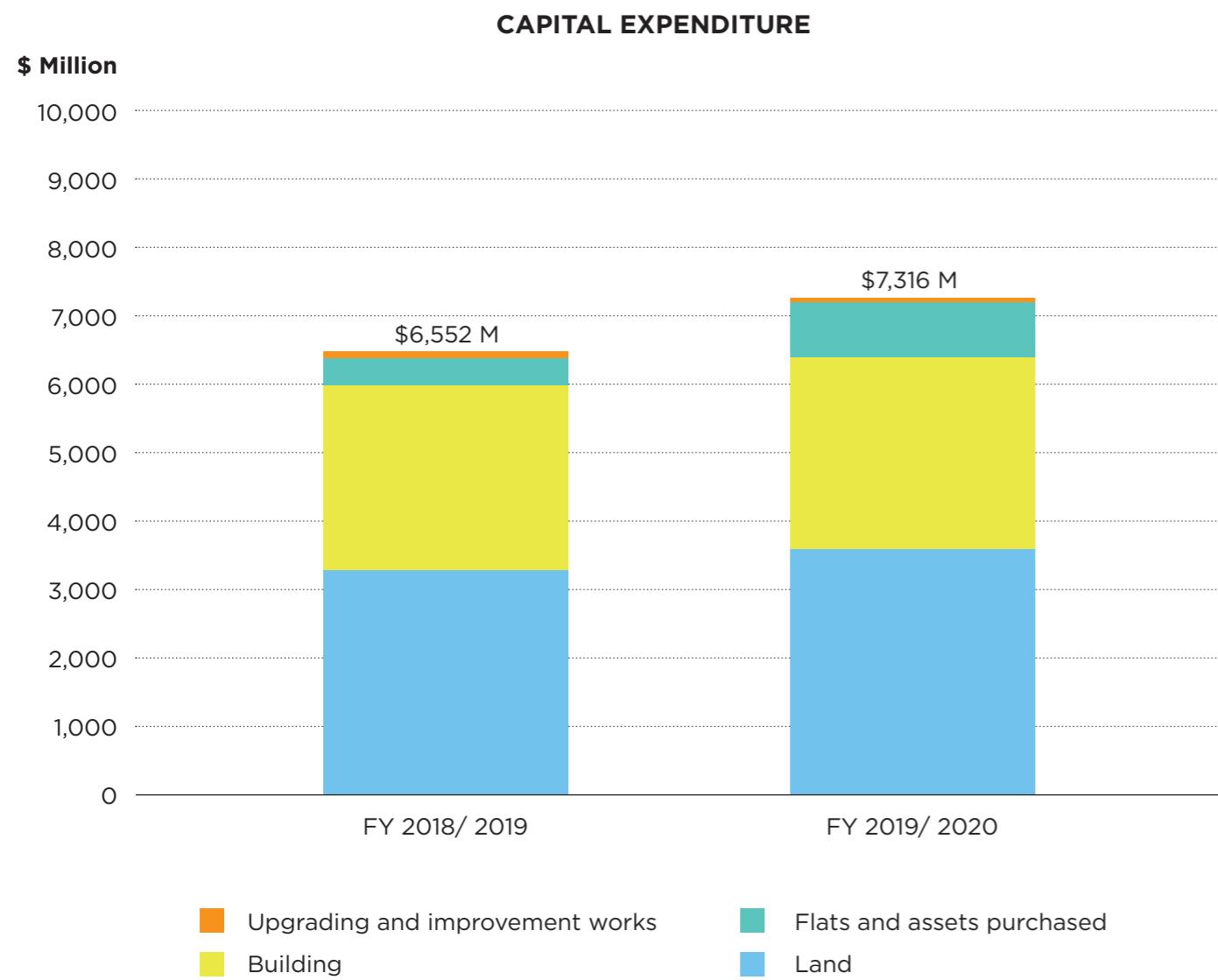
The Mortgage Financing segment also recorded a lower deficit of \$21 million in FY 2019/ 2020.

RESULTS OF OTHER ACTIVITIES

The segment on Other Rental and Related Businesses focuses on the provision, tenancy, and management of commercial properties and land. It reported a lower surplus of \$454 million in FY 2019/ 2020, due mainly to rental rebates given to qualifying tenants in HDB shops and social-communal facilities. The rental rebates were given to help businesses cushion the impact of COVID-19.

CAPITAL EXPENDITURE

Capital expenditure for the year was \$7,316 million. A large proportion of the year's capital expenditure was incurred for the purchases of land and construction of public housing.



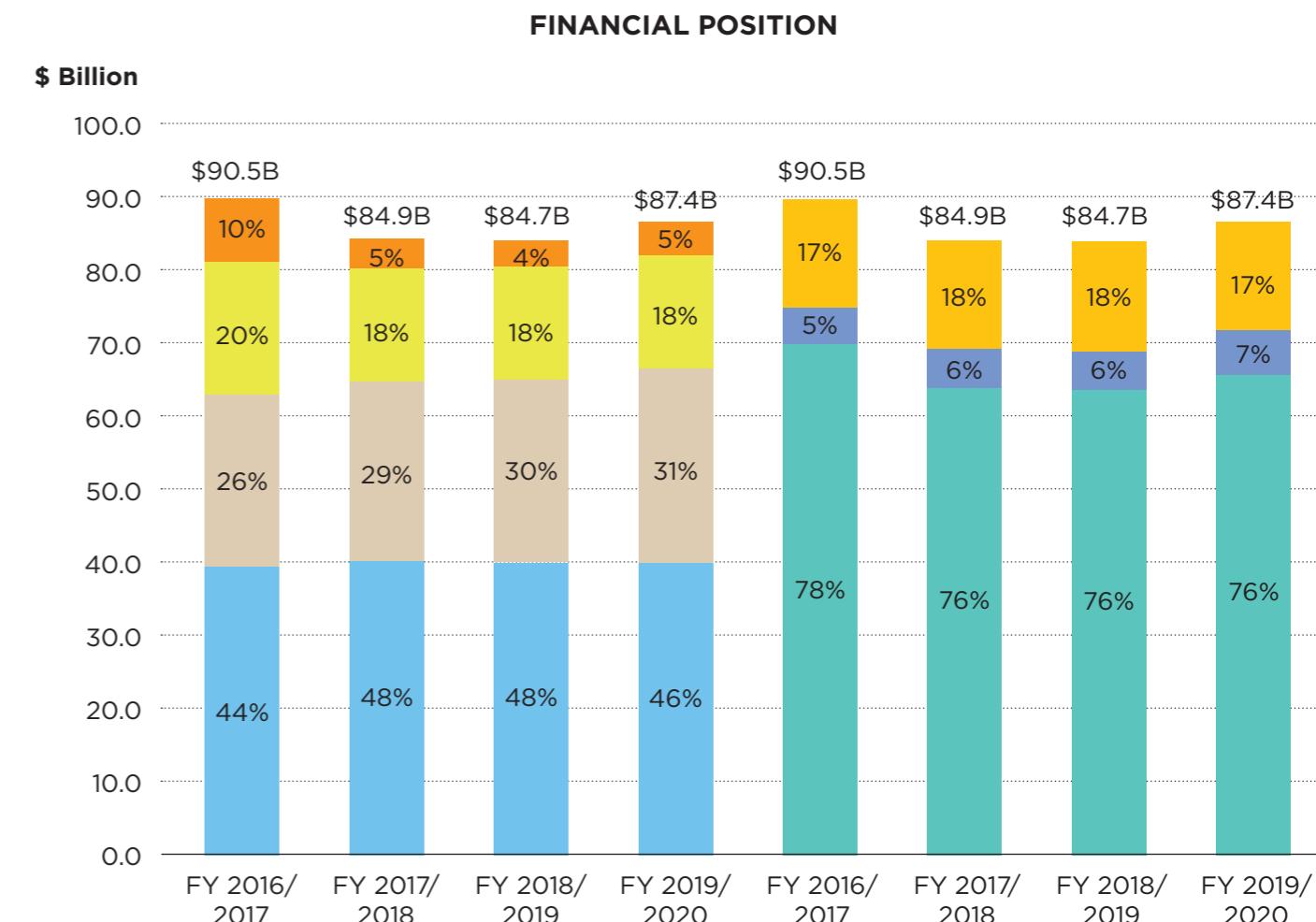
Breakdown	FY 2019/ 2020		FY 2018/ 2019		Change over FY 2018/ 2019	
	\$M	%	\$M	%	\$M	%
Land	3,622	49	3,383	52	239	7
Buildings	2,768	38	2,659	41	109	4
Flats and assets purchased	879	12	421	6	458	109
Upgrading and improvement works	47	1	89	1	(42)	(47)
Capital Expenditure	7,316	100	6,552	100	764	12

FINANCIAL POSITION

As at 31 March 2020, HDB's total assets amounted to \$87,441 million. Loans receivable were \$40,279 million. Property, plant and equipment, investment properties, and properties under development and for sale were \$42,546 million. Altogether these assets accounted for 95% of the total assets.

Capital and reserves stood at \$15,230 million as at 31 March 2020. Reserves comprised capital gains reserve of \$7,432 million and asset revaluation reserve of \$5,334 million.

The loans payable of \$66,205 million comprised mainly loans from the Government and bonds.



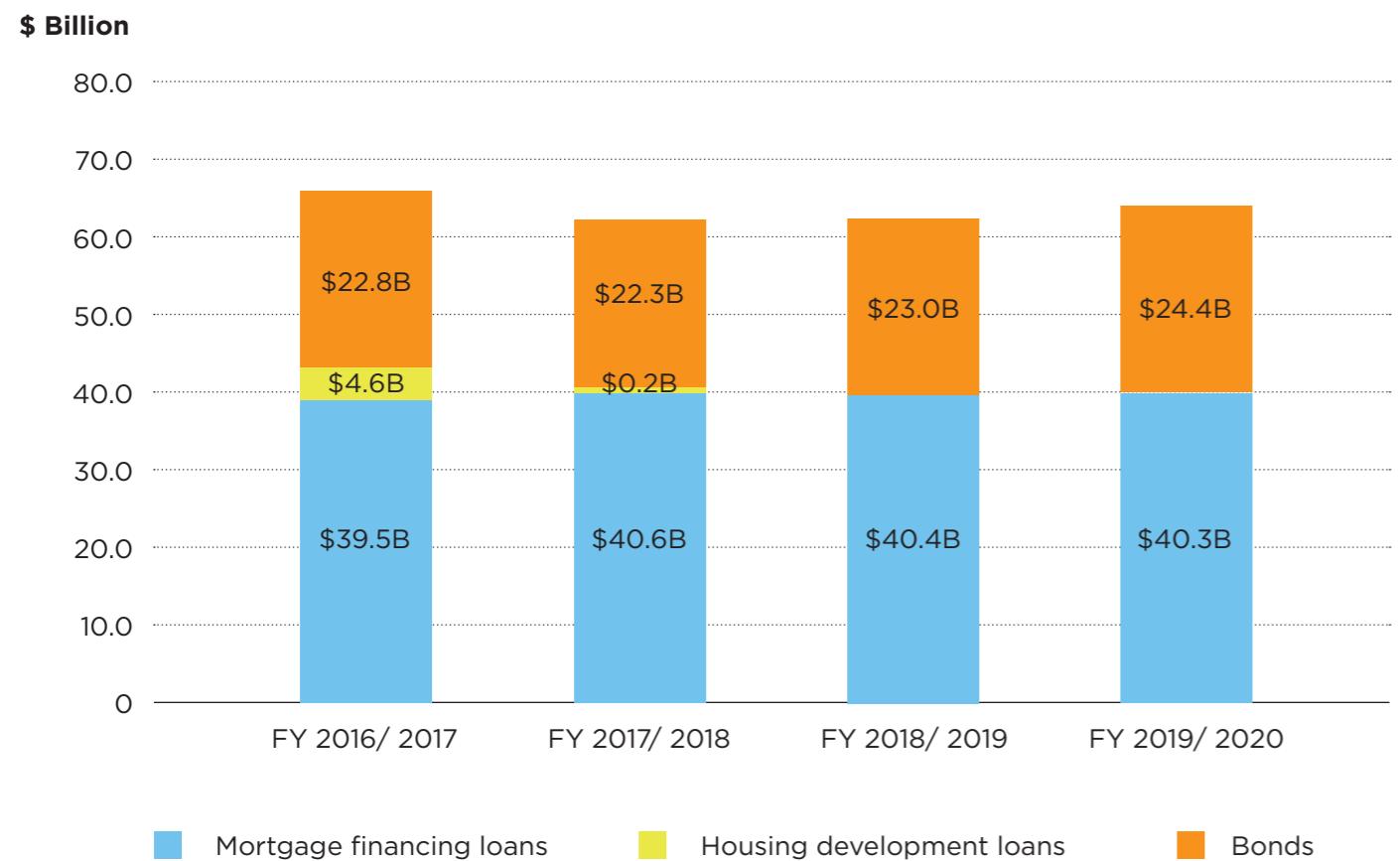
FINANCING OF PUBLIC HOUSING

HDB's annual deficit is fully covered by a government grant. In addition, HDB receives a government grant to preserve the capital gains attributable to past governments on disposal of the protected assets, in accordance with the Constitution of the Republic of Singapore. The cumulative government grants provided to HDB since its establishment in 1960 amounted to \$36,226 million.

The main loans which finance HDB's operations comprise:

- i) Mortgage financing loans that finance the housing loans granted by HDB to purchasers of flats under the public housing schemes.
- ii) Housing development loans that finance the development programmes and operations.
- iii) Bonds that finance HDB's development programmes, working capital requirements, and refinancing of existing borrowings. During the year, HDB raised \$3.20 billion and redeemed \$1.83 billion of unsecured Fixed Rate Notes. Total outstanding Notes under the Medium Term Note Programme was about \$24 billion as at 31 March 2020.

TOTAL OUTSTANDING LOAN



*Fulfilling **Dreams**, Building **Homes**, Creating **Communities***

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