

## Housing a Nation – The HDB Story

### 1. Background

The Housing and Development Board (HDB) was established on 1 February 1960 with the mission of providing quality and affordable public housing for Singaporeans. In February 2010, HDB celebrated 50 years of Public Housing, a milestone which encapsulates the success story of Singapore's Home Ownership Programme.

Singapore's public housing programme has come a long way. In HDB's initial years, the acute housing shortage that plagued the nation called for a low-cost housing model that could meet the housing needs of the people in the shortest time. Spartan by today's standards, this utilitarian housing model was however an improvement over the slums and rural settlements that homed many in the 1960s.

Today, more than 900,000 HDB flats shape Singapore's housing landscape. **More than 8 in 10 Singaporeans live in HDB flats, and more than 9 in 10 of them own the flat they live in.** HDB has delivered on its housing mission to provide more than just shelter and housing for Singaporeans. Over the last five decades, it has rapidly expanded the housing options to better meet the higher aspirations of a new generation of home owners. HDB flats now come with housing schemes and concepts that embrace lifestyle changes beyond just form and function. It has also launched sustainable and iconic public housing projects that push architectural and technological boundaries to inject greater variety and vibrancy.

With public housing a key pillar in Singapore's growth and stability, HDB has put in place sound estate management and housing policies and programmes to help upkeep and sustain the physical and fiscal values of HDB flats well into the future. **Constant renewal and rejuvenation programmes not only serve** to maintain high quality living standards but also help to re-energise communities. Whether it is the design of the built environment or the policies and programmes, fostering greater integration and interaction among residents to create a closely-knit HDB community is fundamental to HDB's mission.

Singaporeans today regard their HDB flats as not merely roofs over their heads, but also endearing homes where they can raise their families in, forge ties over generations and build strong, harmonious communities. **HDB homes have helped anchor Singaporeans and given them a stake in the country and a share in its future.**

As an organisation, HDB has **undergone many changes. Over the last 50 years, it has undertaken many roles and responsibilities** to fulfill its housing mission and vision to the greater benefit of Singaporeans. When the challenge came for HDB to pare down its wide-ranging responsibilities to better focus on its core functions, each change was expeditiously handled. When each HDB town needed to develop its individual character, the estate management function was transferred to local Town Councils in the late 1980s. In 2003, a major restructuring of the organisation re-focused attention back to its core business of providing homes and being a housing authority. Its building arm was corporatised and is now a successful private venture exporting public housing expertise world-wide. **Today, HDB, with staff strength of about 4,800, comprising 15 departments and 23 branch offices, is a fitter and stronger outfit with streamlined functions.**

Today, **HDB continues to plan, develop and renew public housing towns to provide Singaporeans with quality homes and living environments.** From planning and design to construction, and through allocation, management and maintenance, it adopts a total approach in housing a nation and fulfilling its vision to be:

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

with the following **mission**:

*We provide affordable homes of quality and value  
We create vibrant and sustainable towns  
We promote the building of active and cohesive communities*

## **2. Description of the initiative of “Housing a Nation – The HDB Story”**

For half a century, HDB has been providing homes for Singaporeans. The public housing programme did not merely provide physical shelter for the population, but has **contributed significantly to the economic, social and political development of Singapore.**

When Singapore attained self-government in 1959, it faced serious problems of a rapidly growing post-war population, high unemployment rate and a critical shortage of sanitary housing. Public housing provided by the colonial government was grossly insufficient to meet a booming population. **Less than 10 percent of the 1.6 million people on the island owned a home.** Many families lived in overcrowded slums and squatter colonies in unsafe and squalid conditions, with no sanitation, water or basic facilities. Social disharmony and frustration among the different communities of ethnic groups were strong, while riots and strikes were common.

### **Setting up of the Housing and Development Board (HDB) to spearhead Public Housing**

Responding to this crisis, the newly-elected PAP Government set up a new housing authority, the **Housing and Development Board**, in February 1960 to spearhead the provision of sanitary and affordable housing to the population. Public housing was the first priority for the new Government, and HDB received full financial, legislative support and political backing to carry out its mission.

HDB's immediate focus was to build as many low-cost housing units as possible, in the shortest time. It therefore designed basic but functional flats, with adequate living space, and equipped with piped water, electricity and proper sanitation. **Within five years, HDB built close to 55,000 flats, a remarkable feat with more than double what was constructed in 30 years under the colonial government. Within 10 years, the severe housing shortage was largely resolved.**

As HDB transformed the physical landscape, it also played a **pivotal role in our social development.** At the basic level, HDB helped the population to adapt to high-rise, high-density living, which was a drastic change from the previous single-storey attap houses in kampongs.

Initially, the flats were let out at low rents to families. However, to forge nation building and community development for a multi-racial society, the government decided on a policy of encouraging home ownership, introducing the **Home Ownership Scheme** in 1964. This gave Singaporeans a tangible stake in the country and a share in its future. With a valuable asset, it was reasoned that Singaporeans would then be prepared to fight to defend the young nation.

In 1968, the government allowed flat buyers to **use the savings in their Central Provident Fund** (a social security savings plan) to pay for HDB flats. This brought home ownership within the reach of most Singaporeans. Today, over 70 percent of Singaporean HDB flat owners service their housing loans from their CPF account, without the need for outright cash payments.

### **Formulation of Public Housing Policies and Schemes to support national objectives**

HDB created communities in modern self-contained towns. From the start, HDB estates were designed to promote neighbourliness and interaction among residents. Every town is comprehensively planned with facilities within easy reach, e.g. places of worship, neighbourhood shops, wet markets and hawker centres. As of end-March 2010, HDB manages about **890,000** residential units, 17,609 units of commercial properties and 12,491 units of industrial properties. Each precinct and block included flats of varying types and sizes, so that they would house a good mix of residents from different income and social groups. Common facilities like children's playgrounds, fitness corners and open spaces, encouraged residents to mix and mingle.

The shift to public housing in the new townships also helped to **promote racial integration.** Prior to this, the various races lived apart in different areas around the island. But as the Government cleared the slums and enclaves and resettled Singaporeans in flats, HDB introduced an ethnic quota for each

neighbourhood and block under the Ethnic Integration Policy (EIP). The underlying rationale for the policy was to foster a strong multi-racial nation and ensure a good ethnic mix in HDB housing estates, while still providing sufficient laxity and flexibility for the home owners.

HDB's efforts in providing **an inclusive home for all Singaporeans** have contributed to the creation of shared experiences in the nation. **Public housing has helped to build a unique national identity and collective experiences for Singaporeans.** Every true-blue Singaporean would have had supper at the corner coffee shop, attended a wedding at a void deck of an HDB flat or played a ball game at a nearby park. And, almost all marriage proposals in Singapore have started off with an application for a new HDB flat. The **HDB living experience** has created and shaped our communities, and provided the foundation for our **social stability and economic growth.**

### **Keeping up with different needs and rising aspirations**

Over the last 50 years, HDB has continued to formulate sound public housing policies and schemes, which not only support national objectives like racial harmony and strong family ties, but also meet the varied needs and aspirations of the people at different life-cycle stages. Singaporeans who qualify for an HDB flat can find a housing flat type or scheme to fit their different needs and pockets. From young couples setting up their first home, families, singles to the elderly wanting to age-in-place, carefully calibrated schemes helped prioritise housing allocation among those who qualify.

#### Young Couples

Young couples buying an HDB flat for the first time enjoy better chances of getting a HDB flat so that they can set up home earlier. Over time, with a more robust resale market, their chances have been enhanced to give them an edge over HDB flat owners applying for a second subsidised flat. At least 90 percent of flats are set aside for first time applicants who are given twice as many chances under the ballot over other applicants.

#### Multi-generational families

Enhanced chances are also given to married children who wish to live together with their parents or in separate flats near each other. Currently in place is the Married Child Priority Scheme (MCPS), giving such applicants double chances over other applicants.

#### Elderly

As society evolves, some elderly flat owners may prefer to maintain their independence while still living in close proximity to family and friends. The Studio Apartment (SA) Scheme (introduced in 1997) which has a shorter lease of 30 years makes good, practical sense for this segment of the population. They can get a place of their own in HDB estates where public amenities are easily accessible and enjoy the cash proceeds from the sale of their previous flat.

The latest in monetisation options for elderly flat owners is the **Lease Buyback Scheme (LBS)** launched in 2008. Under the scheme, HDB will buy back the tail-end of the lease of their flat, leaving them with a shorter 30-year lease and give them a monthly payout based on the remaining lease and a generous Government grant.

#### Needy Families

For smaller flats intended for the low-income, the income ceiling is set lower, at \$3,000 so that they need not compete with households with higher incomes. They also enjoy more subsidies in the form of grants given on top of existing housing subsidies. The Additional Housing Grant (AHG) to help them own homes has been recently enhanced, from \$30,000 to \$40,000 for those earning less than \$1,500 a month. Middle-income families will also benefit as the qualifying household income ceiling has been increased to \$5,000 a month.

For families who need to right-size their flat due to changing financial circumstances, the supply of smaller flats has been increased. In addition to those already offered for sale, about 4,000 new ones are expected to be completed over the next two to three years. For the truly needy, HDB provides highly-subsidised

rental flats under its Public Rental Scheme to eligible Singapore citizens, with monthly rents from as low as \$32.

### Singles

With changing norms and in recognition of their contributions to the country, the family-only housing policy has been eased to allow singles to buy a resale HDB flat in HDB estates. Further changes mean that singles have a greater choice of housing today, to help them meet their aspirations of owning bigger homes. They also get to enjoy grants and subsidies. Those who buy a resale flat with their parents will benefit from an enhanced grant – a move that also encourages unmarried Singaporeans to care for their elderly parents.

### More affluent families

Progressively, in response to changing lifestyles and growing affluence, from the 1980s onwards, bigger flat types - namely 4-room and 5-room flats have become standard housing fare. With the early flats that came with bare cemented floors, residents covered them up with cheap, colourful linoleum. With bigger budgets, house-proud owners of the flats that came after hacked their floors to re-lay new tiles and replaced the plain solid room doors with more decorative ones, in keeping with their interior design ideals. To reduce all this wastage and meet different needs, HDB subsequently reclassified its flats into two categories – Standard and Premium Apartments, with the latter offering special design attributes and better quality flat finishes. 'White Flats' without internal partitions were launched in 1999 to give owners the flexibility to tailor flat interiors.

HDB also introduced other innovative housing schemes that involved the private sector so as to inject greater variety and choice. The Design, Build & Sell Scheme (DBSS) has met with warm responses from flat buyers looking for something a bit more special.

Meeting the evolving housing trends and higher expectations also means that **HDB needs to come up with new and creative approaches.**

The result of an international design competition, The Pinnacle@Duxton is HDB's first 50 storey development with unique features like sky bridges, an integrated carpark, and a host of commercial and social facilities. The project has also been named the winner of Asia and Australasia's 'Best Tall Building' by the Chicago-based Council on Tall Buildings and Urban Habitat (CTBUH) in June 2010.

### Rejuvenation and Remaking of Our Towns

As HDB towns age and the demographic profile changes, rejuvenation becomes important to ensure their long-term sustainability. In this, HDB adopts a two-pronged strategy – upgrading and redevelopment. **Upgrading** involves improving the physical conditions of the precinct, the blocks and the interior of the flats to standards comparable to those in newer estates. The upgrading programme enhances the living environment and helps to sustain the value of the flats, without uprooting the residents from their familiar environment and community. **For example, the Neighbourhood Renewal Programme focuses on precinct and block level improvements while the Home Improvement Programme addresses common maintenance problems and provides systematic and comprehensive repairs within flats.**

**Redevelopment** entails redeveloping an existing housing precinct by relocating its residents to a nearby site and demolishing the existing flats. In 1995, we introduced the **Selective En bloc Redevelopment Scheme, or SERS**, as part of the Government's plan to rejuvenate and intensify development in older estates. Besides replacing old housing with new, the additional housing units developed also facilitates the injection of younger households to a mature estate to rejuvenate the ageing demographic profile.

This approach has helped to sustain the built environment as well as the communities living within it. It has allowed HDB to regenerate older public housing estates, keep the towns relevant, exciting and vibrant, whilst enabling the community to continue to grow. With nearly one-third of our flats built before the 1980s, there will be more flats reaching the 40 to 50 year age mark within the next decade. Estate renewal has therefore taken on greater urgency.

To enhance the renewal of our towns, HDB launched a major programme in 2007 - “**Remaking Our Heartlands**”. Under this programme, bold new plans were formulated to transform young, middle-aged and mature HDB towns into vibrant homes for Singaporeans. Pilot towns were selected to showcase how such broad remaking efforts could be applied. One of the pilot towns is Punggol – envisioned with attractive waterfront housing along a new waterway. Homes will be developed to be environmentally friendly as Punggol has been earmarked to be an Eco-Town to showcase HDB’s efforts in sustainable developments. And there will be a full slate of commercial and recreational facilities, towards realising the vision of Punggol as a “Waterfront Town of the 21st Century”.

### **Punggol as an Eco-Town**

Punggol is a coastal town located at Singapore’s northeast. From its humble beginning as a fishing village in the 19th century, it was developed into an agricultural area in the 20th century, with activities such as poultry and pig farming, as well as rubber and coconut plantations. One of the key developments in our 21st century Punggol vision is a new waterway traversing through the town. The opportunity for a waterway arose from plans to dam up two rivers bordering the town – Sungei Serangoon and Sungei Punggol – to form fresh water reservoirs. Instead of constructing a conventional drain or pipeline to balance the waters at the two new reservoirs, HDB worked with other government agencies and conceptualised a landscaped waterway meandering through Punggol.

To realise the concept of new waterfront public housing, HDB launched an International Housing Design Competition in 2008 to solicit innovative and new design ideas for high-rise public housing along the waterway, and to introduce new concepts and features in line with sustainable development. More than 100 firms participated, half of which were from foreign firms from as far as Spain, the Netherlands, Japan and Hong Kong.

HDB is also developing its **first Eco-Precinct**, named the **Treelodge@Punggol**. With its eco-friendly features that capitalise on nature and the use of green technologies, the precinct will create a green living environment and raise popular awareness of environment sustainability. Punggol will serve as a 'living laboratory' to test new ideas and technologies in sustainable development, integrating urban solutions to create a green living environment. R&D studies will be conducted to address the diverse expectations and changing aspirations of residents. Urban solutions in the areas of energy, waste and water management will be explored. Eventually, HDB hopes to lower the implementation cost of these solutions and to replicate them across other towns.

### **3. Main Partners**

#### Government and Ministry of National Development (MND)

HDB is one of five statutory boards under the Ministry of National Development (MND). In line with MND’s vision to create “An Endearing Home, A Distinctive City”, HDB works closely with MND to develop innovative housing policies and programmes, to ensure that every home is a part of the city. The government provides funding for the housing subsidies and grants.

#### Customers (Residential, Commercial, Industrial)

HDB serves 3 key customer groups. The first and major customer group is HDB **residents**. HDB offers a wide range of options to meet their varying needs. Hence, it is important that their needs are taken into consideration in the planning process. This is often done by way of **focus groups** with relevant customers. HDB also engages the residents through the **Sample Household Survey**, a five-yearly large scale survey involving interviews with about 8,000 HDB households and other **Customer Satisfaction Surveys** to better understand their changing needs and requirements. For example, HDB organises **Consultation Sessions** with the Advisors, Town Councils and residents on the provision of common facilities for their replacement precinct under the Selective En bloc Redevelopment Scheme.

Our other two customer groups are our **commercial property tenants** and **industrial property tenants**. HDB provides the business premises and infrastructure, tenancy and maintenance administration services for our tenants. There are several engagement strategies e.g. **POWER sessions** (Public Officers Working on Eliminating Red-tapes) to solicit feedback from its customers. These sessions are personally chaired by HDB’s CEO. The feedback and suggestions received have been effective in helping HDB to streamline

and relax our rules to better meet the needs of our customers and business partners. HDB also gathered feedback via regular **dialogue meetings** with tenants and the Federal Merchants' Association.

#### Suppliers and Partners from Other Agencies

In the development of public housing, HDB works actively in collaboration with many partners. They range from material suppliers, business consultants, building contractors, manufacturers, research academicians, banks to professionals from other Singapore government agencies e.g. Building and Construction Authority (BCA), Urban Redevelopment Authority (URA) etc.

HDB has a close working relationship with our partners and continue to grow the networks. For example, HDB also works closely with private developers who take part in our Design, Build and Sell Scheme (DBSS). Through this scheme, HDB involves the private sector in the development of public housing so as to bring about greater innovation in building and design. HDB continues to work with the universities and industry players in research and development.

#### **4. Impact**

Within five years of its formation in 1960, HDB was able to build close to 55,000 flats, more than double what was built in 30 years under the colonial government. And, within 10 years, it had largely resolved the housing shortage, completing the colossal task to house the nation.

Over half a century, HDB has housed a growing population and played an integral part in Singapore's nation building. Today, more than 8 in 10 Singaporeans live in HDB flats and more than 9 in 10 of them, own the flat they live in. In providing a roof over the head for Singapore citizen families, HDB has put in place a host of measures to ensure that the flat they own is not only a home but also their asset against inflation and a stock of value to unlock for old age. So successful is the Home Ownership Programme that it has become Singapore's national pride. The programme has earned HDB several prestigious international awards like the United Nations Public Service Awards 2008.

In designing towns to support a quality lifestyle, HDB has built infrastructure as well as planned for amenities and facilities to meet the full range of needs of an evolving first world society. In addition, every HDB estate was designed to promote neighbourliness and interaction among residents. The Ethnic Integration Policy for flat allocation has ensured a balanced mix of various ethnic groups in HDB estates and this has enhanced inter-racial harmony. Coupled with HDB's sound estate management strategies, the physical and the fiscal values of HDB flats have been sustained. In addition, constant renewal and rejuvenation have helped to maintain high quality living standards.

The Sample Household Survey 2008 which tracks changes in lifestyle patterns and satisfaction levels of HDB residents with HDB living, found that 85.8% of residents considered their flats of good value mainly because of the appreciation in flat value, good location, proximity to facilities and affordability. 96.4% of households were satisfied with their flats. **Residents' sense of belonging has also climbed steadily** over the years from 79.1% in 1993 to 98.6% in 2008. The **overall satisfaction level with the provisions of estate facilities has also increased** from 87.2% in 1998 to 94.4% in 2008.

The **HDB Story** is central to the Singapore Story, and the 'HDB Experience', a common point of emotional reference for the vast majority of Singaporeans. With its various "listening posts" like focus groups, feedback channels, surveys, dialogue sessions, seminars etc, HDB continues to engage its many stakeholders (partners) to better understand and meet their needs and wants.

Numerous heads of state, including royalty, Prime Ministers and Presidents, have beaten a path to the door of an HDB flat dweller and have been pleasantly surprised to be greeted by the high standards and quality lifestyles HDB residents enjoy. **(PI. refer to Annex C for some quotations by our esteemed visitors)**

HDB's achievements also compare well with international benchmarks e.g. affordability and living space per person. **(PI. refer to the Annex E5: Housing in Singapore still affordable)**

Best summed up, the impact of HDB's housing programmes are found in the praise given HDB by the Prime Minister Lee Hsien Loong at his 2007's National Day Rally Speech - **“No other city in the world can do this, public housing that is attractive, that is affordable, that is appealing, that gives a quality home for every citizen and gives you an asset which will appreciate in value and will provide for your old age.”**

## 5. Sustainability

Singapore is a small city, densely populated (close to five million people), with few natural resources and an open economy. Global problems, from the financial crisis to the threat of climate change, cast a large shadow on our small island nation. All the elements of a functioning state – our homes, offices, factories, power plants, parks, roads, reservoirs, airport – have to be located within these 700 sq km. At the same time, HDB needs to ensure that Singaporeans have a clean, green, and comfortable environment to live in. As the public housing authority, HDB plays a key role in spearheading sustainable development practices. Its key task is to find innovative ways to accommodate our people, taking the challenges into account. The principles of sustainable development have underpinned HDB's approach in discharging its mission to provide public housing and to develop towns and communities.

### Sustainable Public Housing in Singapore

HDB planned and developed homes that are affordable and sustainable, and which promote the building of a cohesive community. HDB's efforts in public housing may be viewed from three key dimensions of sustainability: **environmental, economic and social sustainability.**

#### Environmental Sustainability

Environmental concerns have been a major and constant consideration in the design of HDB towns and flats. This was a journey that started from the planning of the very first HDB towns. These towns are planned comprehensively to include major facilities to create a Work-Live-Learn-Play environment meeting the residents' daily needs. The holistic town planning approach takes into account the following three considerations:

**(i) Optimisation of land use** to overcome the constraint of land scarcity. In Singapore, this translates into high-rise high-density buildings, integrated with lush green areas and landscaping and a network of open spaces within the town to provide visual and spatial relief.

**(ii) Creation of a work-live-learn-play living environment (principle of self-sufficiency)** - Each town contains a comprehensive range of facilities, such as markets, shops, schools and community centres to provide convenience to the resident. It also reduces the need to commute.

**(iii) Integration of an efficient transportation network into the land-planning framework** to optimise our land-use and resource utilisation as a country.

Besides town planning at the macro level, HDB also developed **green strategies** for individual buildings. Design guidelines are developed to take into account Singapore's tropical climate. For example, the orientation of housing blocks, layout and design of dwelling units are designed to maximise cross ventilation and minimise heat gain. The choice of materials, design and construction methods are also carefully considered, as they have major bearings on buildability, resource consumption, and future maintenance requirements.

In Singapore, the Green Mark Scheme, a green building rating system, encourages the adoption of green building design and technologies. Under this scheme, buildings are assessed on factors including energy and water efficiency, indoor environmental quality and environmental protection. Singapore has set a target for at least 80 percent of its buildings to attain Green Mark certification by 2030. The Singapore Government is taking the lead in embracing the green mark standards for all public sector buildings. For its part, HDB has obtained the Green Mark Platinum (the highest green mark rating) for key public housing projects e.g. Treelodge@Punggol.

Research and development in green building technologies have also helped us to create green, sustainable homes for the future. Through HDB's Building Research Institute, HDB undertakes R&D on green building technologies and solutions to promote sustainable development in our estates.

#### Economic Sustainability

Our Home Ownership Programme must be **financially sustainable** over the long term, for the Government as well as the flat buyer. In spite of its coverage for over 80% of Singaporeans and the increasing scope of public housing over the years, Singapore has been able to keep its public housing budget within one percent of the GDP. This is achieved by a strong focus on financial prudence and targeted allocation of housing subsidies, with greater help for the lower income.

The majority of Singaporeans are able to service their mortgage loans for HDB flats over the long term, due to generous housing subsidies. HDB also provides loans at concessionary interest rates to Singaporeans buying their flats. In fact, most of our flat buyers service their mortgage loans using savings from their Central Provident Fund account, without having to dip into their take-home pay. In addition, HDB offers a wide range of flat types to cater to the various population segments with different budgets.

The various housing schemes and policies have ensured that HDB flats are affordable, within reach of the vast majority of citizens. Through home ownership, Singaporeans have acquired a hedge against inflation and a store of value which they can encash in times of need.

By allowing flat owners to share in the nation's growth through appreciation in value of their flats, the benefits of growth percolate to the lower income groups as well. Therefore, the extensive home ownership in Singapore not only contributes to the social stability of the country, but also creates a virtuous cycle for the economic development of Singapore.

#### Social Sustainability

Social sustainability is a further key consideration in public housing. One of Singapore's public housing objectives is to promote rooted-ness and social integration, set against the broader context of the building of a new nation. Our experience has shown that home ownership generates immense pride and a sense of belonging. Homeowners are more likely to take better care of their flats, sink their roots, and develop strong bonds with their neighbours and neighbourhood. This is really the first step in achieving sustainable communities.

Singapore is a multi-ethnic, multi-religious and multi-cultural society and we recognise that **social harmony threads all groups together**. One of our most fundamental public housing policies is the **Ethnic Integration Policy**. Implemented in 1989, the EIP seeks to prevent the formation of racial enclaves by setting the maximum allowable proportion for each ethnic group in every HDB neighbourhood and block. This ensures a balanced mix of residents of different ethnic groups to encourage interaction and foster cohesion. Through the public housing programme, members of Singapore's diverse society can share common experiences and forge a common identity.

Our public housing estates are also designed physically to promote interaction. In the planning of HDB estates, flats of varying sizes are provided within each precinct and block, so that households of different income and social profiles can live and interact. In recent years, we have actively encouraged community involvement in the upgrading of estates and the development of public housing. To promote community bonding and a sense of belonging, HDB solicits public feedback on various policies and programmes. Social ties are also fostered through local events such as community gardening and participation in grassroots events.

### **6. Transferability and Upscaling**

Singapore's successful public housing programme has generated keen overseas interest. HDB has received numerous visitors from developing and developed countries to learn about its housing policies, home ownership programme, town planning, evolution of flat design and estates and properties management. HDB shares its expertise and experience through hosting visits and training programmes for housing practitioners from both Singapore and overseas.

#### Hosting visits



Numerous distinguished foreign dignitaries, including the Queen of England, Prime Ministers and Presidents have visited HDB to better understand the public housing model that we have adopted. Other foreign dignitaries were from China, Republic of Ghana, Hong Kong, Thailand, Republic of South Africa, Australia, Indonesia, USA, United Nations etc. **(PI. refer to Annex B)** As of end march 2010, HDB hosted a total of 3,295 visitors in 168 learning visits.

#### Conducting Training Programmes

The training programme was customised to meet the needs of the foreign dignitaries e.g. Malaysian delegates were interested to learn about private sector involvement in public housing programme. Suzhou Industrial Park Officials were interested in keeping costs low for housing and municipal housing projects. Public Officers from Hong Kong were keen to learn about town planning, rental housing and maintenance management of estates.

In addition, there are on-going regular platforms to facilitate the transferability of our knowledge and best practices both locally and overseas. The Centre of Building Research (CBR) [previously known as Prefabrication Technology Centre] was set up since July 1995 to spearhead the use of prefabrication technology and conduct research and development. At CBR, skills and knowledge are imparted to building partners (both locally and overseas) through training courses.

#### Providing expertise for Overseas Projects

HDB also plays a key role in knowledge transfer for prominent overseas housing projects. For example, HDB was involved in the Master Planning of the Tianjin Eco-city as part of the consultant team. With 50 years' experience in developing HDB towns, HDB contributed to areas such as new town planning, neighbourhood planning and housing design. HDB also advised on housing policies, design and maintenance aspects of public housing within the Tianjin Eco-city with the aim of developing attractive affordable housing to foster social harmony. Perhaps providing testimony to the transferability of the HDB Story is an article in the Publication : 21st Century Business Herald, China (Guangzhou) (translated) - The Singapore Experiment: 85% of population living in HDB flats (Report by correspondent Tan Lu from Hong Kong Issue No. 670 dated 18 September 2007). In this article, the writer wrote that China domestic housing market can draw on the experiences of Singapore's public housing policy. **(PI. refer to Annex D2)**

### **7. Innovation**

*(As there are numerous innovations in these 50 years of Public Housing which are documented in the above paragraphs of this write-up), we will just highlight a few key ones in this segment)*

A key tenet in the success of **HDB's Home Ownership Programme** was policy innovation. The move from renting flats to encouraging Singaporeans to own their homes was no easy task. It required a **change of mindset** and finding a way for families to pay for a flat. The programme received a boost when the Central Provident Fund (CPF), a social security savings plan, eased the rules in 1968 to allow its members to pay for their HDB flats from their savings - up to 34.5 percent of a member's salary bringing home ownership within the reach of most Singaporeans. Today, over 70 percent of Singaporean HDB flat owners service their housing loans from their CPF account without the need for outright cash payments.

In providing a roof over the head for Singapore citizen families, HDB has also put in place a host of measures to ensure that the flat they own is not only a home but also their asset against inflation and a stock of value to unlock for old age. In designing towns to support a quality lifestyle, we have built infrastructure as well as plan for amenities and facilities to meet the full range of needs of an evolving first-world society. Moving on into the next lap, with the Remaking of Heartland plans promising to transform HDB estates into vibrant entities, HDB has committed itself to renew whole towns and create sustainable living environments.

And, all this is only made possible with constant innovation. **From policy to product to services, HDB has definitely taken a quantum leap.** Since the 80s, when the first prefabrication contract was awarded to build 3- and 4- room flats in Hougang, Tampines and Yishun, **prefabrication technology** is now indispensable in HDB's building programme. This innovation has greatly reduced dependence on manual labour and increased site productivity. A recent example is the **Prefabricated Ferrolite Partition Wall System** which was developed to provide a more sustainable and economical solution for internal partition walls. The usage reduces the amount of concreting materials required by 30% as compared to other partition walls. Currently, Ferrolite is fully implemented in all HDB projects and this system has also

received an endorsement as Singapore Green Label product by the Singapore Environment Council in 2009.

With innovative schemes like **Design, Build and Sell** introduced in 2005, HDB collaborated with the private sector giving more exciting housing choices to potential home owners. The **Lease Buyback Scheme** implemented since March 2009 is yet another policy/ service innovation which provides a monetization option for the elderly, allowing them to age in place with a steady income stream.

The **Pinnacle@Duxton** is an **iconic housing project** in Singapore's public housing history, with many unique features that set it apart from other HDB housing projects. Located at the site where the first two HDB blocks in that area were built, it is the **first 50-storey public housing project in Singapore**, housing 1,848 apartments in 7 towering blocks. It is also the first in the world with **2 unique skybridges** linking the 7 blocks at the 26th and 50th storey. The skybridges create possibly the longest continuous skygardens in the world, offering panoramic views of the city skyline. Besides the innovative and eye-catching skybridges, it boasts an interesting façade created by a circuit board-like arrangement of bay windows, planter boxes and balconies.

The **Treelodge@Punggol**, HDB's **first eco-precinct** was launched in 2007, incorporating **innovative green energy and water technology**.

## 8. Recognition of the Initiative

By delivering quality and excellence, HDB has received both local and international recognition for its public housing programme as well as its organisational strengths. In 2010, the organisation garnered the Public Service Premier Award for having attained specific national and international benchmarks for excellence. The award is a culmination of HDB's achievements so far, which include the Singapore Quality Award (Special Commendation), People Developer Standard, Singapore Innovation Class (S-Class and I-Class) and ISO 9001 certification.

Other award feats include the Singapore Quality Award (SQA) with Special Commendation (2008), the highest level national award in recognition of Business Excellence, the United Nations Public Service Award in June 2008, the Distinguished Public Service Award 2008 for organisational excellence and the World Habitat Award by the United Nations in 1991. **(PI. refer to supporting documents in Annexes A-F)**

## Conclusion – Meeting Key Challenges

HDB is an organisation which was tasked to solve a housing crisis in its early days, which later evolved into its present-day mission to provide affordable homes and create vibrant and sustainable towns and communities. HDB's journey, with its challenges, struggles and achievements along the way, mirrors the nation's transition from the third world to the first, and is closely intertwined with Singapore's development story.

Looking ahead, HDB will face key challenges due to **shifting demographics and changing aspirations**. An aging population would require further innovations in housing policies and building design. With factors such as the influx of more new citizens through immigration, rapid globalisation and rising affluence, housing provisions will have to evolve to accommodate a more diverse population alongside national integration efforts to build cohesive communities.

With the need to build new towns and rejuvenate mature towns, HDB also has to balance the **impact of growth on the environment and the need for sustainable development**. **In this area, it will play a leading role to drive sustainable initiatives as public housing forms the majority housing.**

Within 50 short years, HDB has transformed Singapore's physical and social landscape. It has renewed and rejuvenated mature towns, built communities, ensured a sustainable environment for generations to come, and provided for the needs of a wide spectrum of the population. Given its vast storehouse of experience and expertise, its role would continue to be vital to the national vision to build a distinctive city and an endearing home for all Singaporeans.