

# Major Challenges for Housing Development in the Next Millennium

*Tan Guong-ching*  
Chief Executive Officer  
Housing & Development Board  
Singapore

## 1 Introduction

### 1.1 The New Millennium

We have all been anticipating the new millennium for a while. Our immediate concern is to ensure that we are able to make that critical crossover into the new future, and to prepare as best we can for all its exciting possibilities.

But, despite some of the most elaborate plans and preparations, things may not happen the way we had planned. The recent Asian financial crisis is a good example of how the best laid plan can be thrown into disarray.

And assuredly, in the new future of the new millennium, sudden and rapid changes will be the only certainty. Along with the incredible speed at which technological advancements are reconfiguring the world, new patterns of working and living will emerge from the social deconstruction that will inevitably ensue. With political and economic pressures being additional agents of change, it will be difficult to say how the tide will turn, ebb and flow.

However, looking at our particular area of emphasis - public housing - the course ahead appears more certain. The reasons for my hopeful outlook are anchored in the important reality of the competencies we have built up not only in the physical aspects of housing skills and expertise, but also in our in-built drive and determination to succeed.

### 1.2 A Perspective of Singapore's Public Housing

Singapore's public housing programme began in 1960, in the midst of a severe housing shortage. Responding to the crisis, the country's newly-independent Government formed the Housing & Development Board (HDB) to spearhead the mission to bring clean and decent homes to the population as quickly as possible. Public housing was to constitute one of the main engines of Singapore's economic and social stability.

HDB rose to the challenge and went beyond the mere provision of basic housing. In just under four decades, it has built 800,000 public housing units and award-winning model towns and estates. HDB today houses 86% of the country's resident population of 3.1 million. Of these households, more than 90% own the flats they live in.

While these are commendable achievements for any country, Singapore's small physical size does not allow us to rest on these laurels. With an area of only 648 square kilometers, Singapore has one of the highest overall population density in the world at 4,800 persons per square kilometer. While the population is still expected to grow, the land supply is limited.

However, any measure to circumvent our space limitation must consider other important factors as well. They go beyond the physical structures to include the whole spectrum of activities that relate to the quality provision of affordable and accessible housing for the majority of Singaporeans.

The central issue is the fact that Singapore is a nation of many races, of diverse cultural backgrounds. Hence, our public housing programme must conserve this unique social structure. It must strive for balance and harmony in its policy and housing approach so as to accommodate the various interests of the different communities. Singapore is also a rapidly developing country whose citizens are fast acquiring a modern, cosmopolitan outlook yet, they are traditional and conservative in many ways. Our architects of public housing must therefore adapt to these changing norms to keep apace.

The pressure of a future ageing population where one in four Singaporeans will be aged above 65 in about 30 years time, has also become a pressing issue of concern today. New solutions are thus required to cater for their special needs as well as the needs of other emerging groups.

In the next millennium, these basic drivers of Singapore's public housing programme will continue to compel us to re-think and re-fine our approaches to public housing as we search for new answers to

tomorrow's problems.

## 2 Interpreting the Challenges

In a tight land situation, HDB has opted for high-rise, high-density housing to optimise housing yield despite real concerns that massive concrete jungles can be an unplanned and unpleasant consequence.

Nonetheless, through bold ideas and initiatives, it has made this housing form viable and sustainable not just for the individual, but also for the community. By careful planning and foresight, it has created attractive and highly liveable public housing towns. And through sensitive design and perceptive interpretation of form and function, it has transformed public housing flats into castles in the sky for their occupants.

However, will this approach, the backbone of our public housing success, prove adequate for the impending future? Will it continue to offer a sustainable solution to meet the higher demands and loftier aspirations of the next generation of HDB flat dwellers?

### 2.1 The First Challenge - Predicting Outcomes

Predicting future outcomes is a tricky business, yet it is a necessary step to ensure success. Because we will be moving into a new and largely unknown future, I believe this has to be the first millennial challenge for housing development - as it would be also for every endeavour of major social, economic and political significance. For HDB, we have found it useful to clarify our perspective by looking for the future through the prism of past and present trends.

#### *Five Developing Trends*

From the findings of our HDB Sample Household Survey, we have discerned five developing trends that we believe will have a major impact on our future housing plans and directions.

Firstly, we note that the population living in HDB towns has increased, with more than 90 percent living in home ownership flats. This was a planned outcome, as home ownership has been successfully suggested as the foremost means for Singaporeans to own an asset and a future in the country.

Secondly, the HDB population are also moving into bigger flats. In 1993, the largest proportion lived in 3-room flats. Today, the 4-room flats house the largest proportion of the HDB population. The percentage of those living in 4-room and bigger flats has also increased.

Thirdly, the HDB population are also becoming more affluent. The mean household income for all flat types is S\$3,700, with the top end flat owners earning correspondingly more, at S\$6,600. The household size, on the other hand, has shrunk. For the first time, it fell below the mark of four persons. In 1968, the mean household size was 6.2 persons compared with 3.7 persons today, reflecting a 40 percent contraction. The reduction applies to all flat types, although it is most marked among the smaller flat households.

Fifthly, the survey shows that the percentage of the elderly population in public housing has increased by 1.5 percent over the last five years, and with this increase, the total elderly population in HDB towns is now 7.2 percent. This finding corroborates the outcome of a national study on the aged.

#### *Important Implications*

We see at least three major implications arising from these developing trends. In many ways, they are interrelated as the issues are basically conjoined.

##### *i) Greater Self-Expression*

The increase in home ownership will ultimately bring with it certain demands. As demonstrated in other areas of life, ownership will inevitably evolve into expectations for more active community involvement and greater expressions of territoriality and identity.

##### *ii) More Flexible Options*

With the trend towards decreasing family size and increasing preference for bigger flat types as well as the increasing affluence of HDB residents, lifestyles and aspirations may be elevated to the point where the present range of housing forms and choice might not be able to fully satisfy. To accommodate these changing family and individual situations and interests, public housing of the future must be ready to offer a range of flexible and customised options.

##### *iii) Specialised Housing for the Elderly*

Solutions must be found to meet the special needs of the elderly for assisted care and housing. Singapore has already convened an inter-ministerial committee on ageing population to devise an

integrated approach. On the part of HDB, provisions for its elderly population have become an on-going challenge. Policies and flat designs have been consistently directed to cater for their special needs. The latest is the introduction of a pilot Studio Apartment Scheme that offers elderly HDB lessees the choice to sell their existing HDB flat and purchase these smaller, customised housing to take advantage of the cash profits as well as the comforts of this new housing form. However, further studies and feedback are necessary to ensure that the needs of the more educated and more affluent elderly of the future can be better met.

## ***2.2 The Second Challenge - Strategising for Success***

Having identified these three scenarios of the future, the next logical progression is to consider the goals to work towards. Sifting through the various issues and establishing the critical ones for serious consideration are onerous tasks, but integral to any successful undertaking. HDB has identified six goals as important to its corporate strategy to bring the organisation and its public housing mission into the new millennium.

### ***Refocusing Policies and Programmes in a Changing Market Environment***

HDB's housing rules and policies are centred on the family unit, it being the bedrock of our society. However, we do adjust our policies where appropriate so as to accommodate the needs of the singles, and also dysfunctional families when it becomes necessary to do so.

Within this broad framework, HDB's home ownership policies have helped eligible families to own their own homes. Highly successful in this area, we are now focusing greater attention on helping low-income families become homeowners. Taking a multi-pronged approach, we offer a range of assistance schemes to accommodate the different financial situations of these families. Our most recent addition is the Rent & Purchase Scheme aimed at larger families who need more room but lack the financial ability to make that leap into a bigger flat.

Another area that requires careful monitoring concerns the policies that prescribe the ratio of government subsidy to first-time homeowners and upgrades. Arising from this, we introduced the One Concessionary Loan policy to forestall profiteering as well as stabilise the market for new and resale flats. In the past year also, we made revisions to the mortgage financing policy to help those affected by the regional economic downturn.

What these moves foretell is the increasing flexibility of HDB's housing responses and responsibility towards its customers. In the millennial future, our housing policies will continue to uphold the family unit, but rules will be rendered more responsive to changing family ties and situations.

### ***Building to Meet Demand***

The building block of our housing programme is our rolling five-year plan where construction targets are set and reviewed to meet market demand.

In the first decade, the building programme sought to provide homes as quickly as possible to solve the housing crisis. In the second decade, with the crisis well behind us, attention turned towards constructing comprehensive new towns and homes of increasing quality. In the third decade, creating attractive town identities and convivial urban settings became a goal that was as important as meeting the high demand for HDB home ownership flats. In the nineties, the fourth decade, with stability restored to the market, renewed attention to quality and aesthetics became top priority as Singaporeans grew more sophisticated in their choice of home and lifestyle.

Today, a new pattern of demand has emerged and will most likely persist into the next millennium. Arising from the aspirations of Singaporeans for condominium lifestyle living, other forms of private leasehold housing have been introduced that have taken some of the urgency off new public housing flats. Consequently, we are now targeting to adjust the building programme. We perceive this to be a good thing, as it will allow us to focus on the finer aspects of building excellence. It will also mean a more varied and interesting housing environment as many of these new private sector housing are sited within or in close proximity to HDB towns.

### ***Harnessing Technology for Construction Innovation***

Buildable design is essentially about ease of construction, and it is the hallmark of HDB's building projects that has enabled us to succeed on such a massive scale.

Since the early seventies, standardisation has been an integral component of our construction planning and design. But the impetus for more exploitative use of modern methods of construction came when we decided to embark on a large-scale prefabrication programme. Today, we have carved a leadership position in this field. The level of precast content in our public housing construction has increased to 30 percent, double the figure achieved 10 years ago. Because of our high construction volume, we have

helped to stimulate demand for a wide range of standardised precast components, and demonstrated their cost-effectiveness vis a vis cast-in-situ construction. In terms of quality and creative value, we have also proved these to be highly achievable.

By setting up our own Precast Technology Centre, we hope to spearhead research and innovation and assist the construction industry to move more aggressively into the new millennium. In this future expectation, we are supported by the government's vision for Singapore's construction industry to be a world-class builder.

### ***Renewing Towns and Communities***

It is an inevitable fact that housing developments deteriorate with time if little is done to arrest the decline. Not only do the physical structures begin to show signs of wear and tear; even the communities come under threat as families move out into newer towns that can better meet their needs. As public housing is important to Singapore's overall well being, the government has implemented a comprehensive Estate Renewal Strategy.

Under the umbrella of estate renewal, there are three major programmes to assure the future viability of HDB's towns. They are the Main Upgrading Programme, the Interim Upgrading Programme and the Selective En Bloc Redevelopment Programme. Each in its own prescribed way systematically upgrades the physical environment, either by sprucing up existing developments in selected precincts or redeveloping sites for new housing. In enhancing the physical, they are also aiming to enhance opportunities for greater community bonding.

Feedback from the families living in these upgraded and redeveloped precincts affirm that the renewal programmes are fulfilling their objectives. The resale values of the upgraded homes have gone up and with new facilities and amenities and the young less inclined to move out, the towns and precincts have become livelier and community ties stronger.

Master plans incorporating these renewal programmes have been drawn up to provide for more coordinated and comprehensive redevelopment of the older towns. New institutional, commercial, social and business opportunities will be added to inject greater economic and social vibrancy, thus bringing these towns up-to-date with the latest developments in the new millennium.

### ***Enhancing Corporate Performance through Information Technology***

An increasingly wired world offers opportunities undreamed of in the past. Faster response time, more effective service delivery, enhanced communication are all the beneficent results of Information Technology. Although HDB is rated one of the foremost proponents of IT, in the new millennium, we see ourselves engaging in a greater array of systems and applications to strengthen our corporate performance and customer links.

IT has been integral in helping us achieve indisputable results in many areas of corporate performance and functions. IT systems totaling more than 100 applications provide customer on-line access to a wide range of services and information. They include HDB's internet website services and a range of enquiry services on resale and new flat applications. Internally, an integrated office system connects staff to a board-wide data network for speed and productivity. HDB has also invested heavily in computer systems such as the Computer Aided Design and Drafting System and is one of the regions' largest users. Investments in software development through joint collaborations have also yielded productive results in areas like the analysis, design and detailing of structural elements.

Inevitably, IT will be the main means of business communication in the new millennium. HDB's use of this cyber technology will become increasingly prolific as it gears up to deliver higher standards of customer service and performance.

### ***Becoming a Cutting-edge Organisation***

To be a premier developer of quality homes that residents and staff would be proud of is a corporate vision that HDB has spelt out for the new millennium.

To become a cutting-edge organisation that such an aspiration entails, firstly, we must strive to be an employer of choice and carve out a reputation for excellent human resource development and relations. The need to become more knowledge-driven will become an imperative and hence, staff empowerment through training and development will be our core emphasis.

Secondly, we must deliver consistently high standards of customer service and performance that other organisations talk about. With quality a major driver of corporate excellence for most organisations, we have also mapped out an integrated approach - the Customer-Driven Mission Achievement Process, which will provide the central focus for all of HDB's quality programmes and initiatives.

And thirdly, we must offer the best value-for-money housing without compromising on quality or effort. This is where training, teamwork, quality, productivity and cost-consciousness have become more than just buzzwords for HDB. They are the core values by which we live in pursuing organisational excellence. They will also be our watchwords for the future.

## **2.3 The Third Challenge - Creating**

### ***A New Vision***

We know now that we need to predict future outcomes and strategise their actualization, but the work is far from complete until we have a specific plan and vision that is able to coalesce these elements of success.

To bring public housing to new levels is our next higher goal and ideal, arising not from a masochistic drive to push ourselves to the outermost limits, but primarily because it is the next progressive step in housing development and a logical response to rising aspirations and expectations. We have already begun to map out our directions in this manner, starting from the baseline of creating a fully integrated and total living environment in a futuristic new town.

### ***A Total Living Environment***

The idea of a total living environment has evoked a variety of responses and definitions that adapt themselves to the unique situations of different countries and communities. Many planning models have emerged as a result of the innovation and creativity of human society in its search for the ideal city, town and habitat.

Singapore's public housing towns are held out as a worthwhile model for emulation. In 1991, one of its new towns, Tampines, won the United Nations World Habitat Award for the comprehensiveness of its planning approach and vitality of its community life and housing form. Yet, nothing can remain static and immutable for long simply because things change. Social and other pressures will re-shape our familiar notions of town planning and housing design, form and function.

Hence, in the new millennium, we believe that providing for a total living environment will entail more than just achieving an optimal mix of housing, recreational, commercial and industrial and institutional land uses within a defined space although these elements will continue to be equally valid. Instead, it will require a fuller integration of lifestyles with their urban settings. Thus, the HDB town of the 21st Century must be capable of supporting a far greater range of activities and catering for a broader diversity of lifestyle choices.

### ***The 21<sup>st</sup> Century Town***

Punggol 21 started out as an ideal to fulfil the expectations of the 21st Century town we had envisaged. It was to be promoted as the right place to raise families and build communities and the showcase town for our new towns of the future. Hence, all the elements that comprise the ideal town were set firmly in place - comfort, convenience and community.

Bold ideas and attractive, new features will set Punggol 21 apart. From a planning perspective, it will offer a more intimate scale of community living. While HDB has been successfully developing towns based on the concept of neighbourhoods of 5,000 to 6,000 dwelling units, smaller clusters of not more than 3,000 dwelling units will form mini-estates of their own in the Punggol 21 Town complete with their own common green.

Housing forms and types will also offer a more exciting mix. As Punggol 21 is planned to meet the rising aspirations of new homeowners, there will be a choice of private and public housing, low-rise and high-rise dwellings. About sixty percent will be public housing, of which a great majority will be the high-end designs.

Recreational facilities will take advantage of the town's unique location and configuration. Because Punggol 21 Town has an extensive water frontage, a variety of outdoor recreational activities and facilities will be developed along its 15-kilometre coastal promenade. They include beach clubs, marinas and seaside villages as well as a waterfront park. And on the small islet that fronts the town, a 50-hectare regional park will offer camping grounds, chalet facilities and a centre for sea sports.

The town centre and other smaller shopping hubs will provide for residents' shopping, leisure and entertainment needs with their extensive range of shops, restaurants and cineplexes. Getting around this 21st Century town and all its attractions will also be highly convenient as it will be served by a light rail transit or LRT system that ensures that all its stations are a comfortable walking distance from most homes. The LRT system will also interface seamlessly with the North-Eastern Mass Rapid Transit Line, which will connect it up with the city centre and other towns.

With the smaller housing clusters, wider variety of recreational pursuits and greater opportunities for social interaction, family and community life in this 21st Century Town is expected to be more vibrant. The presence of clusters of community facilities such as libraries, places of worship and social institutions will further facilitate the growth of strong community ties and bonds.

### **3 Conclusion**

The challenges to public housing are many and varied, and over the years they have undergone several transmutations. In the past, they centred on creating sufficient housing units and persuading an apprehensive public to accept modern, high-rise living as a better alternative to their old homes and lifestyles. We have shown how HDB has managed to overcome these obstacles by meeting both the physical and social needs of its residents.

In contrast, the current challenges test our ability to respond efficiently and effectively to market forces of demand and supply as well as our competency in enhancing product quality and service standards. In these areas, we have also shown how we have harnessed technology and human creativity to exploit the advantages to the maximum possible for the benefit of our customers.

In the future, we expect the challenges will demand from us more individualised and customised responses because of the increasing sophistication of the public. Better educated and more affluent, the future HDB public will want housing that fits into their particular lifestyle and an environment that allows them greater self-expression and a deeper level of community involvement.

Hence, we have to ensure that the HDB of the future would be able to meet these challenges. We expect to become more focused yet more flexible in our housing approach. We also aim to be more market-oriented yet able to stay above its fluctuating vagaries.

Given such demands, the need for focus, strategy and flexibility is essential in designing a public housing programme for the future. We have shown how we attempt to meet this challenge by envisioning a future outcome. We have also shared the need to deploy the right resources and energy to achieve the planned outcomes. Finally, by sharing the planning ideals of our 21st Century town, we hope to show how vital it is for public housing policy makers and practitioners to adopt a bold and experimental outlook.

In the new millennium, in order for public housing to continue to succeed, public housing authorities will have to be more than just anticipative of needs and demands; they need to be creative in approach as well, not merely survivalists, but innovators, creators and leaders in their fields.

*©1999 Housing and Development Board, Singapore*

*All rights reserved. No part of this paper may be reproduced, distributed, published, or transmitted without the prior permission of the copyright owner.*