

## Long-Term Land Use Planning In Singapore

### Introduction

The Singapore government has a well-deserved reputation for its long-term, forward looking approach to land use planning, earned largely because of its success in transforming the island-state from a chaotic ‘third-world’ country without adequate housing, basic sanitation and infrastructure in the 1960s, to the gleaming, efficient, well-run city it is today.

In recent years however, Singapore has experienced rapid population growth, largely due to immigration. As infrastructure growth could not catch up, the planning system was “thrown out of gear”<sup>1</sup> creating an unprecedented infrastructural crunch. In Mass Rapid Transit (MRT) stations, dense crowds would gather on the train platforms during peak hours, unable to squeeze onto the overcrowded train carriages. At the same time, house prices rose faster than income growth, due to a combination of the global liquidity glut, low interest rates, as well as public housing shortages.<sup>2</sup> As the rapid increase in numbers of foreigners introduced unfamiliar frictions into Singapore’s societal and political fabric, public dissatisfaction grew.

In response to growing public concerns over the long-term viability of its population policies and liveability of the island, the Singapore government formulated and released a Population White Paper<sup>3</sup> titled “A Sustainable Population for a Dynamic Singapore” in January 2013. This paper was presented as “a necessary relook” at the responses needed to tackle the various challenges that had arisen. At the same time, the White Paper set out to address a demographic challenge that Singapore faced: an ageing population coupled with extremely low fertility rates

The policy roadmap set out in White Paper was described as a *major shift* in policy where the rate of workforce and population growth would be slowed, compared to their recent trajectories.<sup>4</sup> Key proposals from the White Paper included more generous incentives to

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<sup>1</sup> Teo Chee Hean, Opening Speech at the Parliamentary Debate on Population White Paper, 4 Feb 2013, <http://www.straitstimes.com/sites/straitstimes.com/files/DPM%20Opening%20Speech%204%20Feb%202013.pdf>

<sup>2</sup> Khaw Boon Wan, 2013 Budget Debate, “Shaping Housing Policies Together”, [http://www.mnd.gov.sg/budgetdebate2013/speech\\_kbw.htm](http://www.mnd.gov.sg/budgetdebate2013/speech_kbw.htm) (cited 4 Nov 2013)

<sup>3</sup> A White Paper refers to a policy document issued by the Government to explain or discuss matters. White Papers are often presented for debate in Parliament. Source: <http://population.sg/whitepaper/resource-files/population-white-paper.pdf>

<sup>4</sup> Teo Chee Hean

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This case has been written by Tan Shin Bin under the guidance of Donald Low, Lee Kuan Yew School of Public Policy (LKY School), National University of Singapore and has been funded by the LKY School. The case does not reflect the views of the sponsoring organisation nor is it intended to suggest correct or incorrect handling of the situation depicted. The case is not intended to serve as a primary source of data and is meant solely for class discussion.

encourage Singaporeans to have children, and for Singapore to take in a controlled stream of new citizens and Permanent Residents to counteract the effects of an ageing population. The White Paper also envisaged a larger proportion of Singaporeans taking on Professional, Managerial, Executive and Technical (PMET) jobs, thereby creating the need for additional foreign workers in lower-skilled jobs. At the same time, high-skilled immigrants would also be needed to provide skills, expertise and access to new markets. The government would also plan Singapore's infrastructure developments well in advance, and implement them in a timely and effective way, with a buffer built in where possible.

The Population White Paper estimated a population of **6.5 to 6.9 million** people<sup>5</sup> by 2030, based on anticipated birth rates, life expectancies, as well as the need for immigration and foreign labour based on the country's social and economic needs. In tandem with the Population White Paper, a forward-looking Land Use Plan was presented to the public, which articulated the government's proposed land use and infrastructure development strategy to support a population of 6.9 million by 2030.

Besides being a technical 'blue print' to guide the physical development of Singapore, the Land Use Plan could be read as an attempt to assure the public that a Singapore inhabited by 6.9 million would still be comfortable and liveable. The Land Use Plan report thus set out to show how the additional housing, facilities and amenities required would be accommodated within Singapore's limited area, and also spelt out the various improvements in transport infrastructure that would support such growth. It reassured readers that "together, we can build a high quality living environment for all Singaporeans, an outstanding city which we can all proudly and fondly call home"<sup>6</sup>.

Despite best intentions, the reactions to the Population White Paper and the accompanying Land Use Plan proved negative. The local blogger sphere and online forums exploded with critical articles and strident comments that accused the government of being irresponsible in opening the country up to yet more foreigners, of prioritising economic growth above all, and of generally being deaf to its citizens' wishes and needs.<sup>7</sup> Over the course of a five-day long parliamentary debate on the Population White Paper, members from both sides of the House raised similar concerns about Singapore's future quality of living should the Population White Paper roadmap be implemented. More dramatically, public protests were organised, which garnered attention in international press because of the rarity of such occurrences here.<sup>8</sup>

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<sup>5</sup> This would consist of 3.6 to 3.8 million citizens, 0.5 to 0.6 million PRs, and a non-resident population of 2.3 to 2.5 million.

<sup>6</sup> A high quality living environment for all Singaporeans: Land Use Plan to Support Singapore's Future Population, Jan 2013, Pg 68, <http://www.mnd.gov.sg/landuseplan/e-book/>

<sup>7</sup> Fann Sim "Fury over 6.9 million population target for Singapore", *Yahoo! Newsroom*, Jan 30 2013, <http://sg.news.yahoo.com/fury-over-6-9-million-population-target-for-singapore-103503070.html> (cited 21 Oct 2013); Kate Hodal, Singapore protest: 'Unfamiliar faces are crowding our land', *The Guardian*, Feb 15 2013, <http://www.theguardian.com/world/2013/feb/15/singapore-crisis-immigration-financial-crisis> (cited 21 Oct 2013); Example of criticism: <http://sg.news.yahoo.com/blogs/singaporescene/why-oppose-white-paper-nicole-seah-015700474.html> (cited 21 Oct 2013)

<sup>8</sup> R.C., "To the Sudden Field!", *The Economist, Banyan Asia*, <http://www.economist.com/blogs/banyan/2013/02/protest-singapore>; Alex Au "Five thousand gather to protest

While much of the public angst centred on the perceived economic and social downsides to increasing foreigner numbers (i.e. greater competition for jobs, lowering and stagnation of wages, fears of being displaced), many also voiced fears of a physically more crowded Singapore, and concerns that even after improvements, the urban infrastructure would not be able to shoulder the increased demands arising from a larger population. These concerns, coupled with the oft-heard refrain that the government should fix the current infrastructure problems first before planning for further increases<sup>9</sup>, indicated a great deal of scepticism that the proposed Land Use Plan could deliver on its promises of a better living environment.

The events leading up to the Population White Paper, and the subsequent public uproar over the government's proposed population policy roadmap and Land Use Plan raised key questions about the efficacy of long-term land use planning in Singapore. This case looks to examine whether Singapore's long-term planning over the years has been effective, and also explore how and why it may have fallen short.

### **Long-term planning in Singapore: What is it?**

Long-term, forward-looking planning is firmly entrenched as an integral part of Singapore's land use development process. Singapore's Concept Plan, a strategic, long-term land use and transportation plan drawn up to guide the city-state's development over the course of 40 to 50 years, is reviewed every decade.

As its name suggests, the Concept Plan is conceptual; the finer details of precinct design, precise land-parcel configuration, zoning or even plot ratio are thus not spelt out. Rather, the Concept Plan maps out a structure for Singapore's urban development on a broad, island-wide basis. For instance, it proposes the location of future housing, commercial, industrial clusters, as well as where major infrastructure projects (e.g. the MRT Network, reservoirs) will be needed and provided. Green spaces (e.g. Nature Reserves and Nature Areas, parks and open spaces) are also safeguarded. **Exhibit 1** shows the latest Concept Plan that was published in the 2013 Land Use Plan report.

The Concept Plan process has its roots in rational planning<sup>10</sup>, where analytic thinking is used to formulate a plan that, through data analysis, modelling and forecasting, is assessed to be able to achieve set goals and objectives. A 'demand side' approach is adopted, utilising future economic growth and population estimates (see **Exhibit 2** below) to ascertain future demand

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population White Paper" , *The YawningBread*, <http://yawningbread.wordpress.com/2013/02/17/five-thousand-gather-to-protest-population-white-paper/> (cited 21 Oct 2013)

<sup>9</sup> Example of comment on Straits Times article "High Quality of Life still possible with larger population, Khaw" Jan 31 2013: "Honestly, no point making big plans about the future when the current infrastructure, although improving at snail's pace (paid by taxpayers' monies) still leaves much to be desired" MP of Tanjong Pagar, Tin Pei Ling also highlighted a similar point in her Parliamentary White Paper speech. Source: <https://www.facebook.com/tinpeiling.official/posts/502981183077114> (cited Nov 8 2013)

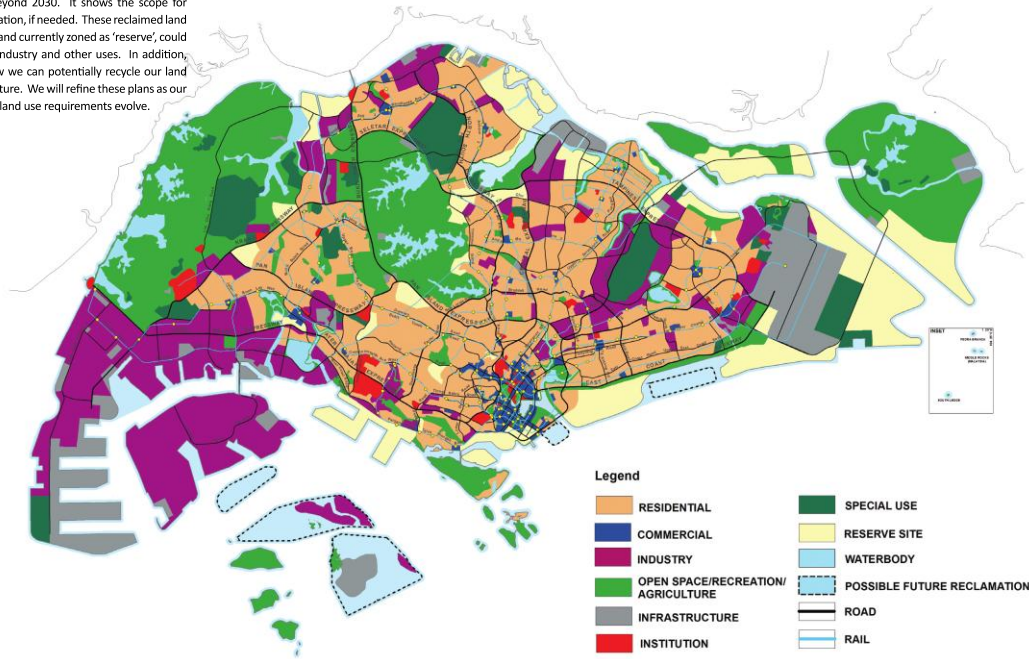
<sup>10</sup> Wong Tai Chee, "Sustainability Planning and Its Theory and Practice: An Introduction", *Spatial Planning for a Sustainable Singapore*. Pg 7

for land development. These parameters are examined and revised at each subsequent review of the Concept Plan.

### Exhibit 1: 2013 Land Use Plan

#### LAND USE BEYOND 2030

This map illustrates the likely profile of Singapore and possible land use allocation beyond 2030. It shows the scope for additional land reclamation, if needed. These reclaimed land parcels, including the land currently zoned as 'reserve', could be used for housing, industry and other uses. In addition, the map indicates how we can potentially recycle our land for other uses in the future. We will refine these plans as our population needs and land use requirements evolve.



### Exhibit 2: Population and Economic Growth published estimates for Concept Plan

Year	Estimated Population	Economic Growth
1971 Concept Plan	3.4 million by Year 1992	GDP in 1992 assumed to be 6.4 times that of 1966 (~7.4% growth per annum)
1991 Concept Plan	3.23 million residents by 2000, 3.45 million residents by 2010, 3.66 million residents by 2030, 4 million residents by Year X	Not indicated
2001 Concept Plan	5.5 million by 2041-2051	Not indicated
Mid-term Concept Plan Review 2006	6.5 million by 2046-2056	Not indicated
2011-2013 Concept Plan/ Land Use Plan	6.5-6.9 million total population by 2030	3-4% growth between now to 2020 2-3% growth between 2020 and 2030

As the Concept Plan is intended to cater comprehensively for the major land uses and infrastructure that Singapore would require to support its projected growth trajectory, the

Concept Plan review is a whole-of-government exercise which mobilises many different agencies from the economic, social, environmental and infrastructure sectors.<sup>11</sup> This multi-agency review takes substantial time to complete. For example, the 2001 Concept Plan, the strategic review of key land use requirements by 8 sub-committees from various government agencies was carried out from Dec 1999 - Aug 2000, while the public was consulted from Aug 2000 - May 2001. The 2001 plan was finalised in July 2001- almost two years after the process started.<sup>12</sup> With the 2011 Concept Plan, the review started in 2009, but was only finalised in 2013, to factor in new planning parameters and public feedback from the Population White Paper official consultation exercise.

The Concept Plan review is meant to be carried out at regular 10 year intervals, to be updated based on latest economic and population trends, as well as land use needs. In 2006, however, a mid-term review was held, to take into account higher projected population and new growth sectors<sup>13</sup>

The broad, long-term Concept Plan proposals are then translated into the Master Plan, a statutory land use plan showing permissible land uses and densities for various land parcels. Reviewed every 5 years, the Master Plan guides Singapore's development over the next 10 to 15 years, a more immediate timeframe than that under the Concept Plan. State land is then released for development through the Government Land Sales programme, in a manner that realises the various planning strategies and directions set out by Concept and Master Plans.<sup>14</sup>

### **Rationale Behind Concept Planning**

*“We cannot just walk away from mistakes made in our existing city and plan a new city. There is simply no room to do so.”*

— Dr Cheong Koon Hean, Former CEO of the Urban Redevelopment Authority (URA), Current CEO of the Housing Development Board<sup>15</sup>

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<sup>11</sup> For the 2013 Land Use Plan, the following ministries and agencies were involved: Ministry of National Development, Ministry of Culture, Community and Youth, Ministry of Defence, Ministry of the Environment and Water Resources, Ministry of Finance, Ministry of Health, Ministry of Law, Ministry of Social and Family Development, Ministry of Trade and Industry, Ministry of Transport, Economic Development Board, Housing and Development Board, Infocomm Development Authority, Jurong Town Corporation, Land Transport Authority, Maritime and Port Authority of Singapore, National Arts Council, National Parks Board, National Population and Talent Division, Prime Minister's Office, Public Utilities Board, Singapore Sports Council, Urban Redevelopment Authority

<sup>12</sup> UN Habitat's Best Practices Database, “Concept Plan 2001—Making a Strategic Blueprint for the Future” [http://www.unhabitat.org/bp/bp.list.details.aspx?bp\\_id=3056](http://www.unhabitat.org/bp/bp.list.details.aspx?bp_id=3056)

<sup>13</sup> Minister Mah Bow Tan, 27 Feb 2007, Parliamentary Question and Answer on “Concept Plan to Accommodate Population Growth”, <http://sprs.parl.gov.sg/search/topic.jsp?currentTopicID=00002253-WA&currentPubID=00004731-WA&topicKey=00004731-WA.00002253-WA.1%2B%2B> (cited 10 Nov 2013)

<sup>14</sup> URA website, <http://www.ura.gov.sg/uol/master-plan/vision-and-principles/Our-Planning-Process.aspx> (cited 23 Oct 2013)

<sup>15</sup> Cheong Koon Hean, “Achieving Sustainable Urban Development” *ETHOS, World Cities Summit Edition*, June 2008

The rationale for charting out Singapore's land use needs far ahead of time is rooted in an acute awareness of Singapore's particular constraint: land scarcity. Singapore's planners have always understood the need to be judicious with space, to avoid making short-sighted mistakes, such as prematurely developing and 'using up' land that should have been reserved for potentially better, future uses. If space for key projects and infrastructure, such as MRT lines and stations, is not identified and safeguarded from development ahead of time, it would be very difficult to overcome the obstacles of constructing these infrastructure in an already built-up area in the future. The Concept Plan was thus intended to be a mechanism to budget for and reserve land for the future<sup>16</sup>.

Furthermore, infrastructure projects often take a long time to complete. For instance, completion of the 20 kilometre North East line took 7 years, from 1996 to 2003<sup>17</sup>. Marina Centre and Marina South's reclamation took over 20 years, starting in the 1960s and completed in the 1980s.<sup>18</sup> Planners thus saw the need for strategic foresight to plan for and implement the right type of projects over a sustained period of time. Precisely because of the capital-intensive, long implementation timeframe of infrastructure projects, planners believed that the market could not be trusted to ensure that infrastructure growth keeps pace with demand for development—this was best left to a forward-looking, responsible government.<sup>19</sup>

For these reasons, urban development in Singapore has traditionally been controlled by a largely top-down, centrally calibrated planning process, based on the premise that far-sighted, rational control and coordination by the government is key to proper use of scarce land.

### **Overview of previous Concept Plans: Key Objectives and Planning Strategies**

The first Concept Plan for Singapore was completed in 1971 after a four-year long study together with the United Nations Development Programme (UNDP).<sup>20</sup> Since then, the Plan has undergone several rounds of review and updating.<sup>21</sup> The latest Concept Plan was released as the 2013 Land Use Plan, together with the Population White Paper.

The principles, objectives and key land use strategies of the Concept Plan have remained remarkably consistent over the various rounds of review, and generally correspond to the

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<sup>16</sup> When interviewed about the Concept Plan, URA CEO Mr Ng Lang expressed that "We cannot consume things ahead of time, and some land areas are kept for future use when your children grow up." He also drew a parallel between URA's role in budgeting land to the Ministry of Finance's role in budgeting for the government. Wong Sher Maine, "Good Planning Is Not Just About Now" *Challenge Magazine*, 18 March 2013

<sup>17</sup> "Singapore North East Line", *Railway Technology.com*, <http://www.railway-technology.com/projects/sing-ne/>

<sup>18</sup> Wong Tai Chee & Yap Lian-Ho Adriel "Transformation of Singapore's Central Area", *Four decades of transformation*, pg 21

<sup>19</sup> "The market cannot ensure that infrastructure keeps pace with development. We have to make sure our city works. It must accommodate a high population density while minimising the usual urban problems." Quote from Cheong Koon Hean, "Achieving Sustainable Urban Development" *ETHOS, World Cities Summit Edition*, June 2008

<sup>20</sup> T.F. Kwa, "Sustainable urban transportation planning and development — issues and challenges for Singapore" <http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=AFABAFFE14A4EF50247D97626F52150E?doi=10.1.1.119.9246&rep=rep1&type=pdf>

<sup>21</sup> After the first Concept Plan was drawn up in 1971, there have been subsequent updated plans published in 1991, 2001, 2007, and most recently in 2013 as the MND Land Use Plan.

typical definitions of sustainable development used internationally<sup>22</sup>. While new ideas and some policy shifts have been incorporated into successive iterations, Concept Plans have remained true to the following objectives (**Appendix 1** provides details):

- Providing affordable homes to meet needs and aspirations
- Providing a good living environment (e.g. access to facilities and amenities)
- Keeping Singapore green and protecting our biodiversity
- Sustaining economic growth
- Providing good transport and mobility
- Preserving heritage and identity

Not all ideas and urban land use strategies in the Concept Plan originated from the review process itself. Some were developed in earlier Master Plans or policy reviews. For example, the plan to clear the city centre of its slums and replace them with a commercial central business district was highlighted in the 1971 Concept Plan *after* HDB's Five-Year Plan (1960-1965) had already kick-started the process of resettling of the city centre's inhabitants to the peripheries. Nevertheless, the approval of the Concept Plan in 1971 provided a legal blueprint, paving the way for a progressively planned redevelopment of the Central Area.<sup>23</sup> The Concept Plan review can thus be seen as a useful platform to coordinate and consolidate various initiatives into one Plan, which works as an integrated roadmap for future development.

### **Shifts in the Concept Plan: Public Consultation and Emphasis on Liveability**

One major shift between Concept Plans was the incorporation of stronger element of public consultation and participation. For the 2001 Concept Plan, two focus groups were set up to examine two topics: Land Allocation and Identity versus Intensive Use of Land. The focus group members were also tasked to engage a wider spectrum of the public through public forums and in-depth discussions with professionals, interest groups, grassroots leaders, industrialists and businessmen.<sup>24</sup>

With the 2011 Concept Plan consultation, a similar format was adopted, where two focus groups comprising representatives from professional organisations, NGOs, academics, community leaders and youths were formed to discuss the four key issues identified: Quality of Life; Ageing Issues; Sustainability; and Identity. Recommendations from the focus groups were then presented at a public forum for general feedback. A public survey was also

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<sup>22</sup> The 1987 report *Our Common Future* from the United Nations World Commission on Environment and Development (WCED) set forth the most widely used definition of sustainable development "Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs". Other more detailed definitions developed for land use planning and policy purposes tend to cover environment, economy, social equity and liveability objectives. Source: Philip R. Berke et. al., *Urban Land Use Planning*, pg 10-12

<sup>23</sup> Wong Tai Chee & Yap Lian-Ho Adriel, pg 20.

<sup>24</sup> Emily Y. Soh and Belinda Yuen, "Government-aided participation in planning Singapore" *Cities*, Vol. 23, No. 1, 2006 Pg 30-43

conducted, garnering over 5,000 responses. This survey was meant for planners to gain insights on the lifestyle needs and aspirations of people, and on satisfaction levels of the living, working and leisure environment in Singapore.

Over time, the language used in Concept Plan publications has also evolved. The 1991 Concept Plan sets out a vision for Singapore to be “a Tropical City of Excellence, an exotic island and an international investment hub”, while the 2001 Concept Plan describes the future Singapore as “a thriving world-class city in the 21st century”. The 2013 Land Use Plan, in contrast, calls for Singapore to be “one of the most liveable cities in the world – a city for all ages and a country we are proud to call home.” This implies a shift from a primarily economic focus on Singapore’s global competitiveness, towards greater attention to liveability. Harvard urban theorist, Peter G. Rowe, also notes this shift:

On a variety of levels and fairly thoroughly, Singapore made such a turn from its initial defining embrace of the 1971 Concept Plan for the island state and its progeny of 1991 and 2001, through to the Master Plan of 2008. In both tone and substance, this has involved a substantial push towards a lively, livable and sustainable Singapore via a less straight-laced attitudes about social interaction, heightened senses of environmental stewardship, conspicuous expansion of leisure-time opportunities, additional urban amenities and more diversified living environments.<sup>25</sup>

Nevertheless, the economic imperative still remains dominant today. In a recent interview, URA’s CEO Ng Lang stressed that “the economic part is important because that must work before everything else. Without a robust economy, all your dreams about having a good quality of life would be very difficult to achieve. But it doesn’t mean that it’s something we want to achieve at the expense of everything else. Apart from the economy, we also look at the social and environment aspects.”<sup>26</sup>

### **How Effective has the Concept Plan Been?**

*Singapore's planning has been truly exemplary in terms of its comprehensive, well-conceived vision, its integration of the parts, its analytic rationality, and its actual impact on the ground*

— Alan Altshuler, Ruth and Frank Stanton Professor of Urban Policy and Planning at Harvard University's John F. Kennedy School of Government<sup>27</sup>

### ***Economic Success***

Thanks in part to the Concept Plan’s land use and infrastructure policies, which have been carefully coordinated with overall economic strategies, Singapore has enjoyed healthy

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<sup>25</sup> Peter G. Rowe, “What is the state of urban development in Singapore”, *Architecture and Urbanism*, May 2012 No. 500, Pg16.

<sup>26</sup> Wong Sher Maine, “Good Planning Is Not Just About Now” *Challenge Magazine*, 18 March 2013

<sup>27</sup> Alan Altshuler, “Planning and Innovation for City Success”, *ETHOS*, June 2008



economic growth over the years. It ranked second in the 2013 World Economic Forum's Report on Global Competitiveness Index, which singled out Singapore's world-class infrastructure as a major contributor to its success<sup>28</sup>. Many of the economic strategies mapped out in the Concept Plan have been realised. For instance, the proposal to build up a commercial core in Singapore's city centre as well as to develop a new downtown in Marina Bay have both been successfully implemented. To date, an estimated USD 25 billion of local and foreign equity has been pumped into the new Marina Bay over a short span of a few years<sup>29</sup>, while both the CBD and Marina Bay pull in high office rental rates.<sup>30</sup> Similarly, Jurong Island, mooted in the 1991 Concept Plan, has cemented Singapore's position as a global chemicals hub, and has successfully attracted investments in excess of S\$35 billion.<sup>31</sup>

### ***A Good Quality of Living***

As promised in the Concept Plan, Singapore has made substantial progress towards creating a liveable city. Green cover has been increased over the years, new parks, facilities and amenities have been built up, and the majority of the population are housed in well-functioning, affordable public housing. In the URA's latest 2009 Lifestyle Survey, 83.8 per cent of the respondents agreed that Singapore was a great place to live, work and play in.<sup>32</sup>

Singapore has also done well on international liveability and sustainability city rankings<sup>33</sup> and has been held up as a good example of urban development in various forums. For instance, the UN-Habitat's "State of the World Cities 2012/2013" report praised Singapore as one of the top-performing cities in terms of quality of life offered, and highlighted its ability to preserve greenery, public parks and biodiversity as "a leading example in the world".<sup>34</sup>

However, the mismatch between rapid population growth and infrastructure growth in recent years has negatively affected the quality of urban living. During the year-long public consultation for the Population White Paper, many voiced concerns with overcrowding, particularly on the public transport system. There were also calls for a reduction of foreigner

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<sup>28</sup> World Economic Forum, *The Global Competitiveness Report 2013 – 2014*

<sup>29</sup> Mindy Tan, "Marina Bay area looking extraordinary successful", *BT Invest*, 17 Aug 2012, <http://www.btinvest.com.sg/property/local/marina-bay-area-looking-extraordinary-successful-20120817/>; CBRE Special Report Aug 2012 "Marina Bay: A Garden City by the Bay| A Global Business Hub" [http://www.cbre.eu/portal/pls/portal/res\\_rep.show\\_report?report\\_id=2141](http://www.cbre.eu/portal/pls/portal/res_rep.show_report?report_id=2141)

<sup>30</sup> Melissa Tan, "Singapore CBD office space is world's 8th priciest, JLL reports" *Straits Times*, Oct 24 2013, <http://www.straitstimes.com/breaking-news/money/story/singapore-cbd-office-space-worlds-8th-priciest-jll-reports-20131024> (cited Oct 28 2013)

<sup>31</sup> EDB, <http://www.edb.gov.sg/content/edb/en/industries/industries/chemicals.html> (cited Nov 11 2013)

<sup>32</sup> URA "URA Lifestyle survey 2009 and Concept Plan 2011 online survey - High public satisfaction with Singapore's Quality of Life", April 30 2009 <http://www.ura.gov.sg/pr/text/2010/pr10-51.html> (cited Nov 5 2013)

<sup>33</sup> Singapore ranked 15 in Monocle's 2013 list of the most liveable cities in the world, and 25th on a similar 2012 index by Mercer Consulting, the highest of any Asian city. It was also ranked 4<sup>th</sup> out of 31 countries in a Standard Chartered Development Index to measure progress in sustainable development from 2000 to 2012.

<sup>34</sup> "The city-state of Singapore is a leading example in the world, with greenery over 50 per cent of the surface area and over 450 public parks and gardens. The city is also preserving its rich biodiversity with four nature reserves which cover more than 3,000 ha, and are legally protected to safeguard key indigenous ecosystems." (UN-Habitat, *State of the World's Cities 2012-2013* report pg 80.)

inflow to allow more time for infrastructure development<sup>35</sup>. LTA’s yearly Public Transport Customer Satisfaction Survey<sup>36</sup> indicated that the total percentage of respondents satisfied with public transport services, while generally high, has perceptibly dipped since 2009. (See **Exhibit 3**)

**Exhibit 3**

	2008	2009	2010	2011	2012
% Satisfied with Public Transport service	89.5	93.8	92.2	90.3	88.8
% Satisfied with Bus services	86.9	92.5	90.2	87.1	86.4
% Satisfied with MRT services	94.1	96.0	95.4	94.6	92.1

The Population White Paper and Land Use Plan seem to have further shaken Singaporeans’ confidence in the future quality of living in Singapore. Many comments on blogs and online forums expressed deep worry that Singapore lacked the space to accommodate a further increase in population from 5.3 million today to 6.9 million in 2030<sup>37</sup>. Many were also sceptical that the government was capable of avoiding yet another infrastructure crunch<sup>38</sup>. While these may not be wholly representative of public sentiment, the prevalence of such online negativity pointed to potentially wide-spread dissatisfaction.

The infrastructure and housing crunch point to a problem in Singapore’s planning system, which was ostensibly set up to enable the Government to match demand and supply of infrastructure and various land uses. These lapses may also have potentially undermined the system’s credibility in the eyes of the public.

**Top-Down, Rational Planning**

*[Singapore is] one of the most obsessively and thoughtfully controlled urban environments ... Everything was being planned with such efficiency and with such an eye to latest theories of what makes good urban environment that there was no opportunity for chance, ad hoc activities, or the joy of contrasts.*

— Aaron Betsky, Director of the Cincinnati Art Museum, former member of URA’s International Panel of Experts<sup>39</sup>

***Too Orderly, Too Rigid?***

<sup>35</sup> NPTD, <http://population.sg/whitepaper/summary-of-feedback/liveability/#.Um9e-ZFc-oY> (cited Oct 29, 2013)

<sup>36</sup> LTA, <http://app.lta.gov.sg/apps/news/page.aspx?c=2&id=1754ac5b-2212-487e-8d48-b8dccc895cc9> ; <http://app.lta.gov.sg/apps/news/page.aspx?c=2&id=60fv2p8cwmbe4bwl186ucsy3o7n2h99om4p8bs704vm41d5ek>

<sup>37</sup> Cecilia Chow, “Singapore Relooks land use” *The Edge*, March 19 2013, <http://www.theedgemaalaysia.com/property/233073-singapore-relooks-land-use.html> (cited Oct 29 2013)

<sup>38</sup> See responses to Rachel Cheng’s article “High Quality of Life still possible with larger population: Khaw”, *Straits Times*, 31 Jan 2013.

<sup>39</sup> Aaron Betsky “Singapore’s URA: Too Much Planning?” *Architect Magazine*. <http://www.architectmagazine.com/blogs/postdetails.aspx?BlogId=beyondbuildingsblog&postId=106923> (Cited 17 Oct 2013)

Singapore's top-down, centralised planning framework has been extremely effective in shaping the rapid growth and expansion of the city along the orderly structure set out by the Concept Plan. Features such as the MRT network, expressway system, decentralised commercial centres in Tampines and Jurong, new housing towns and industrial clusters are clearly recognisable today<sup>40</sup>, which bears testament to the Concept Plan's effectiveness in guiding implementation. This can be favourably contrasted with the relatively chaotic growth patterns found in neighbouring Asian and South East Asian cities<sup>41</sup>, which are associated with problems of traffic congestion, poor provision of basic infrastructure, urban sprawl and other related dis-amenities. Harvard economist and urban theorist Edward Glaeser highlighted Singapore as a well-managed city in his book *Triumph of the City* and quipped that "Americans visiting Singapore can be forgiven for wistfully wondering why our own cities don't seem so well managed"<sup>42</sup>

This top-down control over urban development which has made Singapore impressively well-managed has attracted both admiration and criticism. Saskia Sassen, a sociologist and urban theorist compared Singapore's urban environment favourably to global cities London, New York and Tokyo, but also cautioned that Singapore should resist the urge to continue planning its city too comprehensively, in order to keep the city dynamic and exciting<sup>43</sup>.

Along the same vein, James C Scott, in his book *Seeing like a State* argued that high-modernist planning<sup>44</sup> oversimplified the complexity of human interaction and social community into formulas and forecasts to be applied to derive an ideal plan. He opined that "working from formulas about density, green space, and transportation may produce narrowly efficient outcomes, but it is unlikely to result in a desirable place to live" because planners tend to over-simplify and misunderstand what makes a good urban environment. Furthermore, he noted that planners often made wrong predictions about the future, which would in turn rendered the final plan built on these predictions highly problematic. To illustrate his point, he pointed to centrally planned cities like Brasilia, Brazil and Chandigarh, India as examples of uniform and sterile cities.<sup>45</sup>

While Singapore may not quite be a Brasilia or Chandigarh, Scott's observations about the potential pitfalls of oversimplification and inaccurate assumptions in planning are nevertheless useful reminders. How then can Singapore's planning processes be more realistic, flexible and adaptable, to accurately respond to the complexities of urban living?

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<sup>40</sup> "Even though this plan was developed more than forty years ago, its essential features are recognisable even today as the basic structure of Singapore" quote from Peter Ho, at the Lee Kuan Yew and the Physical Transformation of Singapore Public Conference, Sept 18 2013, <http://www.ura.gov.sg/uol/media-room/speeches/2013/sep/pr13-58.aspx>

<sup>41</sup> Peggy Teo et al, *Changing Landscapes of Singapore*, 2004, pg 57.

<sup>42</sup> Edward Glaeser, *The Triumph of the City*, pg 230

<sup>43</sup> Cheong Suk-wai "The merits of an unfinished city" *Straits Times*, Feb 20, 2013

<sup>44</sup> High modernism is defined by Scott as "self-confidence about scientific and technical progress, the expansion of production, the growing satisfaction of human needs, the mastery of nature (including human nature), and, above all, the rational design of social order commensurate with the scientific understanding of natural laws" *Seeing Like a State*, pg 4

<sup>45</sup> James C Scott, *Seeing Like a State*, pg 145

## **Public Participation: A deeper partnership with the public?**

*We would like to participate in constructive and meaningful engagement on policies that impact our society, and to work with leaders who can connect with Singaporeans from all walks of life. As citizens, we sometimes feel that the government could trust us more. At the end of the day, we may not always agree with the government's decisions. But we would like to have more information to make an informed assessment, and to arrive at conclusions of our own.*

- Reflections of Our Singapore Conversation, on 'Trust'

### ***More Collaboration Please?***

One clear request voiced by participants in the year-long 'Our Singapore Conversation' (OSC) public engagement exercise<sup>46</sup> was for a society where government and the people could have a more collaborative relationship, where policies are not presented as 'precooked' with little leeway for revision, and where the government is able and ready to take on board diverse viewpoints.

During the 2001 and 2011 reviews of the Concept Plan, URA held extensive consultations to seek a better understanding of people's priorities and desires. The URA views such engagement as useful in giving the public a conduit to surface their suggestions and concerns to decision makers. These are considered and where deemed beneficial, factored into the final endorsed Plan.<sup>47</sup> For the planners, these engagements are also very useful to help identify people's preferences and priorities. For instance, participants in the 2011 Concept Plan public engagement exercise were asked whether they preferred high-rise, mid-rise or low-rise environments, whether they preferred to rent or own their accommodations, how much they valued urban greenery and nature, and whether they would prefer to age-in-place or in dedicated 'retirement villages.'<sup>48</sup>

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<sup>46</sup> The 'Our Singapore Conversation' was a year-long national conversation exercise where over 47,000 Singaporeans participated in 660 dialogue sessions on issues ranging from housing and job opportunities, to core aspirations and what it means to be Singaporean. Source: <https://www.oursgconversation.sg/about-our-singapore-conversation/>

<sup>47</sup> "The public has participated in various ways to improve the plan, when they voice their concerns on issues such as affordability of city centre living. Their voices allowed planners insight into the people's acceptability level of higher density and very high-rise living. The public has also provided local knowledge on specific neighbourhoods and the natural heritage that they wanted to be conserved. Creative solutions and ideas have also been brought up, such as the farming out of conservation to private sectors through tax incentives, and the proposal for a heritage guide plan which have since seen fruition in the Identity Plan that complements the current Master Plan (2003)." EY Soh & B Yuen

<sup>48</sup> URA, URA Lifestyle Survey 2009. Source: <http://spring.ura.gov.sg/conceptplan2011/results/Report%20-%20Lifestyle%20Survey%20and%20Online%20Survey.pdf>

Prior to the publication of the White Paper itself, the National Population and Talent Division (NPTD) had also engaged in a year-long public engagement exercise, to collect views and suggestions from Singaporeans on population related matters<sup>49</sup>.

Despite these efforts, there have been criticisms that such consultation exercises ultimately reflected a centralised decision-making framework, where the assumption was that the centralised planning authorities understood and hence knew best what the needs of the urban population were.<sup>50</sup> The current model of consultation thus may not sufficiently meet growing public desires to be more engaged in the actual decision making process, beyond simply providing inputs or reacting to a (more or less) finalised proposal.

So how far should planners work together with the public?

On the one hand, urban planning has typically been viewed in Singapore as a highly technical endeavour requiring deep expertise and knowledge. Liu Thai Kher, Chief Executive Officer and Chief Planner of Urban Redevelopment Authority from 1989-1992, said,

There is a very serious and challenging aspect of urban planning, which requires a city to function perfectly like a Giant Urban Machine for Living...It is not a simple task to assemble this giant urban machine. To begin with, a planner must know what parts are required for the machine to function perfectly. How big is each of the parts? How many of each type? How should the parts be fitted in relation to one another? To answer these questions, and assemble the parts, requires a great deal of research and experience, as well as a tremendous amount of stamina.<sup>51</sup>

In contrast, a strong advocate of the community involvement and grounds-up urban development, Jane Jacobs, argued, “[T]he processes that occur in cities are not arcane, capable of being understood only by experts. They can be understood by almost anybody.” She argued instead that no expertise can substitute for local knowledge, and that planners should therefore need to engage the community they are planning for.<sup>52</sup>

Interestingly, since the 1990s, consensus-building has become the reigning paradigm in planning theory. In contrast to rational planning, which prescribes using technical reasoning, calculations and modelling to derive the best plan to achieve desired goals, a consensus-building approach places trust in the subjective and experiential shared knowledge from the ground. This approach planning is seen to help build greater legitimacy for the final plan, foster innovation, harness diversity and generate new ideas.<sup>53</sup>

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<sup>49</sup> NPTD had received close to 2,500 pieces of feedback directly and engaged over 2,200 individuals and representatives from various stakeholder groups and organisations. Topics discussed include Marriage and Parenthood, Singaporeans Abroad, Integration, Identity, Immigration, Cost of Living, Social Support, Economy and Workforce, Liveability, Environment, Land Planning. Source: [www.population.sg](http://www.population.sg) (cited 21 Oct 2013)

<sup>50</sup> Peggy Teo et al, pg 69

<sup>51</sup> Liu Thai Kher, Interview, *CLC Urban Solutions*, Issue 1, July 2012

<sup>52</sup> Jane Jacobs, *Life and Death of Great American Cities*, pg 441 and pg 409-410

<sup>53</sup> Philip R. Berke et. al.pg 48-49

However, a highly consultative, consensus-based approach per se may not always achieve just outcomes. In *The Just City* urban theorist Susan Fainstein observed that recent theory in both political philosophy and planning tended to idealise open communication as a desired end in itself. Rather “if justice is the goal, the requirement of democracy is mainly instrumental—without it, those with less power are likely to be treated badly.”<sup>54</sup> A more democratic mode of policy-making is thus generally useful in guarding against possible abuse of power. However, she further observed that in certain situations, “insulated decision making may produce more just outcomes than public participation” and cites Singapore as an example of an authoritarian government which has produced a very high quality of life for its citizens<sup>55</sup>.

Should Singapore choose to adopt a more collaborative approach to planning, planners would have to play a pivotal and difficult role in moderating discussions towards a balanced convergence of views. Chairman of the Public Service Commission, Mr Eddie Teo revealed in a 2002 speech that the potential lack of consensus was indeed a concern holding policy makers back from being more consultative: “Where there are deep divisions of views, values and culture, such as in the social and political fields, the government is not inclined to move too fast, lest our society pull apart. It will consult, but where there is no consensus, it is difficult for government to be responsive.”<sup>56</sup>

### ***More Information Please?***

As part of the OSC exercise, Singaporeans also called for greater transparency of information and for the government to share raw data and facts to facilitate better collaboration, build trust and appreciation of the thinking in government policies.<sup>57</sup>

Critics of top-down rational planning, the chosen approach of Singaporean planners, have argued that plans derived this way lack a mechanism to gain community acceptance. As the assumptions made in planning analyses are critical to the modelling of forecasts and selection of policy proposals, when such assumptions are not made public and clearly explained, the implementation of the ‘expert-driven’ plans often faces opposition.<sup>58</sup> This is because the lack of public clarity, dialogue and acceptance of these assumptions could lead to confusion and unhappiness about the policy-makers’ intentions, especially as the plan and policies may not have taken on board the public’s actual values and concerns.

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<sup>54</sup> Susan Fainstein, *The Just City*, pg 23, pg 175

<sup>55</sup> “Contemporary Singapore could be classified as a benevolent despotism, and despite the limits it places on liberty, and especially on democracy, it produces a very high quality of life for its citizens. On the other hand, we can probably think of many more instances where authoritarian decision making caused outcomes strongly biased toward upper class interests” Quote from Susan Fainstein, *The Just City*, pg 32.

<sup>56</sup> Eddie Teo , “Will the Real Civil Service Please Stand Up?”, *Ethos*, Issue 3 2002, <http://www.ccollege.gov.sg/Knowledge/Ethos/Ethos%20Issue%203,%202002/Pages/Will%20the%20Real%20Civil%20Service%20Please%20Stand%20Up.aspx> (cited Nov 8 2013)

<sup>57</sup> Reflections of Our Singapore Conversation, 2013, <http://oursgconversation.sg/reflections/OSC.pdf> and *Perspectives Arising from Our Singapore Conversation*, March 2013 [https://www.oursgconversation.sg/wp-content/uploads/2013/03/OSC\\_newsletter.pdf](https://www.oursgconversation.sg/wp-content/uploads/2013/03/OSC_newsletter.pdf)

<sup>58</sup> Philip R. Berke et. al, pg 46

This observation could be applied to Singapore. For the current and past Concept Plans, there has been a lack of publically available information provided about the projections and land use scenarios studied.

In contrast, cities like London publish extensive technical and research reports which provide information about the various parameters, assumptions, scenarios and assessments that have been incorporated into their spatial strategy<sup>59</sup>. Furthermore, many forward looking plans like New York's PlaNYC<sup>60</sup> and the London Plan<sup>61</sup> have also included monitoring reports or indicator-based scorecards that keep their respective stakeholders and publics regularly updated on the implementation of the proposed plans and initiatives.

A similar approach for the Concept Plan could thus be useful in increasing both the transparency of and public accountability in government plans, and fulfilling the wishes highlighted during the OSC for greater consensus-building in the policy-making process. However, planners will need to be prepared to be challenged on these assumptions. They will also have to weigh the potential sensitivity of releasing certain findings and assumptions (e.g. those regarding national security) against the benefits of openness and debate.

### **Economic and Population Parameters: a different approach to planning?**

*What alarms me most about the White Paper and the Land Use Plan is the emphasis placed on 'economic growth' measured in GDP terms.*

— Faizah Jamal, Nominated Member of Parliament, Singapore

As with earlier Concept Plans, projected economic growth rates and population figures are basic parameters used in the formulation of the 2013 Land Use Plan. This approach is similar to that adopted in many other cities, where long-term, forward looking land use planning responds to population and economic growth projections. For instance, the Metropolitan Strategy for Sydney projects 1.3 million more persons in Sydney by 2031, and also sets out various economic growth targets<sup>62</sup>. The London Plan sets out a spatial strategy for a London assuming a future population of 8.82 million, and job growth of 16.6% by 2031<sup>63</sup>, while the

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<sup>59</sup> Greater London Authority, *The London Plan*, <http://www.london.gov.uk/shaping-london/london-plan/strategy/download.jsp>

<sup>60</sup> PlaNYC, first published in 2007, is a plan to prepare New York City for one million more residents, strengthen its economy, combat climate change, and enhance the quality of life. The latest monitoring report: [http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/planyc\\_2011\\_sustainability\\_indicators.pdf](http://nytelecom.vo.llnwd.net/o15/agencies/planyc2030/pdf/planyc_2011_sustainability_indicators.pdf)

<sup>61</sup> Greater London Authority, *Monitoring the London Plan*: <http://www.london.gov.uk/priorities/planning/research-reports/monitoring-london-plan>

<sup>62</sup> New South Wales Government, "Draft Metropolitan Strategy for Sydney", <http://strategies.planning.nsw.gov.au/MetropolitanStrategyforSydney.aspx> (cited Nov 5 2013)

<sup>63</sup> Mayor of London, *The London Plan, Spatial Development Strategy for Greater London*, July 2011

Copenhagen's Municipal Plan 2011 proposes a plan that would support a population of 637,000 by 2025, with an annual growth of 5%<sup>64</sup>.

Clearly, Singapore's approach to land use and transport planning – grounded on population projections and an anticipated economic growth trajectory – is well-established. Nevertheless, the use of economic growth estimates as a parameter has contributed to the view that the Land Use plan is primarily economically-driven, which in turn created unhappiness that planners have not sufficiently consider other objectives such as well-being and equity, national identity and sense of belonging, or environmental sustainability.

Nominated MP Faizah Jamal, during her speech at the February 2013 Parliament debate on the Population White Paper, took issue with the emphasis placed on 'economic growth' as measured in GDP terms. She made a pitch for a change of focus on well-being instead, which would include objectives such as emotional security, equitable distribution of wealth, as well as access to natural spaces and places that "evoke childhood memories".<sup>65</sup> Similarly, Mr Inderjit Singh, the MP for Ang Mo Kio GRC, commented that "while the report has some compelling arguments for the 6.9m population figure projected, we all know it is based mainly on economic considerations [...] I feel the time has come for us to find a better balance between economic growth and social cohesion and yes there will have to be trade-offs of economic growth but I would rather trade some of these for a cohesive, united nation where people feel taken care of at home and are confident of their future."

There has also been questions and debate about what a reasonable maximum population for Singapore should be, and whether Singapore would breach this threshold with its current growth trajectory. When the 2007 Mid-Term Concept Plan estimates of a 6.5 million population were published, Minister Mentor Lee Kuan Yew expressed doubts that this was a sustainable number and hypothesised that a 5 to 5.5 million population would be more comfortable.<sup>66</sup> More recently, NPTD's yearlong consultation prior to the publication of the Population White Paper flagged out requests for the Government to determine an optimal population size that infrastructure could support. However, to date, there has been no clear consensus on a reasonable maximum. Academics have made estimates ranging from a conservative 5.5 million to 8 million<sup>67</sup>.

One possible way to address various concerns is for planners to publish a 'supply-side' assessment of the holding capacity of Singapore, articulating considerations of land availability, environmental constraints, built density thresholds as well as community

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<sup>64</sup>City of Copenhagen,

[https://subsite.kk.dk/sitecore/content/Subsites/CityOfCopenhagen/SubsiteFrontpage/Business/Growth\\_and\\_partnerships/Strategy/~media/E9CC623FEEA6485582EEA7BDEEFE066B.ashx](https://subsite.kk.dk/sitecore/content/Subsites/CityOfCopenhagen/SubsiteFrontpage/Business/Growth_and_partnerships/Strategy/~media/E9CC623FEEA6485582EEA7BDEEFE066B.ashx)

<sup>65</sup> Faizah Jamal, Parliamentary Debate on the Population White Paper, Feb 4 2013: [http://sprs.parl.gov.sg/search/topic.jsp?currentTopicID=00078611-WA&currentPubID=00078619-WA&topicKey=00078619-WA.00078611-WA\\_3%2Bmotion%2B](http://sprs.parl.gov.sg/search/topic.jsp?currentTopicID=00078611-WA&currentPubID=00078619-WA&topicKey=00078619-WA.00078611-WA_3%2Bmotion%2B)

<sup>66</sup> Li Xueying "MM 'not quite sold' on idea of 6.5million population" *Straits Times*, Feb 2 2008.

<sup>67</sup> Phua Mei Pin, Goh Chin Lian, Jessica Cheam, "Population 6 million: Is there Room" *Straits Times*, Oct 14 2012. <http://www.straitstimes.com/the-big-story/st-exclusives/story/population-6-million-there-room-20121014> (cited Nov 6 2013)



acceptance and expectations.<sup>68</sup> Different scenarios of ‘optimal population’ or ‘maximum’ population could be generated, from which population and economic growth targets could then be derived. In other words, this would flip the typical planning process around, starting from the end-state (optimal population) and working backwards to derive the parameters.

While it may be technically possible for planners to work out a reasonable upper limit (or various scenarios of it) for Singapore’s population, working backwards from that to develop and refine economic and population growth policies would require a fundamental shift in policy making across various sectors, economic and social. Should economic growth need to be further slowed in order to hold to the proposed population limit, policy makers may be reluctant to do so, as they see a certain level of economic growth as imperative for Singapore to continue enjoying high employment and good standards of living.<sup>69</sup>

Another big challenge would be gaining public consensus and acceptance of the proposed scenario of a fully built-out Singapore. A public exercise to derive Singapore’s maximum capacity could be highly divisive, especially if people maintain a ‘not-in-my-back-yard’<sup>70</sup> mentality to discussions. Any upward revision to a limit would also be challenging, in view of a potential public backlash, even if the carrying capacity of Singapore did indeed improve due to new technologies (e.g. underground development), shifting trends and behavioural patterns (e.g. more telecommuting).

On the other hand, taking such an approach might also soothe fears that Singapore’s growth trajectory was unrealistic or detrimental to the end goal of creating a liveable Singapore. It also presents potential for Singaporeans to coalesce around a common vision of the country, and through that grant greater legitimacy to, and collective ownership of, the proposed plan.

### **Ideas for Planners/ Policy Makers to consider**

1. Is it time to re-examine Singapore’s long-term planning mechanisms? Judging from the constant revision upwards of the population parameter at each Concept Plan Review and the rapid pace of change, a 10-yearly review may be insufficient. At the same time, the resources and time required for each Concept Plan process – combined with implementation time lags –

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<sup>68</sup> A holding capacity approach to planning is typically used for smaller areas, or in situations where definite boundaries can be drawn around the study area. Cities that have incorporated capacity modeling into their long-term plans include Portland Metro, Oregon; Montgomery County, Maryland and Seattle, Washington, to assess whether projected population and economic growth can be contained with urban limits. Source: Philip R. Berke et. al. pg 10-12, pg 215

<sup>69</sup> MTI “MTI Occasional Paper on Population and Economy” <http://www.mti.gov.sg/MTIInsights/Documents/MTI%20Occasional%20Paper%20on%20Population%20and%20Economy.pdf> (cited Nov 6 2013)

<sup>70</sup> ‘Not in my back yard’ or NIMBY refers to residents’ opposition to the locating of something considered undesirable (as a prison or incinerator) in one’s neighborhood. The term has the connotation that such residents believe that the developments are needed in society but should be further away. In recent years, there have been incidences of vocal opposition by residents to ‘undesirable’ developments such as nursing homes being located in their estates. This has been picked up by local political leaders as a sign that Singaporeans are becoming more self-centred and unwilling to compromise. Source: Asia One, “PM Lee worried about growing divide in Singapore” April 05 2012, <http://news.asiaone.com/News/Latest%2BNews/Singapore/Story/A1Story20120405-337897.html> (cited Nov 8 2013)

make it unrealistic and probably undesirable for this to be conducted much more frequently. How can Singapore's long-term planning process be made more responsive to changes? At the same time, how can planners avoid 'over-planning' the city and ensure sufficient scope for the city to evolve organically?

2. Is the current approach of engagement, where feedback is collected from the public and used as inputs by planners for Concept Plan, sufficient? How much more should planners involve the public or civil society in the actual formulation of the Concept Plan, given the various considerations? Additional public engagement would also lengthen the already lengthy exercise. How can this be reconciled with the need to be nimble in order to respond to trends/ changes? How should "post Concept Plan engagement" with the public be improved?

3. What would be a feasible and desirable alternative to the current approach of using economic and population parameters as a basis for land use planning? What would the costs and benefits be of adopting such an alternative? What would the implications of such a change be on the formulation of Singapore's economic and social policies?

### Concept Plan Strategies: An overview

**(A) Providing a good living environment/ homes:** One primary objective of the 1<sup>st</sup> Concept Plan in 1971 was to provide basic needs, such as housing, for the new nation. ‘A Ring Plan’ was proposed, where new, high-density satellite towns around the central water catchment area would be built up. Low and medium density private housing developments would be built between these towns<sup>71</sup>.

The 1991 Concept Plan retained the concept of satellite residential towns, and further proposed a greater variety of housing types (e.g. waterfront housing, within the city centre, next to parks etc), as well as a shift towards more low and medium rise housing. Both the 2001 Concept Plan and the 2013 Land Use Plan echoed this aspiration to provide a choice of housing options, in terms of locations and housing types, but have dropped the promise to shift towards low and medium rise housing.

All versions of the Concept Plan have also made provisions for easy access to various amenities and facilities for sports and recreational (parks, fields, swimming pools etc.), cultural activities (museums, theatres, performance spaces etc.), education and community bonding (e.g. community centres), which round out the Plan’s definition of a good living environment.

**(B) Keeping Singapore green (Parks, Natural Areas, Waterbodies)** The 1991 Concept Plan introduced a ‘Green Blue Plan’, which identified a network of natural green spaces, open spaces, planned parks and waterways, as well as intermediate green connectors between parks, to help heighten the sense of garden and island living. These ideas were carried and further developed through to the “Parks and Waterbodies” plan, as part of the 2001 Concept Plan, as well as the 2013 Land Use Plan. While the latest Concept Plan included additional proposed green spaces and initiatives (e.g. Rail Corridor and the Round Island Route, vertical greenery within buildings), it remains consistent with earlier proposals.

**(C) Sustaining economic growth:** The 1971 Concept Plan was drawn up with a clear goal of creating a strong financial business district, which would in turn attract foreign capital, mobilise local savings and expedite Singapore’s industrialisation programme by providing financing support<sup>72</sup>. Subsequent Concept Plans continued to build up the strategy of a strong CBD, including a ‘New Downtown’ at Marina Bay, in the central city area.

However, the 1991 Concept Plan included a new idea of building up decentralised commercial centres in areas like Tampines, Jurong and , in addition to a strong CBD core,

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<sup>71</sup> “Benjamin Ng, “35 good years” *URA Skyline Magazine*, March-April 2009 [http://www.ura.gov.sg/skyline/skyline09/skyline09-02/text/01\\_3.htm](http://www.ura.gov.sg/skyline/skyline09/skyline09-02/text/01_3.htm) (cited 23 Oct 2013); URA website: <http://www.ura.gov.sg/uol/concept-plan.aspx?p1=View-Concept-Plan&p2=Concept-Plan1971>

<sup>72</sup> Wong Tai Chee & Yap Lian-Ho Adriel, *Four Decade of Transformation: Land Use in Singapore*, pg 19

which has been carried through to the latest Land Use Plan. The rationale behind doing so would help decant commercial activities and thus to prevent traffic congestion going into and out of the city centre from building up during peak hours, and also to provide people with shorter commutes closer to home.

Industrial areas were also identified in the 1971 Concept Plan, including one in Jurong. The 1991, 2001 and 2013 Land Use Plan similarly articulated various strategies to safeguard and create industrial space. Such strategies would be well-coordinated with overarching economic strategies being pursued. For instance, the 1991 Concept Plan identified ‘technology corridors’, which are made up of business parks, science parks, and academic institutions to create synergies and promote the exchange of ideas and innovation. Similarly, the proposal for Jurong Island, which is an amalgamation of seven low-lying southern islands, was intended to support the development of a petrochemical industry.

**(D) Providing good transport and mobility.** The Concept Plan is also an infrastructure plan, and transport infrastructure forms a critical part of the plan. A proposal for a rail network branching North-South and East-West was first mooted in the 1971 Concept Plan, which would serve a series of commercial centres along the route. The 1971 Concept Plan also proposed a comprehensive network of expressways and arterial roads, including the Pan-Island Expressway (PIE), East Coast Parkway (ECP) and Bukit Timah Expressway (BKE)<sup>73</sup>.

Subsequent Concept Plans and Land Transport Masterplans<sup>74</sup> further built on this structure, proposing extensions of the road system (e.g. second link to Malaysia) and MRT network (e.g. a North East Line and three additional circumferential lines circling the city centre were proposed in the 1991 Concept Plan).

Increasingly, focus seems to have shifting away from a car-centric mode of planning, where smooth-flowing roads are a key priority, to one that is more ‘people-centric’. The latest Land Use Plan articulates a promise to build up supporting infrastructure for alternative modes of transport such as cycling and walking, in addition to the traditional bus and rail options.

**(E) Preserving heritage and identity:** The 1971 Concept Plan, which was formulated before any significant policy on conservation<sup>75</sup>, highlighted the importance of keeping and

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<sup>73</sup> Chin Hoong Chor “Urban Transport Planning in Singapore” *Planning Singapore: From Plan to Implementation*, Aug 1998

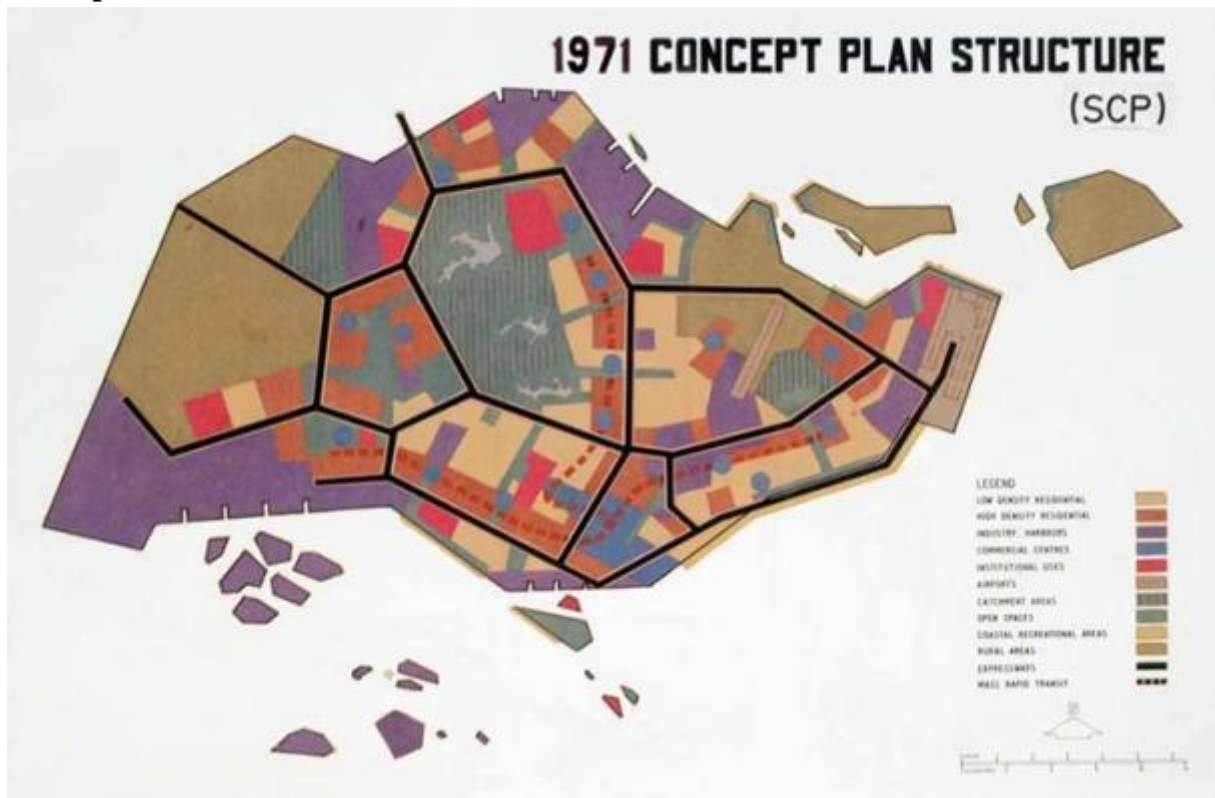
[http://www.elsalvadorcompite.gob.sv/portal/page/portal/ESV/Pg\\_Biblio\\_logist/MFA%20-%20Urban%20Transportation%20\(Singapore%20Model\).PDF](http://www.elsalvadorcompite.gob.sv/portal/page/portal/ESV/Pg_Biblio_logist/MFA%20-%20Urban%20Transportation%20(Singapore%20Model).PDF)

<sup>74</sup> The LTA Masterplan (LTMP) is a document that serve as the roadmap to guide land transport developments in Singapore over the next 10-15 years. The first LTMP was published in 2008, and the latest in 2013.

<sup>75</sup> In 1986, URA published a Master Plan for the conservation of the Historic Districts, after establishing guidelines for conservation. In 1989, conservation areas in the historic districts of Chinatown (Telok Ayer, Kreta Ayer, Tanjong Pagar and Bukit Pasoh), Little India, Kampong Glam, Singapore River (Boat Quay and Clarke

rehabilitating parts of the old city (i.e. Chinatown and Kampung Glam) with traditional character. In subsequent Concept Plans, firm proposals were included to safeguard Singapore's built heritage. Such proposals were not restricted to conserving only buildings but also to maintain the unique charm of areas deemed culturally significant. For instance, the 2001 Concept Plan introduced an 'Identity Plan' where 15 nodes were identified as important to Singaporeans, and suggested ways these could be retained and enhanced<sup>76</sup>.

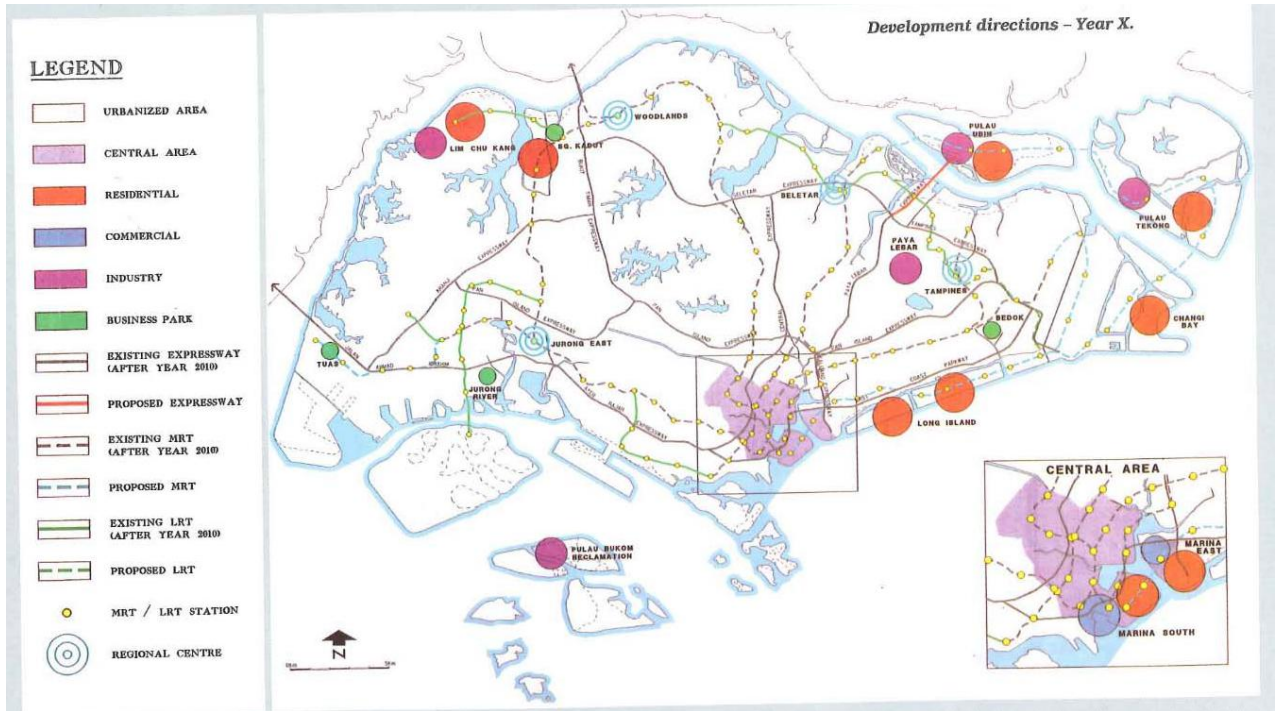
### Concept Plan 1971



Quay), Cairnhill and Emerald Hill, with a total of over 3200 buildings, were gazetted for conservation. Source: <http://www.ura.gov.sg/uol/conservation/vision-and-principles/brief-history.aspx>. (cited Oct 25 2013)

<sup>76</sup>“URA launches identity plans for 15 areas in Singapore” 23 July 2002, <http://www.ura.gov.sg/pr/text/pr02-42.html>

# Concept Plan 1991



# Concept Plan 2001

