

## **Urban Planning**

40 years ago, Singapore faced the problems of an overcrowded city, poor living conditions and a severe lack of infrastructure. Today, the face of Singapore has changed to become one of a thriving city and business hub, characterised by a high standard of living in a clean and green environment.

This success did not come easy. Singapore's progress was built on the back of a stable and strong government, the hard work of its people and an efficient public sector that was proactive, coordinated and able to formulate far-sighted policies.

A visible mark of Singapore's progress is its urban planning, including infrastructure development. Visitors are often surprised to find a modern and well planned-out city that is both user and eco-friendly.

### ***Land-Use Planning***

With only a small area to live on and work with, land-use planning in Singapore is especially critical. This is particularly since we are constantly striving for higher living standards, continued economic growth and social harmony.

In 1959, when Singapore attained self-government, only 9% of the total population of Singaporeans resided in public housing. The majority lived in squatter colonies and city slums, often in unhygienic and potentially hazardous conditions. Today, 85% of the population lives in 987,419 public housing flats located across 23 towns and estates, contributing to one of the highest rates of home ownerships in the world.

In 2001, the government implemented Concept Plan 2001. The vision is to develop Singapore into a thriving city in the 21st century. It is based on a population scenario of 5.5 million and is set for the next 40 to 50 years. A total of 1.8 million homes will be needed, which adds up to another 800,000 new homes, on top of the existing 1 million homes today.

The two government agencies that oversee Singapore's urban infrastructure are the **Housing Development Board (HDB)** and the **Urban Redevelopment Authority (URA)**. HDB tackles the housing needs of the country while URA's primary task is to optimise land use and urban renewal.

For the future, Singaporeans are looking forward to HDB's programme to build a new generation of public housing and revitalise existing public housing estates. Among the ideas under study is the concept of "Housing in a Park", which will complement Singapore's vision to be a City in a Garden. Like its title, "Housing in a Park" will involve the creative integration of greenery and eco-friendly features into public housing. This is not only to improve the standard of living, but also to provide the ideal home for relaxation for Singaporeans.

### ***Industrial Park Development***

Land also has to be allocated for economic activity and industrial development. Since 1968, **Jurong Town Corporation (JTC)** has been Singapore's lead agency in shaping the country's industrial landscape, catering to the needs of more than 7,000 local and foreign enterprises.

Throughout the years, JTC has developed world-class expertise in industrial park planning, development and management. Jurong Island, where Singapore's petrochemical industry is located, has become a case study for many other governments. Formed by linking seven

islands together, the island is now home to almost 90 leading petrochemical companies such as Dupont, ExxonMobil, Mitsui Chemicals, Shell and Sumitomo Chemical.

A more recent state-of-the-art project is One-North. Covering almost 200 hectares, One-North is an intellectually stimulating and creative physical environment for entrepreneurs, scientists and researchers to congregate, interact and exchange ideas.

JTC subsidiaries have ventured overseas to help establish and manage industrial parks. The Suzhou Industrial Development, the Vietnam-Singapore Industrial Development and the Bangalore International Tech Park are just a few out of many other examples.

### ***Land Transport System***

Despite the problems of land shortage and an increasing number of vehicles on the road, Singapore has managed to develop an efficient land transport system. This is a result of innovative traffic management solutions; expanding road network and capacity; managing constant demand of road usage and providing sufficient public transport alternatives.

A good example of an efficient public transport system is the Rapid Transit Systems (RTS). The first RTS line was opened in 1987 and is a pivotal component of Singapore's public transport system. Everyday, more than 1.6 million commuters travel on the RTS, in addition to some 3 million who use the comprehensive bus network. It has since been continually expanded and at present, spans 138km with 110 stations.

Optimising our road network system is vital. Our small island is connected by some 8,600 lane-km of roads and expressways. Intelligent Transport Systems have been developed and installed to maximise road capacity and improve traffic flow. All 2,010 traffic lights island-wide are linked and centrally controlled, while automatic incident and congestion detection systems are installed on expressways. To manage demand, we have come up with effective policies such as the Vehicle Quota System and Electronic Road Pricing System (ERP).

The ERP is Singapore's most innovative and successful solution to traffic congestion. Since its implementation, traffic speeds have been consistently maintained at an optimal range of 45-65 kph for expressways and 20-30 kph for arterial roads. Similar concepts have been adopted by other cities, a testament to its effectiveness.

### ***Port Management and Operations***

Singapore is fortunate to have a strategic location for its full range of shipping activities, including cargo handling, bunkering, research & development and training. Its status as a major international maritime hub is reflected by the fact that 200 shipping lines call on Singapore, offering connections to 600 ports in 123 countries. This includes daily sailings to every major port in the world.

The largest port operator in Singapore is the **Port of Singapore Authority (PSA)** which has 44 berths. PSA's strongest selling point is its efficiency. Its effective service has allowed it to enable a container ship to turn around in a mere eight hours. Backed by advanced information technology, PSA has played a key role in helping Singapore achieve good port and maritime growth. In 2008, PSA's terminals handled 29.00 million TEUs (twenty-foot equivalent units) of containers while its global throughput was 63.2 million TEUs – making Singapore one of the world's busiest container ports.

PSA's flagship product – **PORTNET** – is the world's first nation-wide business to business (B2B) solution, with the aim of helping the port and shipping communities to increase productivity and save costs through the greater use of information technology and the internet. PORTNET is also a winning entry in National Infocomm Awards (2006).

Since it was formed in 2000, it has proven crucial in improving PSA's overall integration and efficiency, by providing the logistics industry with a single sign-on network portal. In doing so, it seamlessly handles all electronic vessel and container data passing through PSA Singapore

Terminals. Its automated system intelligently consolidates and synchronises the complex transactions and operational processes for customers both locally and globally. With an efficient and reliable supply chain, PORTNET has enabled PSA to handle a 25% increase in container volume on a year-on-year basis.

PORTNET has 8,000 integrated users and generates a remarkable 130 million transactions annually. In a survey by the World Bank done in 2007, PORTNET was cited as the key success factor in Singapore's ranking as the World's Number 1 Logistics Hub for its role in simplifying and integrating the complex processes involved in the moving and tracking of cargo worldwide.

In order to facilitate access to real time information and interface with the port community anytime, anywhere, PORTNET new service offering - **PORTNET Mobile** - allows subscribers to access the PORTNET platform on the go. Real time information available includes container status and current container position which can be automatically pushed to customer service in the handling of cargo.

With a suite of innovative services, the port community has achieved a quantum leap in cost savings and operational efficiency by up to 50% through the effective use of resources.

*All information is accurate as of December 2009*

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