

## CASE STUDY

### The MRT system, Singapore: an outstanding rapid transit system (1967 to the present and continuing)

The idea of the Mass Rapid Transit System (MRT) in Singapore goes back to the very earliest conceptual plan designed for the development of the island state after independence. In 1962, Emile E. Lorange, in a study sponsored by the United Nations, made broad recommendations for an action plan for the highly crowded central area of Singapore but he said it should be seen within a larger regional context. The following year a team consisting of Otto Koenigsberger, Charles Abrams and Susume Kobe stressed the need for a unified approach to the location of jobs and housing, and to urban renewal. Further support came from a transportation study, also sponsored by the United Nations, conducted by Britton Harris and Jack Mitchell, that recommended that Singapore have a clear transportation structure plan before major development took place. The study also doubted that a road-based system would be able to handle all the traffic that would be moving along the central circulation route. This series of recommendations resulted in the initiation of a United Nations Urban Renewal and Development Project.

The project's goals were to: (1) establish a long-range physical plan for the republic, including a transportation plan, (2) recommend policies and schemes for the central area, (3) recommend the type of mass transport system to be used, (4) assist in the preparation of specific projects and (5) develop a fully operational agency that could develop the plan further, and implement it. Crooks, Mitchell, Peacock and Stewart, a consulting firm based in Sydney,

conducted the study between 1967 and 1971 when the population of Singapore was 2.07 million people and that predicted (with reasonable accuracy) being 4 million in 2000. The long-range proposal for Singapore was presented in a concept plan.

The concept plan is simple but powerful (see Figure 10.12). It was selected from a number of possibilities based on the need for an efficient transportation system. It consists of a loop MRT with seven major nodes/new towns varying in size from 100,000 to 400,000 people, being plugged into it. Accompanying the MRT would be an expressway system, with graded interchanges, and other major roads. It was also recommended that a restriction be placed on the number of cars entering the CBD. (An Area Licensing Scheme now operates and charges a fee for cars entering the district.) The success in developing and implementing the plan has been due to the efficiency of the Singaporean civil service.

The concept plan had, and has, no legal standing. The master plan of 1958 had statutory authority and accordingly was amended (and has been every 5 years since) within the specifications of the concept plan. The concept plan was revised in 1992 and again in 2001, but the basic principles behind the 1971 plan have been retained. Queenstown (1965), the first of the new towns, had already been completed and the second Toa Payoh was completed in the year of the publication of the concept plan. It was not until 1981 that the Singapore government committed itself to building the MRT. Construction began in 1983 and