The lack of means of transport means users must walk long distances.
Half the urban population of the country lives in the Greater Dakar area, Senegal.

How to determine demand

To set up a strategy for urban public transport development in the cities of the South, any approach to the next decade must take into account the major ineluctable trends and, above all, the estimated demand parameters.

•• **The rapid urbanization of cities and changing lifestyles influence mobility flows.** Regular readjustments must therefore be made to traffic data at about five-yearly intervals. The tools available for use must be consistent with the objectives.

In developing countries, where distortions can easily occur, it is preferable to opt for light, low-cost tools that are easy to set up, operate and readjust. The most commonly used of these tools, from the simplest to the most complex, are cordon line surveys, origin-destination studies, household surveys and traffic forecasts. The O/D study is an appropriate tool for planning, designing and determining priorities for a public transport network. In cities such as Douala, Yaoundé, Libreville, Dakar and Abidjan, O/D surveys based on roadside questionnaires have shown that it is possible to use local resources to determine demand - desire lines, volume, motivation, age, professional category, sensitivity to fares - at a reasonable cost and at quite short notice[15].

O/D study results are basic, medium-term planning tools that integrate the various transport modes and determine land reservation for busy public transport routes. They must be planned in accordance with urban development schemes. The Urban Travel Plans introduced into France by the Inland Transport Act (LOTI) of 1981, and made compulsory by the Air Act of December 1996, address the overall transport problem encompassing walking, two-wheelers, private cars and public transport within a medium-term planning framework. These plans can be used as benchmarks.

The already-completed partial surveys highlight the very heavy traffic flows on specific routes and at peak hours for cities with more than 700,000 inhabitants.

•• **These surveys also show a high percentage of students**: 70% of the population in the countries of Africa, the Maghreb and the Caribbean are aged under twenty-five and 50% are under fifteen. In all the developing countries, the organization of the school bus service is a major concern.

The problems are twofold:

- How to provide for heavy traffic flows concentrated into restricted time periods and corridors, which require large, unprofitable vehicle fleets;
- How to address the problem of fares.

Different solutions have been adopted:

- Students in Tunis, who account for 30 to 40% of the traffic, use the scheduled services. They give rise to fare compensations that do not cover the entire cost, the difference being paid for by companies.
- In Morocco, public operators are entirely responsible for the school bus service, with compensations that do not fully cover the cost.
- In Africa and Central America, students use the scheduled services. Fare compensation is non-existent in Central America, and inadequately applied in Sub-Saharan Africa when transport is provided by public corporations.
- However exceptions do exist, such as in Libreville where the school bus is operated by a state-managed company and is subsidized. Transport is now entirely free for students. The transport company is unable to renew the vehicle fleet for two reasons: State transport subsidies have been reduced and there is no political will to ask for contributions from households.
- In Cameroon, to make up for the total lack of public transport since Sotuc went into liquidation, the Cameroon Teachers' Association is endeavouring to set up a special mutual-benefit type of transport service. Aid has been sought from France for this initiative.

The characteristics of transport supply

▼ Supply capacities to be mobilized

•• **On the busiest road sections**, the transport capacities offered by minibuses or midibuses require a regular fleet of vehicles that is not consistent with the road characteristics. In Abdijan, for instance, on the Abobo and Yopougon roads, where traffic exceeds 10,000 people per hour and per direction, the minibus equivalence to the Sotra standard and articulated buses would require 8 minibuses per minute and per bus route[16].

Public transport systems are determined from peak hour demand on the busiest sections, from medium and long-term forecasts and from the possibilities of integrating these systems into the urban fabric. Urban and population growth in the cities under study, which have one or more million inhabitants, has already caused peak hour traffic on the busiest corridors to exceed 10,000 travellers per hour and per direction. This lends credence to the idea that heavy systems must be adopted quickly.

The matching of transport modes to traffic is summarized in the following table. The average capacity per mode takes account of local conditions, which are different from European standards of comfort. These figures form the low end of the range.