Republic of Yemen
City and Inter-City Land Transport Sector
Strategy Note

August 2010

Middle East and North Africa Region
Energy and Transport Unit

World Bank Document
CURRENCY EQUIVALENTS
(Exchange rate effective on March 8, 2010)

Currency Unit = Yemeni Rial (YER)
1 YER = 0.0049 USD
1 USD = 205 YER

Fiscal Year: January 1 – December 31

ABBREVIATIONS AND ACRONYMS

CTMS Comprehensive Traffic Management Study
FIATA Fédération Internationale des Associations de Transitaires et Assimilés
(Governmental Federation of Freight Forwarders Associations)
GVW Gross Vehicle Weight
LLTC Local Land Transport Corporation
MOI Ministry of Interior
MOT Ministry of Transport
FOREWORD

This report presents the main findings and recommendations of several World Bank missions to Yemen, undertaken in 2008 and 2009. It was mainly prepared by Mr. Richard Meakin, Consultant and Transport Specialist, under the guidance of Mr. Jean-Charles Crochet, Task Team Leader. Several versions of the report were reviewed with the Ministry of Transport of Yemen in October 2008 and 2009. It was later edited by Mr. Vincent Vesin, Transport Specialist.

The mission wishes to thank all those in the Ministry of Transport and other agencies who provided information and assistance, particularly Minister Al Wazir for his constant support of World Bank missions. Particular thanks are also due to Mr. Gamal Alshawbaly of MOT for his kind and very efficient assistance in organizing the original review and analyzing sector issues, and to Mr. Essam Ahmed Shaker, chairman of the Land Transport Authority for his assistance to Bank staff throughout the period.

The World Bank’s study covered all modes of city and inter-city land transport, also designated in this report under the name of “road transport”. However, the report focuses on the Government’s two main concerns: (i) the urban bus and taxi sector, which performs poorly and is a major cause of the growing traffic congestion in Yemeni cities, particularly in Sana’a; and (ii) the inter-city freight sector, which does not presently develop in ways that adequately serve the economy.
EXECUTIVE SUMMARY

In the city and inter-city land transport sector, the Government of the Republic of Yemen has two major concerns, the urban transport services in Sana’a and the freight inter-city services, mainly for economic, social, and safety reasons. Sana’a is indeed a large and fast growing city where public transport has become critical. Its population was 1.75 million in 2004, while forecasts are for 2.8 million for 2014 (+60 percent) and 3.8 million for 2024 (+117 percent). Yet, Sana’a’s public transport system performs poorly. Similarly, the efficiency of inter-city freight transport is low and it does not promote trade, competition, and low price of basic commodities as it should. In addition, Yemen faces a very high rate of road accidents: in 2006, the number of recorded accidents was about 13,000, resulting in about 2,700 deaths and 18,000 injuries.

Main Sector Issues

General Issues

- The legal and institutional framework for land transport services is insufficiently developed due to scarce financial, technical and human resources.
- The very limited and inconsistent data about vehicles and transport operations makes it difficult to diagnose key sector problems and formulate effective policies.

Passenger City Transport Issues

- The route network of Sana’a has developed following the historical growth of the city, without anticipating future needs. Today, it does not meet the actual transport demand, especially for cross-city routes and north-west suburbs coverage.
- There is no formal regulation of bus operations but a rigid informal system based on the mandoobs. This is characterized by the absence of service obligation and demand/supply monitoring.
- City buses are in poor condition due to a deficient inspection system.
- Although advanced inspection and testing facilities have recently been established in Sana’a, it seems that few commercial vehicles are actually tested in Sana’a and, in the rest of the country, most vehicles are still not tested.
- The bus industry is fragmented and does not attract investments needed to improve the quality of vehicles.
- Disorganized on-street bus operations worsen traffic and safety conditions.
- The urban population’s low income and limited affordability impose a constraint on acceptable fare levels
- The supply of urban taxis is excessive and empty taxis are a significant contributor to congestion and air pollution. Most of the taxis are unfit for service due to age and poor maintenance.

Inter-City Freight Transport Issues

- The heavy haulage industry is dominated by an excessive number of small-scale operators, who operate trucks in bad condition at low levels of productivity.
- The ban of trucks in Sana’a combined with the absence of trans-shipment facilities reduces productivity and adds to road congestion in the suburbs of Sana’a.
- Overloading, driver’s errors, poor vehicle maintenance and lack of inspection are responsible for many severe road accidents.
Despite Law 33 which liberalized the truck market, some monopolistic practices remain.

**Recommended Strategies**

**Institutional Development**

- Concentrate expertise in a central unit to strengthen the capability of MOT.
- Consolidate licensing functions and vehicle database in MOT.
- Prepare a comprehensive statement of road transport policy.

**Urban Buses**

- Establish a legal framework to regulate licenses and service obligations by legitimate franchises rather than through the *mandoob* system.
- Create an adequate institutional structure at city level to plan urban transport services, award, and supervise bus route franchises.
- Reduce the number of operating buses to induce higher seat-capacity and better vehicle condition.
- Deploy bigger buses on main routes.
- Adjust the bus network regularly to meet demand.
- Set a proper fare policy, relying especially on the competition in the award of route franchises to keep fares low.
- Improve bus operating conditions.

**Urban Taxis**

- Replace the four urban fixed-route taxis by bus services.
- Reduce the excess number of taxis.
- Improve vehicle and service quality.

**Inter-City Buses**

The current policy of liberal market entry subject to minimum service quality, safety and environmental impact criteria should be continued, but the vehicle, driver and operating safety criteria need to be applied more stringently.

**Inter-City Freight Trucks**

- Anticipate market pressures and progressively update vehicle regulations to reflect higher standards of vehicle and driver safety, environmental impacts and operating efficiency.
- Reduce the excess number of low-quality trucks by increasing vehicle standards and making insurance mandatory.
- Improve operators’ competence by creating professional associations.
- Improve vehicle quality by effective mechanical examination, and construction and maintenance regulations.
- Improve drivers’ quality through licensing, training and limitation of driving hours
- Improve operating infrastructure by building logistics platforms.

Action plans and timetables to implement these strategies are proposed in Chapter IV below.
Republic of Yemen  
City and Inter-City Transport Sector  
Review Note

I. DESCRIPTION OF THE CURRENT SITUATION

A. Institutional and Legal Framework

1. At present, the Traffic Department of the Ministry of the Interior (MOI) is the authority for vehicle inspections and for licensing transport vehicles and services, while the Ministry of Transport (MOT) is responsible mainly for transport policy and planning.

2. The current legal framework for the regulation of city and inter-city transport is contained in Law 33 of 2003 which created an ‘open market’ for passenger and freight transport services, replacing the previous monopolies held by syndicates. Tariffs for road freight and passenger services are unregulated. A detailed description of Law 33 can be found in Annex 1 at the end of this report.

B. National Transport Data

3. Few data are available on the vehicle fleet in Yemen and data from different sources are often inconsistent. In response to an enquiry by the Mission, MOT provided the following data for the total number of vehicles in Yemen:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>245,123</td>
</tr>
<tr>
<td>Taxi</td>
<td>86,752</td>
</tr>
<tr>
<td>General transport (freight &amp; passenger)</td>
<td>240,371</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>572,246</strong></td>
</tr>
</tbody>
</table>

Table 1: Vehicles registered in Yemen  
source: MOT

C. City Passenger Transport Sector

4. **Operating Data.** The most recent source of reliable data on urban passenger transport operations is the Comprehensive Traffic Management Study for Sana’a City (CTMS) prepared by consultant Team International under funding from the Arab Fund for Economic and Social Development, which produced its main reports in 2006. It emphasized that all reported numbers

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1The number of vehicles by category registered in each governorate was also provided. It can be found at Annex 2. Annex 2 states the total number of vehicles registered in Yemen to be 709,276, about 24% higher than in Table 1.
were approximate\textsuperscript{2}. CTMS compared the data on the size and composition of the public transport fleet derived from its surveys (which were based on interviews with the mandoob\textsuperscript{3} in each terminal) with the data shown in the Traffic Department’s Annual Report 2005. The result is shown in the table below:

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>2005 Annual Report of Traffic Department</th>
<th>CTMS Public Transport Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable Route</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxi</td>
<td>33,000</td>
<td>n/a</td>
</tr>
<tr>
<td>Shared-Taxi</td>
<td>n/a</td>
<td>127</td>
</tr>
<tr>
<td><strong>Fixed Route\textsuperscript{4}</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbus</td>
<td>7,000 (47%)</td>
<td>3,997 (39%)</td>
</tr>
<tr>
<td>Minibus</td>
<td>7,300 (48%)</td>
<td>5,529 (54%)</td>
</tr>
<tr>
<td>Bus</td>
<td>700 (5%)</td>
<td>717 (7%)</td>
</tr>
<tr>
<td><strong>Total Fixed Route</strong></td>
<td>15,000</td>
<td>10,243</td>
</tr>
</tbody>
</table>

Table 2: CTMS Public Transport Vehicle Data Compared with Traffic Department Data

source: CTMS, Team International, Interim Report 5.3.

5. As shown above, the Traffic Department reported 15,000 minibuses in Sana’a. The fact that figures are presented in round thousands suggests that they are estimates rather than derived from licensing records. By contrast, interviews of mandoob carried out by CTMS indicated the total to be 10,243. When presenting the 2006 data to the World Bank, the Traffic Department stated that, in interpreting the published data, the following factors should be taken into account: (i) vehicles whose licences have expired and which are probably scrapped, are not systematically removed from the register and (ii) a proportion of owners of inoperable vehicles transfer their plates to other vehicles. Traffic Department therefore assumes that 10-15% of minibuses are retired each year and adjusts the published figures accordingly.

6. Other factors cause a disparity between the number of vehicles licensed and the number actually operating:

- a large number of minibuses registered in governorates outside Sana’a operate on routes within the city
- for many owners, minibus operation is a part-time occupation by which they supplement their income or fill periods of unemployment. Their vehicles may not operate every day
- the poor condition of many vehicles reduces their availability.

7. The 2006 Annual Report of the Traffic Department stated that there were 9,299 minibuses licensed to operate 39 urban routes and 160 taxis licensed to operate 4 urban routes, totalling 9,459 vehicles: a large reduction from the 2005 data shown in Table 2. Average vehicle occupancy at screenline survey points was used by CTMS to estimate passenger volumes. Results

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\textsuperscript{2} CTMS Interim Report paragraph 5.1., September 2005

\textsuperscript{3} Each terminal is controlled by a mandoob who registers vehicles on each route, organizes the departure sequence, keeps order and collects departure fees. Mandoob were very strong prior to the liberalization brought about by the 2003 Law and have since been retained as MOT has insufficient staff to control terminals.

\textsuperscript{4} CTMS did not record any fixed urban routes operated by taxis, but 2006 data from Traffic Department’s Annual Report shown in Annex 3 identified four fixed taxi routes deploying 160 vehicles.
are summarized in the table below. However, this data does not provide a reliable basis to estimate daily passengers carried.

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Avg. Occupancy (inc. Driver)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Passenger Car</td>
<td>2.1</td>
</tr>
<tr>
<td>Taxi</td>
<td>2.1</td>
</tr>
<tr>
<td>Microbus</td>
<td>3.5</td>
</tr>
<tr>
<td>Minibus</td>
<td>6.8</td>
</tr>
<tr>
<td>Bus</td>
<td>15.4</td>
</tr>
</tbody>
</table>

**Table 3: Average Vehicle Occupancy**

source: CTMS, Team International. Interim Report 5.3.

Urban Buses

8. **Vehicle Numbers and Types.** Fixed-route public transport in Sana’a is provided exclusively by minibuses, except for four routes operated by taxis. There are no full-sized buses. MOT data refers to three categories of minibus: (i) ‘Dabab’ microbuses, nominally 7-seats; (ii) ‘Nuss-bus’ minibuses, nominally 14-seats; and (iii) ‘Coaster’ minibuses, nominally 26-seats. In practice, seating capacity varies with the internal layout and vehicle model. The capacity of the three vehicle types were described by CTMS\(^5\) as 7, 12 and 24 seats respectively and these seating capacities will be used in this report. The table below summarises the number of each type in service, derived from the Traffic Department Annual Report.

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Total No of Routes</th>
<th>Total No. Allocated</th>
<th>Average Allocation per Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi</td>
<td>4</td>
<td>160</td>
<td>40</td>
</tr>
<tr>
<td>7-seat</td>
<td>16</td>
<td>3,756</td>
<td>235</td>
</tr>
<tr>
<td>12-seat</td>
<td>16</td>
<td>4,745</td>
<td>297</td>
</tr>
<tr>
<td>24-seat</td>
<td>6</td>
<td>753</td>
<td>126</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>9,459</strong></td>
<td><strong>220</strong></td>
</tr>
</tbody>
</table>

**Table 4: Summary of Vehicle Types in Sana’a**

source: Traffic Department Annual Report 2006

9. There is little variation in bus types. Most minibuses are of 1970’s and 1980’s vintage and have been imported second-hand. The 24-seaters are almost all 1980’s vintage Toyota Coasters, with a few Nissan Civilians. They were designed as 16-seaters and the additional capacity is created by seating two passengers next to the driver and using fold-down seats in the aisle. Standing passengers are not usually carried – the low headroom and lack of floor space when the aisle seats are used makes standing impractical. The 12–seaters are predominantly Toyota Hiace, which was designed as a 9-seater. Again most vehicles are more than 20 years old. Most of the older 7-seat microbuses are Daihatsu, with small number of Suzuki Carry. Some relatively new Daewoo Damas microbuses can be seen. The minibus network is supplemented by taxis, motorcycle taxis and unlicensed taxis (private cars) which openly stand or ply for hire.

10. **Route Network and Vehicle Allocations.** The 2006 Traffic Department Annual Report identified 43 separate minibus routes operating in Sana’a. The routes, together with the number of vehicles licensed on each route, are shown in Annex 3. The CTMS identified 61 routes in its 2005 surveys. The average number of minibuses licensed per route was very large at 243. Twelve routes had a vehicle allocation of more than 300, three routes had more than 500. The Traffic Department report stated that Route 7 between Altahreer and Hadda which is about 10km in length had 750 vehicles allocated. However, a mandoob at Altahreer terminal told the World Bank that 350 vehicles were deployed on Route 7 and parallel Route 8, though he asserted that the number registered for the routes could be double that. These busy routes are operated by smallest 7-seat microbuses. The mandoob stated that the two short routes between Al Tahreer and Hayel (5kms) and between Al Tahreer and Hasser (6kms) combined deploy 180 vehicles.

11. Huge though the reported vehicle allocations are, the Traffic Department stated that these reflected the vehicles licensed in 2006, and an embargo on new bus and taxi licences was in effect from 2002 to 2006. Since the embargo was lifted in 2006, the current (May 2008) total of licensed minibuses was estimated to be about 15,000, an increase of about 5,500 (58%) since 2006. The additional vehicles are reported to have been deployed on the existing routes, but the distribution is not known. No new routes were created to extend the network coverage, though some routes were extended into the outer suburbs.

12. **Terminals.** The large minibus terminals established on public land in central Sana’a are identified in Annex 3. There are five urban terminals with more than three routes. The largest is Bab Alyamen near the Old City which, according to Traffic Department’s report, accommodated 14 routes which deployed 3,242 vehicles. However, the mandoob stated that the terminal deployed 1,600 vehicles on 12 routes, with each vehicle completing about ten trips per day. Averages route length was about ten kilometres. No rent is paid to government for the sites, other than the MOT Governorate’s YER40 share of the departure fees.

13. **Licensing.** Traffic Department of the Police is responsible for the registration and licensing of passenger vehicles and drivers, as well as for bus and taxi service licences and mechanical inspection of vehicles. Minibuses require an annual route permit issued by Traffic Department to operate. No qualifications other than a valid driving licence are required for the driver. Each route is identified by a number and the destinations served which are displayed on stickers on the front and rear of the vehicle. Stickers are of three colours (red, green, yellow) which indentify which of the city centre terminals the route originates from. No minibus is permitted to operate without a sticker which is issued by the Traffic Department.

**Urban Taxis**

14. **Vehicle Numbers and Allocations.** There are estimated to be 33,000 licensed taxis in Sana’a metropolitan area, though as with minibuses, this figure is approximate as non-operating vehicles are not removed from the register. The estimate is based on an assumption that about 10% of taxis are scrapped annually. As Annex 3 shows, four urban fixed-route services in Sana’a are operated by taxis – mostly Peugeot 504 station wagons. These taxis are painted in the yellow and white standard taxi livery but often do not exhibit a taxi sign.

15. **Cost and Revenue.** Most urban taxis are individually-owned and rented to a driver on a daily, or longer-term basis. Daily rental is about YER3,000 and the driver keeps the balance after paying fuel and minor repairs. Daily total revenue averages YER 6,000. Some taxis have contracts for schools or companies, while some are engaged on fixed-route operation. Taxi fares
are not regulated and are negotiated between driver and passenger. Average fare for a 5km journey is about YER300.

16. **Vehicle Condition.** Many of the older taxis, particularly for the urban and inter-city shared taxi routes, are the robust Peugeot 504 and 505 station wagons, (manufactured in France between 1968 and 1983 (504) and 1979 and 1992 (505)), which can accommodate three rows of seats and thus carry up to 8 passengers. Baggage is stacked on a roof rack. A cottage industry has developed to manufacture parts keep these antiquated vehicles running. No more Peugeot 504 or 505s can now be imported due to the 5-year age limit. Other older taxis are a variety of models, a high proportion being Toyota, including Toyota Cressida, Crown and Camry from the 1970’s and 1980’s. Even a few old Russian Volga’s can still be seen.

17. In the last two years, there has been an influx of new 4-seat cars into the taxi market, most Daewoo or Toyota Corolla (price about YER 2.1 million) as operators have sought to reduce their fuel expenses. Daewoo is reported to be supporting loans through a local affiliated bank. Repayments are about YER 3,000 per day, about the same as renting a taxi. A large company, Raha Taxi Company (see description below), has recently invested in a new fleet of 500 new taxis, using meters and radio dispatching.

<table>
<thead>
<tr>
<th><strong>Raha Taxi Company</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>In 2006, Raha Taxi Company commenced operation, using new Hyundai cars. (see photo 18 of Annex 5). The fleet currently comprises 200 4-seaters, 269 5-seat Hyundai Matrix and 100 Hyundai Elantra (branded ‘Raha Plus’). All cars are gasoline fuelled. Diesel is not favoured for environmental reasons. Gas fuel is being considered.</td>
</tr>
<tr>
<td>Drivers receive training and are supervised. Drivers pay a fixed daily rental of YER 4,500 for a 4-seater car, while average daily revenue is about YER 13,000. After 4.5 years employment, a driver is given ownership of the taxi, even though Raha acknowledges that the taxi will then be used in competition with Raha.</td>
</tr>
<tr>
<td>The company operates a despatching system using VHF radio. Although taxi fares are not regulated, drivers are required by the company to charge fares according to a taximeter. Drivers failing to use the meter are liable to a penalty of YER 50,000. Raha fares for a 4-seater taxi are (in YER): flagfall 1st km 85, 2nd km 60, 3rd km 40, 4th km 40, 5th km 30. Fares for a ‘Raha Plus’ 5-seater taxis are about 15% higher.</td>
</tr>
<tr>
<td>Raha receives about 1,000 phone bookings per day and each taxi averages 54 paid trips per day. Average trip length is about 5km. This produces average revenue of about YER 370,000 per month per taxi. Raha is considering entering inter-city bus market, using twenty 40-50 seat Hyundai buses.</td>
</tr>
</tbody>
</table>

**D. Inter-City & International Passenger Transport Sector**

18. Prior to 1997 inter-city passenger routes were mainly operated by buses of the state-owned Local Land Transport Corporation (LLTC) described below, and Peugeot route taxis.

**Inter-City & International Buses**

19. **Competition.** The first private company to operate long-distance bus routes, the Yemen International Transport Co. (Yemitco), started in 1997 with 8 buses. Other inter-city bus companies are relatively small with fleets of 28, 10, 10 and 5 buses. There is active competition on inter-city routes. For example, about ten bus companies and several Peugeot routes serve the Sana’a- Aden corridor. No data is available on fares. The longest inter-city route is 1600 kms.

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6 The Peugeot operators protested and damaged some buses. Now the company has 70 buses.
20. Al Esayi is the second biggest inter-city operator with 28 buses. It serves 8 cities in Yemen with 18 daily departures. Buses depart twice weekly to Riyadh and Jeddah from Sana’a and daily from Aden to Jeddah. Esayi operates Hajj trips to Makkah through a subsidiary ‘Al Yamama’ company. It also operates some small trucks and minibuses on contracts. The company has developed a dedicated terminal in central Sana’a. Revenue is generated from leases to travel agents, telecoms and other retail outlets.

21. Licences and Operations. Inter-city bus licences are issued by MOT under Law 33. Applications are normally granted as the market is open. Nevertheless, no data was available to the Mission on the number of buses or operators licensed to operate inter-city services. Despite the requirement of Law 33 of 2003 that all long-distance buses should operate from dedicated terminals provided by the operator, the smaller inter-city operators pick-up passengers on-street at several locations in central Sana’a. Yemitco also operates from an on-street location near Bab Alyamen. These on-street terminals are shown in photos 14-16 in Annex 5. It has been proposed that government should construct a common terminal for inter-city and international bus services, modelled on the Arriyadh terminal in Riyadh. About 35 bus operators are licensed to operate international services, including foreign operators from Saudi, UAE and Oman. Yemeni buses only operate to destinations in Saudi Arabia.

Local Land Transport Corporation (LLTC)

LLTC, previously called the General Land Transport Corporation, was established in the 1960s as a wholly government-owned company. It is authorized by its law to operate inter-city, international and urban services. LLTC also operates some Hajj charters to Saudi Arabia for private companies.

The company makes an operating profit and claims it has never received subsidy. Ten years ago, LLTC operated a fleet of 80 buses but now the fleet is reduced to 14, all deployed on inter-city routes. LLTC owns large depot sites in Sana’a and it is proposed to sell half the area for an estimated YER 4 billion. Maintenance operations would be moved to a large site 6kms outside Sana’a.

The company plans to expand its inter-city operations by buying 20 new buses by tender. LLTC does not consider urban operations to be profitable. Urban operations could generate YER 10,000 revenue per bus per day, but inter-city routes can produce YER 60,000-100,000 per day.

Because LLTC was one of very few undertakings in Sana’a with well-equipped workshops, MOT proposed that they should undertake the annual mechanical inspection of buses and trucks on a commercial basis but this was never fully implemented. Now government is considering a joint venture with a private firm to improve the integrity of mechanical inspections.

Inter-City Taxis

22. On many inter-city routes Peugeot taxis compete with buses, even though, unlike buses, they are not air-conditioned and usually not insured. Since about 2000, 12-seat minibuses have

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7 Overseas experience shows that market conditions for inter-city and international buses are generally more favourable than those of urban buses. Schedules and capacity may be closely adjusted to demand without the need for regular headways. Affordability of long-distance fares is generally higher because passenger trips are usually infrequent and often optional. There is little need for governments to control fares on social grounds.

8 The government embarked on a program to privatize state enterprises in 1995 as part of the economic reform strategy. LLTC was one of the enterprises targeted. Although government has reduced its share in the company, the privatization is not yet complete.
also been operating inter-city routes, picking up on-street not in the main terminals. MOT says it will permit 24-seat minibuses to run inter-city routes, and is expecting an application. The longest Peugeot route is 650 kms.

23. **Licences and Operations.** Taxis, including fixed-route taxis, are licensed by Traffic Department. Fares are not regulated. Most fixed-route taxis operate between cities, operating from the big minibus terminals. A dedicated ‘Peugeot’ terminal has been established near the Bab Alyamen minibus terminal. (see photos 10-12 of Annex 5). The terminal\(^9\) accommodates about seven high-frequency routes, including to Aden, Ibb, Taiz and Hodeidah. A separate loading lane is dedicated for each route and vehicles on each route are identified by a coloured stripe. The queues of waiting vehicles are very long (see photos 3-9 in Annex 5), and in many cases it will take several hours to reach the head of the queue. The committee allows a driver to jump the queue for a fee of half the trip revenue, in addition to the departure levy. A levy of YER 250-400 per trip is collected on departure, depending on route length. Of this, YER 50 is remitted to the MOT office in the Governorate and the remainder is retained by the union.

24. **Taxis vs. Buses.** The inter-city fixed-route collective taxis are able to compete with inter-city buses because they offer higher frequencies, slightly shorter journey times and similar fares, but lower comfort. In time, as the long-distance bus network becomes more extensive, and especially if fuel prices rise substantially, the buses will take market share from the taxis.

25. Many private vehicles (blue licence plate) stand for hire in the taxi terminals and informal picking-up points in Sana’a, offering transport to outlying areas, apparently without fear of prosecution. As photo 17 in Annex 5 shows, they include cars, 4-wheel drive SUVs and pick-up trucks. Unlicensed public transport vehicles are common in the rural areas.

### E. Inter-City Freight Transport Sector

26. The road freight industry comprises two sectors: (i) local distributor and own-account operators using trucks under 3.5 tonnes of GVW (Gross Vehicle Weight), and (ii) heavy, mainly long-distance haulage operators using trucks over 3.5 tonnes of GVW. The heavy haulage sector is the main focus of this report.

27. **Composition.** No data is available from MOT on the numbers, sizes, types and ages of trucks registered in Yemen, nor the number and size of operators. Most of the small owners operate medium-size 2-axle, flat-bed or drop-side trucks suitable for a wide range of cargos. Most maintenance is done by the owner, often at the roadside. There are a number of companies with up to 20 trucks, but relatively few large corporate fleets greater than 20. The fleets of the larger companies comprise larger, more modern trucks, with a proportion of specialised trucks for the carriage of liquids or gases, heavy equipment and products from the oil industry and articulated trucks with semi-trailers suitable for the carriage of shipping containers. Very few containers are seen on the road which probably means they are stripped in the port.

28. **Market Conditions.** Competition is severe for general haulage consignments from the low-cost, small-scale truck sector, as reported the company Al-Huthaily (see description below). It results in downward pressure on rates. Operation of specialised trucks, particularly for the oil

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\(^9\) The Peugeot terminal is managed by a committee of the Transport and Communications General Union. Committee members are elected and the committee employs controllers and fee collectors on a salaried basis. The Union has established 72 committees for different functions.
industry is more profitable. Saudi Arabia does not permit Yemeni trucks to enter its territory and this has deprived the local trucking industry of the opportunity to compete for the transport of freight between Yemen and Saudi Arabia and UAE. This would be a natural market for the larger companies with their more modern, higher capacity trucks. Saudi trucks however are permitted to enter Yemen. Shipping insurance premia in Yemen are the highest in the region, putting upward pressure on freight rates.

**Al-Huthaily Trade, Transport & Oil Services**

Al-Huthaily Co. was established in 1974. By 1980, the company specialised in heavy haulage of oil and gas for the domestic oil industry. Later the fleet diversified to include low-loaders, liquid gas tankers, container trucks, refrigerated trucks, cranes and tankers for oil products as well as general-purpose trucks.

Al-Huthaily’s current fleet comprises 83 trucks, all purchased new: 30 articulated, mostly Volvo, and 53 rigid trucks, mostly Mercedes-Benz. A range of semi-trailers includes low-loaders with a capacity of 160 tons. Trucks are hired on long and short-term contracts.

The company also acts as a freight forwarder for air, sea and land services and owns two petrol filling stations. They construct private and retail filling stations for clients.

Al-Huthaily has truck depots in Sana’a, Aden, Mokalla, Al-Hodiedah, each of which has a maintenance facility.
II. MAIN SECTOR ISSUES

A. Inefficient Institutional Framework

29. Because of limited financial, technical and human resources, government agencies cannot ensure full compliance with all the rules and procedures defined in Law 33. In particular, Law 33 requires a technical examination for entry to the bus and truck markets, but the absence of an effective system of vehicle examination allows unfit vehicles to operate.

B. Insufficient Data

The very limited and inconsistent data about Yemeni vehicles and transport operations restrains the expression of clear objectives and effective policies in the transport sector.

30. Only few and approximate data are available on the vehicle fleet in Yemen. Buses and trucks are not identified separately. Trucks are not classified by weight, size or axle configuration. No data is available on the utilization of the vehicle fleet, such as the category and volume of cargo carried, haulage distances, nor on the distribution of ownership by fleet size. In the passenger sector, no data is available on the national fleet of buses, such as the distribution of ownership, size of buses, nor the number of passengers using any transport service, except data reported in the 2006 Sana’a CTMS.

31. CTMS is the most recent source of reliable data on urban passenger transport operations. It was emphasized that all figures were approximate. The Interim Report of CTMS stated: “The only official sources of numbers of vehicles operating in Sana'a appears in the Annual Report of the Traffic Department of Sana'a Municipality. And this source is careful in pointing out that the numbers it quotes are approximate. In the data collection effort exerted by this study, the numbers of various public transport vehicles operating from each Farza11 were recorded as reported by the responsible individual at each Farza. Again here we must mention that numbers were given, from memory, without resort to any written records. These numbers are at best approximate, as they come mostly in multiples of 10. Because of the scarcity of data and its doubtful accuracy, only wide range trends are detectable and broad conclusions are impossible to make.”

32. Data from different sources are often inconsistent. It is understood that one reason for the wide disparities in data is that there is no procedure for removing vehicles from the register when they are scrapped; an assumption is made about the rate of vehicle scrapping. The manual system of record-keeping in the governorates also contributes to inconsistencies. Clearly, the lack of even basic data on the characteristics of the vehicle population is a major problem because it obscures the status of the road transport sector, which is an important component of the national economy. It inhibits the formulation of objectives and effective policies.

33. However, the Police Traffic Department is installing a computerised system for recording and issuing driver and vehicle licences. It will be installed in the headquarters in

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10 CTMS Interim Report para 5.1, September 2005

11 Farza are public transport terminals
Sana’a and may be operational by the end of 2008. The new system is expected to simplify the application and renewal process for licenses. It should enable more accurate and readily retrievable database to be maintained, though more stringent procedures for deleting scrapped vehicles will need to be adopted\textsuperscript{12}.

\begin{center}
\textbf{C. City Passenger Transport Sector}
\end{center}

\textit{Urban Buses}

\textit{The route network of Sana’a has developed following the historical growth of the city, without anticipating future needs. Today, it doesn’t meet the actual transport demand, especially for cross-city routes and north-west suburbs coverage.}

34. The route network is presented graphically in Annex 4 which was extracted from the CTMS report. Annex 4 shows that the characteristics of the route network are:

- routes tend to radiate from seven main city termini: there are few cross-city routes
- many routes concentrate on the main urban corridors: there is extensive duplication
- extensive areas of the suburbs, especially the north-west, lack adequate service coverage

35. \textbf{Only main corridors are adequately served.} There has never been a public transport study of Sana’a or any other city in Yemen. CTMS was primarily a traffic study but undertook extensive surveys of public transport operation in 2005. The study proposed that the 61 urban minibus routes identified by the surveys should be merged into 18 routes and operated by big (51-seat) buses. This recommendation was based on the assumption that “the current bus lines respond to the current patterns of demand”. No evidence was presented to support that assertion. On the contrary, the concentration of the network on a few large terminals and main corridors, the lack of cross-city routes, and gaps in network coverage, for example in the north-west sector of the city, suggest that only the main corridors are adequately served and many passengers must change routes to complete their journey.

36. \textbf{Too many buses, badly deployed.} The alignment of the routes, the type of minibuses deployed and number of buses on each route are largely based on historical factors. Traffic Department conceded that there were too many buses and taxis in Sana’a and other cities. They cited the governorate of Hadramout which had restricted minibuses to operate on alternate days to reduce their numbers. However, other stakeholders claimed that there was not enough capacity in Sana’a at rush hours.

\textsuperscript{12} Motor vehicle registration systems in most countries are now computerized and integrated. Proprietary software is readily available for this purpose which automatically updates the database with each transaction. Systems integrate records of vehicle particulars, emission standards, ownership, insurance status, licensing and inspection records and offences and will print licenses, certificates and data summaries on demand. The hardware requirement is a central computer server with on-line connections to local registration offices and enforcement agencies. A wide variety of add-on facilities is available including remote interrogation of the database by enforcement officers on the road. The system will also detect vehicles operating in a prohibited area during restricted hours (source: http://solutions.3m.com/wps/portal/3M/en_US/Traffic_Safety/TSS/Solutions/DMV/Intro_Vehicle_Systems)
37. **A comprehensive demand study has never been done.** CTMS’s main objective in proposing to reduce the number of routes and to operate standard-size buses was to reduce the number of public transport vehicles in Sana’a from about 10,000 to 593, thereby reducing the impact of public transport services on traffic movement. It was, after all, a traffic study. No analysis was undertaken on the impacts of the proposal on costs and fares, nor was it assessed whether the new network would meet existing or projected demand. A more comprehensive study is required to assess the extent to which the current network in Sana’a meets demand, and to adjust the network accordingly. No regular checks or surveys are carried out by central MOT, nor the MOT office in the Sana’a governorate, nor by the Traffic Department.

**There is a strong informal regulatory system for bus operations. This system generates numerous inefficiencies.**

38. **Terminals Operations are deficient.** In the major city terminals, there are hundreds of minibuses queuing in lines by route for departure at various times of the day. At no time was a queue of passengers waiting for minibuses observed by the World Bank during its March 2008 visit. It appeared that minibuses must wait one or two hours to reach the head of the departure bay and pick up passengers. On high-density and long-distance routes vehicles waited for a full load before departure. On lower-density routes and off-peak times, vehicles departed with a part load. There seems to be a high degree of compliance with the requirement for the vehicle to begin its trip from the designated terminal, which probably reflects the power of the mandoob and his incentive to collect departure fees.

39. **The mandoob system is still in place.** Prior to the enactment of Law 33 in 2003 which liberalised the road transport sector, the bus sector was controlled by powerful syndicates who restricted entry. Terminals were controlled by mandoob. Law 33 sought to establish an open market for transport services and there were initial tensions between MOT and the mandoob as government sought to assert control of transport operations. However, effective control of 15,000 individually-owned minibuses in Sana’a was clearly beyond the resources of the Ministry of Transport and the Traffic Department. Even now, the office of MOT in Sana’a governorate has only thirteen staff. Thus, the mandoob continued to control the terminals, or groups of adjacent terminals, under the supervision of MOT, becoming an integral part of the regulatory structure.

40. **Mandoob interest is to keep traffic high.** The mandoob now collect fees from operators both for themselves and for the governorate office of MOT. Mandoob are self-appointed and hold the job indefinitely. It’s clearly a job for a strong and influential individual. Mandoob control the departure sequence on each route and collect daily terminal fees13 from each minibus. Thus, regulation is focused on the collection of fees; there are strong incentives for the mandoob to constrain changes and resist any reduction in terminal throughput to maximise his share of departure fees. It is also reported that when an application for a route permit is received by the Traffic Department, the department will consult the mandoob of the route terminal. If the mandoob declares the route “full”14, the permit will be refused. No loading or headway surveys are carried out.

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13 The daily levy varies with the route and vehicle capacity, but is reported by MOT to be about YER 90 for a 7-seater and YER 160 for a 24-seater. Of this, YER 40 is remitted to the MOT office in the Governorate and the remainder retained by the mandoob. There appears to be no means of auditing the money collected. In addition, the driver will pay YER 20 per departure to the touts in the terminal who hustle passengers.

14 A list of ‘full’ routes is included in the Traffic Department’s Annual Report.
41. **The current industry structure and regulatory system has many deficiencies.** There is no process to monitor demand or supply nor to change the network or services in response to changes in demand. Moreover, the route permit imposes no service obligations; the operator is not penalized if he fails to operate his vehicle. Thus, the lack of collective service obligations and the loose relationship between the number of vehicles licensed on a route and the number actually operating, makes planning impossible.

   **City buses are in poor condition due to a deficient inspection system.**

42. The Traffic Department is responsible for vehicle inspection. Although the 2003 law requires minibuses to be examined annually for roadworthiness, it is understood that, at most, the inspection takes the form of a cursory visual inspection. Advanced inspection and testing facilities have recently been established in Sana’a, but most vehicles in the rest of the country are not tested and it is not clear how much of the commercial fleet is actually tested in Sana’a. The CTMS study\(^ {15} \) found that “Annual inspection is still only a paper formality for payment of the required annual charges with, no actual inspection undertaken”. The very poor condition of many minibuses\(^ {16} \) and taxis attests to the continuing ineffectiveness of the inspection system. In 2004, the Government ruled that no minibus or taxi could be newly licensed if it was more than 5 years old. However, there is no maximum age for minibuses already licensed and it is evident that many are 20-30 years old and in dilapidated condition.

   **The bus industry is fragmented and doesn’t attract investments needed to improve the vehicles quality.**

43. Urban bus operation is not regarded as an attractive area for investment under current conditions of over-supply and it is unlikely that any new fleets have been introduced. Officials estimate that the largest minibus fleet consists of only about 20 vehicles. Bus operation tends to be a family business. It is estimated that 30% of minibuses are driven by their owner and about 70% are rented to a driver on a daily basis. In this case the driver pays the fuel cost and minor running repairs. 24-seaters and many 12-seaters carry a conductor who is likely to be a member of the driver’s family. The 7-seat Dabab does not carry a conductor; fares are collected by the driver.

   **Disorganized on-street bus operations worsen traffic and safety conditions.**

44. CTMS surveys reported that on the busiest city centre streets, minibuses constituted one-third of vehicles in the traffic flow. Along their routes, minibuses stop on demand and loiter at busy locations to attract passengers, which obstructs traffic. Racing between minibuses to pick up passengers is also reported. CTMS reported\(^ {17} \) as follows: “While each route starts from a defined terminal (Farza), the boarding and alighting of passengers happen anywhere along the route with no marked stops, a demand responsive feature, which may seem user friendly, but inflicts a heavy toll on traffic conditions, and safety due to aggressive driving practices and fierce competition among operators”.

45. There are passenger shelters sponsored by advertising on the main routes in Sana’a, but these are not generally observed by minibuses which stop anywhere on demand. Many smaller

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\(^{16}\) See for example the condition of the 25-year old Daihatsu Dabab in photos 4 and 5 of Annex 5.

\(^{17}\) **CTMS Immediate Action Plan**, Chapter 5.1 (5)
terminals are established on-street, often blocking the street. For example, photo 2 of Annex 5 shows that the terminal of Route 7 near Tahreer Square occupies the entire street, so that no vehicles may pass through. No shelters or other passenger facilities are provided in terminals.

Population’s low revenues impose low fares.

46. Since the enactment of Law 33 of 2003, fares have been deregulated, but affordability imposes a constraint on fare levels. Most urban routes below 10 kms charge a flat fare of YER 20. On some of the longer routes, drivers divide the route into sections and charge a second fare for passengers crossing the boundary.

47. The price of fuel, and its impact on public transport fares remains a sensitive issue in Yemen. Fuel has been subsidised by the Government for many years and, despite the distortions that this creates, it is politically very difficult for the Government to change this situation. In January 2008, there were rumours of an impending increase in fuel prices\(^\text{18}\). In response, some minibus drivers raised their fare to YER 50 instead of the normal YER 20. Although fares are not regulated, it is understood that the Government puts pressure on operators to maintain current fares. No fuel price increase was implemented in 2008 and the price of diesel remained at YER 34 (about USD 0.17) per litre.

Urban Taxis

The supply of urban taxis is excessive and empty taxis are a significant contributor to congestion and air pollution. Most of the taxis are unfit for service due to age and poor maintenance.

48. There are approximately 33,000 taxis in Sana’a. The majority of them are more than 20 years old and in very poor condition. In 2005 government ruled that no car could be registered as a taxi if it was more than five year old. This has reduced the import of used cars for use as taxis, but may also have reduced the rate at which very old taxis were replaced by newer used imports. Sources reported that 3,000 taxi licences were issued in 2007 in an effort to reduce unemployment.

49. The density of taxis in the central city is very high and many taxis are operating empty, cruising in search of passengers. CTMS traffic surveys showed that in 2005, at survey sites within the inner ring road in Sana’a, the proportion of taxis in the traffic stream ranged between 31% and 19%, with an average of 23%. In the whole city area the average proportion of taxis was 19%, with a range of 6% to 32%\(^\text{19}\). These are very high densities and suggest that vacant taxis, cruising or waiting, contribute significantly to congestion.

D. Inter-City & International Passenger Transport Sector

This sector faces no major issues like the other sectors do.

\(^{18}\) Yemen Times, issue 1124, 28-30 Jan 2008 (www.yementimes.com)

\(^{19}\) CTMS Interim Report 2005, Chapter 6.1
Because the inter-city bus sector is potentially profitable, the sector is attractive to investors and it is feasible to use competition as an incentive to keep downward pressure on fares and to match service quality to demand.

Safety is a vital consideration, especially given the long distances between cities and the difficult road conditions in Yemen, which make considerable demands on vehicles. However, most coaches, though old, appear to be well-maintained. And safety standards of the fixed-route taxis are acceptable too.

E. Inter-City Freight Transport Sector

The light goods vehicles undertaking distribution and light haulage in the cities appear to be reasonably modern and roadworthy. Generally, the issues relating to the heavy trunk haulage sector are more urgent due to the economic importance of the efficient carriage of goods, and the safety and environmental impacts of heavy trucks.

The heavy haulage industry is dominated by an excessive number of small-scale operators, who operate trucks in bad condition at low levels of productivity.

Operators were required by law 33 to own a minimum of ten trucks, not older than two years when acquired. This minimum age requirement is difficult to justify on economic or safety grounds and initially attracted considerable protests from the trucking trade. For two years the syndicates organised demonstrations against Law 33, but organised opposition has since ceased. One effect of the minimum fleet requirement has been to inhibit under-capitalised operators from upgrading their old trucks to newer and imported used trucks since the law does not impose any age limit on trucks already in use in 2003.

The ban of trucks in Sana’a combined with the absence of trans-shipment facilities adds to road congestion and low productivity.

Heavy trucks are banned from entering central Sana’a from 7.00am to 10.00pm, and banned from the inner ring road from 7.00am to 3.00pm. This does not include small trucks below 3.5 tons of GVW. These bans, which are justified for urban traffic and urbanistic reasons make it necessary to trans-ship goods to smaller trucks, which may be difficult and costly in the absence of proper facilities. As a result, there is a demand for break-bulk facilities on the outer approaches to Sana’a. In the absence of such facilities the 7am-10pm truck ban in Sana’a imposes significant costs on hauliers. Much of the activity that would take place in the logistics platforms now takes place at the roadside in the outer areas of Sana’a creating traffic and environmental problems.
Overloading, driver’s errors, poor vehicle maintenance and inspection are responsible for many severe road accidents.

56. There is a high frequency of serious truck accidents in Yemen due to overloading, driver errors, difficult roads and poor vehicle maintenance. Insurance is available but not compulsory and drivers are liable to compensate the victims of accidents (‘blood money’). This can cause financial ruin to a small trucker. The regulations provide a maximum of 12 hours per day driving and require each heavy truck to carry two crew; the second crew member may be an alternate driver. It is understood that, while there is a legal requirement for trucks to be mechanically inspected, no more than a token visual inspection is carried out. The very dilapidated state of many of the individually-owned trucks clearly presents a road safety risk, especially given the prevalence of overloading.

57. Overloading of trucks is a major issue relating to safety and road damage. Maximum permitted GVW in Yemen is 45 tonnes. Maximum permitted axle weights are 7 tonnes front, and 13 tonnes rear\textsuperscript{20}. Truckers claim that a 20-foot container, which will fit on a 2-axle truck may weigh 29 tonnes and a 40-foot container up to 40 tonnes. Tanker trucks are also routinely overloaded by increasing the size of the tank. Enforcement is by the Roads Authority who maintain fixed weighbridges at the Hodeidah port and elsewhere but none in Sana’a. Mobile axle scales are also used. Overloaded trucks are fined per overloaded axle and per excess GVW. However, recent enforcement efforts against overloading have generated protests and threats to the Roads Maintenance Fund staff manning the weighbridges. Now a concession of 5 tonnes above maximum GVW is allowed before a penalty is imposed.

Despite Law 33 which liberalized the truck market, some monopolistic practices remain.

58. There are signs that monopolistic practices still prevail in the informal small-scale truck sector. Trucks available for hire by individual owners gather at points around the periphery of Sana’a and it is suspected that the hiring sequence and perhaps charges for hire from these stands are controlled by local associations. Operators who get business by means other than from the stands are free to negotiate rates.

F. Road Safety

59. An important issue relating to all transport modes is the need to reduce the very high rate of road accidents in Yemen. In 2006, the number of recorded accidents was 13,011, resulting in 2,711 deaths and 17,873 injuries at a cost of over YER 2.8 billion\textsuperscript{21}.


III. RECOMMENDED STRATEGIES

60. Most of the deficiencies in the Yemeni city and inter-city transport sector derive from six structural issues:

- Predominance of individual owner-operators who have old and poorly maintained vehicles, and little access to capital: low-cost competition deters corporate investment in large fleets;
- Excess capacity and low productivity;
- Low tariffs and marginal returns;
- Low standards of vehicle and driver fitness;
- Inadequate operating infrastructure;
- Low capability of Government to plan and monitor transport services, to intervene as and when needed, and raise standards.

61. However, there are also four major constraints on implementing strategies to address these issues:

- The affordability of tariffs is low due to low disposable incomes;
- A large number of stakeholders in each sector will defend the status quo;
- Many marginal operators may be displaced, creating social problems by adding to the high rate of unemployment;\(^\text{22}\);\(^\text{23}\)
- Gains in efficiency require improvements to the operating environment: a more effective traffic management to reduce delays and operating infrastructure such as logistics platforms for trucks and better terminals for buses.

A. Institutional Development

Concentrate expertise in a central unit to strengthen the capability of MOT

62. The initial step in the reform process for all road transport modes is to strengthen the capability of MOT to monitor the status of the city and inter-city land transport sector, as well as policy-making, strategy evaluation, planning and regulation. Because professional resources in transport are scarce in Yemen, it is recommended initially to concentrate available expertise in a central land transport unit. The central unit would give directions and guidance to the decentralized offices of MOT to which it would progressively delegate more responsibility. The central land transport unit would also play a key role in supporting through guidance, information, and training, the public transport agencies to be set up in the municipalities (see paragraph 74 below). The Government has already taken key steps in this direction by creating the Land Transport Authority.\(^\text{23}\) To achieve the reform of the sector, the Government should provide the Land Transport Authority with qualified staff and adequate financial and material resources, and also hire experts specialized in the transport sector.

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\(^\text{22}\) Unemployment in Yemen was estimated to be 35% in 2003

\(^\text{23}\) See the Republican Decree no. 291 of 2008 concerning the “Establishment of the General Authority for the Organization of Land Transport Affairs”
63. The sectors most urgently in need of reform are the urban bus, urban taxi and heavy road freight sectors. Several fundamental issues must be addressed which are common to all three sectors. The current status of the bus, truck and taxi sectors must be determined, in particular: (i) the distribution of vehicles by ownership (fleet size), type and mechanical condition; (ii) the performance of each sector in terms of productivity (passengers carried, revenue, kilometres operated per vehicle/day); (iii) the operating cost structure: fuel and lubricants, labour, spare parts and maintenance, overheads (management and depot/parking costs, insurance, taxes and illicit payments); and (iv) demand factors: extent to which services meet demand, affordability of tariffs and elasticity. The central unit should produce a database which can form the basis of forecasts of demand and supply, service quality parameters and the evaluation of reform strategies. Assembly of the database by consultants, in parallel with the strengthening of MOTs internal capability would expedite the reform process.

64. A particular aspect of enforcement is the integrity of the system for mechanical inspection of vehicles which is now the responsibility of Traffic Department. Restoring the effectiveness of the system underlies the basic strategy of reducing excess truck, taxi and minibus capacity by progressively eliminating old, poorly maintained and unfit vehicles. Again, the specification of a new system, appropriate to local conditions, should be determined by expert consultants. Inspections may be undertaken by the private sector, and government would need the legal and technical capability to ensure that high standards of integrity and capability are maintained by the contractors. The pace at which higher mechanical standards are imposed will determine the pace at which unfit vehicles are withdrawn and will need to take into account the hardships to the operators affected, the proportion of unfit vehicles, the proportion of excess supply and estimates of the new investment likely to be attracted to the sectors.

**Consolidate licensing functions and vehicle database in MOT**

65. National responsibilities for the management of the land transport sector are currently divided between MOT and the Traffic Police Department of the MOI. It is recommended that all functions relating to the regulation and administration of company and operators licences for transport services, together with the responsibility for maintaining a related database, should be consolidated in MOT. The Traffic Department of MOI would retain responsibility for the registration and licensing of vehicles (as opposed to services) and drivers, and for enforcement of regulations on the road. The Traffic Department would also continue to conduct vehicle technical inspections. The Traffic Department and MOT would have access to each other’s database. Of course, the Traffic Department would be consulted on all aspects of policy and strategy at the formulation stage since issues of law and order and traffic management would arise. The Traffic Department could attach senior traffic officers to MOT to ensure effective coordination.

66. The Traffic Department is currently installing a computerised system of vehicle and driver licence records. It is essential that records of vehicle examination, vehicle registration, and driver licensing are inter-linked so that no vehicle may be licensed without a valid fitness certificate and insurance. MOT and the public transport agencies of the municipalities should have access to this database to perform their own regulatory functions.

**Prepare a comprehensive statement of road transport policy**

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24 Operators should be certified through a Certificate of Professional Competence
As MOT’s capability increases, it should draft a ‘White Paper’ setting out the Government’s policies and proposed programs for the development of the passenger and freight transport sectors. The White Paper should be subject to wide consultation with stakeholders and the community before being finalised. It is indeed essential for its feasibility that the White Paper takes full account of the political economy of the sector and the resulting constraints, particularly for sequencing reform implementation.

The White Paper should contain a plan of transport infrastructure to be provided by government, including logistics platforms for trucks, improvements to city bus terminals and possibly one or more inter-city bus terminals. These facilities should be managed by the private sector. Changes in legislation will be required to give effect to policy changes and these will be drafted when consensus is reached on the policies and implementation programme. The revised legislation should ensure that the duties of each agency involved in land transport are clear and that there is no overlap.

**Develop sector competence**

In view of the large size of the land transport sector, the large number of people involved in it, and the lack of appropriate qualifications and skills, the Government shall develop training at all levels, including through specialized university programs and, possibly, the establishment of a technical land transport institute dedicated to capacity enhancement and research.

Implementing the recommendations mentioned above for institutional development will require technical assistance.

**B. Strategy for City Passenger Transport Sector**

**Urban Buses**

The effective management of the fixed-route bus sector requires four essential elements, which should be developed in the following sequence:

1. Coherent policies and strategies that favor public transport by adjusting the relative attractiveness of public and private transport;
2. A public transport industry structure that is amenable to regulation and is capable of responding to demand;
3. A legal framework that enables transport plans to be imposed on the operators as service obligations, balanced by commercial incentives;
4. A capable institution at city level.

*Establish a legal framework to regulate licenses and service obligations by legitimate franchises rather than mandoob*

As previously noted, each urban minibus is issued an annual licence that permits it to operate on a single and specified route. This licence does not impose any service obligations, so that the number of vehicles operating, as well as the frequency and capacity of service vary every day. In practice, the *mandoob* at each terminal determines the departure sequence and the service frequency, but his appointment and the exercise of his regulatory functions have no legal basis. Changes to the law are needed:
to allow a transition to a system of route franchises whereby a franchise-holder (usually a company or cooperative) is awarded the right to operate a route for a limited period, e.g. 3-5 years for minibuses. As a counterpart, the franchise-holder must provide the service at the level required by the authority.

• to give the authority legal powers to award franchises by competitive tender, and to enforce the franchise obligations. The law will also define the rights and freedoms of the franchisee.

At the same time as the proposed law is drafted, the transition process and its economic and social implications should be carefully studied.

73. The route network will be derived from a systematic planning process that will produce an annual plan of service changes. This plan will reflect changes in demand, urban development and other factors (see paragraph 79).

Create an adequate institutional structure to plan public transport services and award franchises

74. The introduction of route franchising supported by a systematic service planning process will require an agency with professional skills. It is recommended that the agency be located within the Municipality of Sana’a. The core functions of the agency would include:

• monitoring demand and supply, planning system development
• setting standards of safety, service quality, environment impacts
• setting minimum service levels
• awarding and regulate franchise contracts (obligations, incentives, sanctions)
• formulating fares policy and fare-setting, if necessary

Reduce the number of operating buses to induce higher seat-capacity and better condition

75. It is evident that considerable over-capacity exists in the minibus sector, and that larger minibuses or buses would cater for the demand more cost-effectively. Measures to eliminate the oldest and most poorly maintained minibuses are recommended:

• Stop new registrations of the smallest minibuses (7 and 12-seaters) and continue to register buses of 24 seats or more
• Impose progressive age ceilings on buses based on size: 10 years for microbuses, 15 for minibuses, 20 years for standard buses
• Eliminate unlicensed vehicles operating as buses
• Delete buses from the register whose licences have expired for two years or more
• Progressively impose more stringent vehicle quality criteria (age, equipment, condition, emissions) on licence renewal to eliminate unfit and poorly maintained vehicles; enforce standards through effective annual mechanical inspection
• If social needs require, government may compensate owners of old minibuses

Consolidate bus operators into route-based organizations accountable for quality of service

76. The predominance of individually-owned minibuses whose licences impose no service obligations means that none of the operators is responsible for overall service provision. This also puts too much power in the hands of the mandoob and makes effective regulation impossible. The following strategies are recommended to begin a transition to route-based organizations who are accountable for providing services to the standard required by the authority:
• Offer franchises\textsuperscript{25} for a limited period for a few new routes to companies or co-ops which own or control enough buses of appropriate size to provide full service on at least one route, if any.\textsuperscript{26}

• Pilot a corporate big-bus franchise on one or more trunk routes to demonstrate the concept of route franchises.

• Once some experience has been gained with route franchises, procure operators through competitively tendered franchises for a steadily growing number of existing and planned routes or groups of routes. This implies that individual bus owners would associate to form operating companies; as said in paragraph 73 above, this process should be carefully designed and facilitated by the Government.

• Longer-term: cease licensing individual buses or operators and award only route franchises with service obligations to co-operatives or companies.

77. The sequence of steps in the transition is set out in two case studies below. Lahore, Pakistan offers a successful example of a transition from para-transit minibuses to standard city buses operated by companies under route franchises. Uzbekistan offers a different example of a transition from informal unregulated services to a well organized system of route franchises for minibus services.

**The Transition from Minibuses to Big Buses in Lahore, Pakistan**

Lahore, Pakistan offers an example of a successful transition from an urban bus system wholly provided by about 6,000 paratransit minibuses owned by individuals in the late 1990's, to a substantial fleet of 1,000 standard 11.5-metre buses operated profitably by thirteen companies in 2005.

The essential elements that succeeded in attracting corporate investment to the urban transport sector which was previously regarded as high-risk and low-return, were:

- A credible government commitment to policies supportive of the development of an urban bus system including assurances not to constrain fare increases for political reasons
- A legal framework for awarding and administering franchises
- A package of financial and other incentives, including availability of depot sites previously occupied by the failed state-owned bus operator
- A transparent and fair procedure for evaluating tenders
- Some protection from trade union activity

The franchising programme would have attracted substantially more investment but for the intervention of several obstacles. These were aggravated because an effective agency to plan and regulate the bus sector (one of the four ‘cornerstones’ of reform of the bus sector) was not established.

It is notable, that, one of the biggest threats to the implementation of the franchising scheme, the risk if militant action by the incumbent minibus operators, did not arise. This was partly because the minibus operators were given the opportunity to form co-operatives and apply for franchises. No minibus operators showed interest in consolidating in this way, and several said that they regarded themselves as individual

\textsuperscript{25} A franchise offers an exclusive or partly-exclusive right to operate a defined route for a period of years, in return for meeting service obligations and accepting liability to sanctions. Franchises are normally awarded by competitive tender (in a transition process franchises could be awarded to the existing operators for a limited time period once they have formed an association).

\textsuperscript{26} A successful initiative to convert unregulated para-transit minibuses into route-based organizations operating under franchises which impose service obligations and fixed fares in return for some exclusivity and security was started in Hong Kong in 1976. Now more than half Hong Kong’s 4,350 minibuses, identifiable by a green livery, operate under franchises.
entrepreneurs, not transport professionals nor businessmen, and did not have the capital or skills to organize a bus service²⁷.

The Transition from informal unregulated services to route franchises in Uzbekistan

Urban public transport services were traditionally supplied in Uzbekistan by State-owned enterprises that enjoyed area wide, sometimes city wide, monopolies. Beginning in late 1997, however, the Uzbek Government has implemented radical changes in the organization and regulation of urban public bus transport services. Through a gradual and carefully planned process, which included experiments in a few cities, a study tour to Western Europe, and progressive scaling up to all cities except the capital, Tashkent, all urban bus services have been reorganized on the basis of exclusive route franchises reserved for either minibuses of large/medium buses. These franchises are allocated by the city administrations through a competitive tendering process open freely to private companies and associations of small bus owner-operators as well as to State owned enterprises. Tendering is under the responsibility of a special commission in each city, chaired by a Deputy Mayor, operating under precise rules set by the Government’s Uzbek Agency for Automobile and River Transport. Bidder’s discount, if any, from the passenger fare ceiling, proposed service frequency, and bus fleet characteristics are the main selection criteria. Franchise duration, initially set at six months, renewable once for another six months, has progressively been extended.

These reforms, implemented in two years, resulted in impressive changes. Numerous private operators entered the public transport market, many new jobs were created in the emerging bus service sector, and a healthy competition developed for the rapidly growing minibus services. In Samarkand, the country’s second city, 63 out of the 64 minibus routes tendered between January and October 2001 had at least two bidders and 90% of all tenders were won by private operators.

Performance of the bus route franchising system was audited every year in the fall in the five cities where it was initiated in 1997, and regulations were improved on the basis of the audit’s findings. The main areas for which improvements proved necessary were (i) the clarification of the conditions for extension of franchise contracts, (ii) the procedures for monitoring compliance of operators with the terms of their franchise contracts, (iii) mechanisms to prevent non-franchised operators to operate on the routes allocated to franchise operators, and (iv) streamlining the incentive framework for the supply of large/medium bus services.

Deploy bigger buses on main routes

78. The 24-seat buses must shift from trunk routes to secondary routes, while the 7 and 12-seaters shift to tertiary routes. Theses shifts will be done through the franchising process to implement the adjusted bus network. Companies should receive incentives²⁸, such as reduced import duty and tax, for the purchase of standard urban buses that are at least 10-metre and 40-seats.


²⁸ The following incentives were offered to investors in big buses under the Lahore Urban Transport Project: Ten-year franchise term; exclusive rights to routes; flexible fare structure and liberal fare regulation; lease of government-owned depots and terminals at nominal rents; subsidy on loan interest; no obligation to carry passengers free or at concessionary fares; minimum fleet requirement of 40 new buses, 20 buses for smaller cities; exemption of duty on import of buses; due protection to foreign investment; declaration as an essential service to protect from union disruptions.
Adjust the bus network regularly to meet demand

79. The bus network in Sana’a has developed incrementally with little reference to existing or potential demand. CTMS focused on buses as components of the traffic flow and contributors to congestion rather than services to meet travel demand. Sana’a and other major cities require a public transport study to re-design the bus network to reflect existing and projected demand, redistributing capacity over more routes. Such a study would ensure high bus productivity, so that investors would be attracted to the bidding process for route franchises. The bus network and the service plan must be annually updated through demand forecasts and consultation with operators, users and communities.

Set tariff policy

80. Fares are not regulated but the population’s low disposable income constrain increases. It is not evident that any competition exists between minibus operators due to the tight controls exercised by the Traffic Department and the mandoobs on routes and schedules. Some controls on fares may be necessary in future if competition remains muted. A liberal policy should be maintained on control of tariffs to encourage investment. However, the city level institution should have the capability to monitor operational costs and to regulate fares if downward pressure on fares cannot be achieved through competition in the market or through the competitive franchising process.

Improve bus operating conditions

81. Passenger facilities are very poor and must be improved to match any improvement in vehicle and service quality.

- Provide better facilities at bus terminals (surfacing, loading platforms, circulation lanes, shelters, toilets, route information, retail concessions). Terminal improvements to be funded by government but management contracted to private companies who would generate revenue from business concessions and a levy on franchisees.
- Dedicate depots to big buses for parking and maintenance. Make depot sites (for example those of the LLTC which are proposed to be sold) available for lease to franchisees for duration of franchises.
- Designate bus stops and enforce ‘no stopping’ by other vehicles.
- Promote construction of more bus shelters funded by advertising.
- Create bus-only lanes where bus density is high.
- Implement the traffic management measures proposed by the 2006 Sana’a CTMS, especially junction improvements and parking controls.
Urban Taxis

Replace the four urban fixed-route taxis by bus services

82. This should be an early component of the bus development programme. In the urban public transport hierarchy, the role of buses is to meet high-volume demand on busy corridors. The role of taxis is to cater for trips that may not be conveniently undertaken by the bus network, or for urgent, high-value or group trips which warrant a premium fare. Taxis should not therefore engage in fixed-route or separate-fare operations which encroach on the bus sector. An improved bus network and better services will further reduce demand and increase excess capacity of taxis.

Reduce excess number of taxis

83. The main strategy to reduce excess capacity is the improvement of standards of taxi vehicles and services to a level appropriate to local demand. At present, there is no regulation of tariffs or market entry and none is recommended under current conditions where: (i) there is inadequate capability to set fares that will provide a reasonable return to operators while protecting users from over-charging; and (ii) affordability by passengers puts downward pressure on fares, while most taxi users are familiar with prevailing fares. When MOT improves its capability to monitor supply and demand, and to impose and enforce taxi quality standards, consideration should be given to applying fare controls, in combination with quality-controlled free entry.

84. The following strategy components are recommended:

- Impose progressively age ceilings on taxis (20, 15, 10 years).
- Eliminate unlicensed vehicles operating as taxis.
- Delete taxis from the register whose licences have expired for two years or more.
- Monitor supply and demand through regular surveys.
- If social needs require, government may compensate owners of old taxis.

Improve vehicle quality

85. The following strategy components are recommended:

- Draft regulations to progressively impose more stringent vehicle quality criteria (vehicle type, dimensions, equipment, emission standards) on first registration and licence renewal to phase out poorly maintained vehicles.
- Improve enforcement capability.
- Enforce standards of mechanical fitness and maintenance through effective annual mechanical inspection; ensure integrity of the inspection process.

Improve service quality

29 This would require a change in Law 33 of 2003 which liberalized transport fares. This change would apply to urban transport only.

30 Gwilliam concludes that, in the cruising taxi market, neither total regulation (fare and entry) nor total deregulation is likely to be as effective as partial regulation involving fare control accompanied by quality-controlled free-entry, Regulation of Taxi Markets in Developing Countries: Issues and Options, World Bank Transport Note No. TRN-3
86. The following strategy components are recommended:
   - Make requirements for a taxi drivers’ licence more stringent based on driving experience, good character, medical fitness, geographical knowledge, knowledge of safe driving techniques and traffic and taxi regulations. This would basically be an operator’s licence.
   - Provide incentives to operators to improve service infrastructure (e.g. air-conditioned vehicles, GPS-based dispatching and radio network). Incentives may take the form of a premium fare if fare controls are introduced\(^\text{31}\).
   - Prohibit taxis from operating fixed routes or carrying multiple passengers at separate fares; offer these routes to minibuses.
   - Require all taxis to be insured for accidents.
   - Establish taxi stands at places of high demand to reduce cruising.

C. **Strategy for Inter-City and International Passenger Transport Sector**

*The current policy of liberal market entry subject to minimum service quality, safety and environmental impact criteria may be continued, but the vehicle, driver and operating safety criteria need to be applied more stringently.*

87. Government’s key strategies for the development of the inter-city and international sector will be:

   - Enact and enforce appropriate standards of vehicle equipment, fitness and maintenance.
   - Ensure that sound driver licensing and fitness criteria are applied.
   - Ensure that operators have adequate facilities for maintenance and parking.
   - Promote safe operating practices, particularly strict control of drivers’ hours.
   - Ensure fair competition in the market.
   - Promote the construction of inter-city terminals.

88. These standards may be formalized in regulations for market entry based on competition. This should aim to promote stability whilst giving operators freedom to compete in the market through route network, service development and market-based fares. Provided safety standards of the fixed-route taxis remain acceptable, there is no reason to take action to restrict their operations.

D. **Strategy for Inter-City Freight Transport Sector**

*Anticipate market pressures and progressively update vehicle regulations to reflect higher standards of vehicle and driver safety, environmental impacts and operating efficiency.*

89. It is evident from other developing countries that the road freight industry responds to economic growth by raising efficiency and quality through market forces. As the economy expands, the value of freight consignments, and the demand for quick, reliable deliveries,\(^\text{31}\) Abu Dhabi has recently introduced a two-tier taxi system, with 5-seater cars charging a 15% fare premium over 4-seater cars. Raha is currently offering a two-tier taxi service in Sana’a, with Raha Plus charging a 15% premium for a higher quality service.
increases. The range of products to be shipped also widens. Shippers demand specialised vehicles to protect their cargo from deterioration, damage or theft. Shippers also demand reliability and insurance. These market forces shift business away from the general haulier with his small fleet of multi-purpose flat-bed or drop-side trucks, towards the larger, better capitalised, more professional operator who can offer the high quality service needed. The goods being shipped can stand the additional cost.

Reduce the excess number of low-quality trucks by increasing vehicle standards and making insurance mandatory

90. The revision of regulations to require progressively higher standards of vehicle management, maintenance, and operation (and thus the establishment of an adequate vehicle inspection system) would eliminate the oldest and most poorly maintained vehicles, reducing their negative impacts on congestion, safety and pollution. Eliminating the operators who achieve low cost by compromising maintenance and safety standards would also encourage investment in the sector. There would however be some increase in haulage rates for those who now hire trucks on the roadside from the informal trucking sector.

91. Making insurance compulsory is an urgent priority for reform for both the bus and truck sector, since there is no legal requirement for vehicles to be insured against damage or injury to third-parties in Yemen. Vehicle occupants and other road users injured in accidents, as well as the owners of consignments, would then be able to seek fair compensation for damage suffered. Drivers and operators would be able to avoid direct compensation of the injured by ‘blood money’.

Improve operators’ competence by creating professional associations

92. The freight and transport industry is not effectively organized to represent their interests. Professional associations for road hauliers and for freight forwarding companies should be established. The associations will play a role in establishing and maintaining professional and quality standards for the trades, and should be affiliated to international associations such as FIATA and IRU. Affiliation would give access to training programs and standard documentation and procedures for freight transport and shipping.

93. In many countries, truck operators are required to obtain an operators licence which demonstrates that they have the experience and knowledge to operate safely and efficiently. Best practice in this regard are training courses for the Certificate of Professional Competence (CPC) in domestic and international haulage, which has been adopted within the EU and other countries. This is probably not realistic for less developed countries such as Yemen in the near term, but should be considered for future adoption after Yemeni trucks are able to operate across their national border. In the meantime, measures to improve vehicle fitness, by eliminating some of the marginal small operators will tend to encourage more professional management.

Improve vehicle quality by effective mechanical examination, construction and maintenance regulations

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32 MOT in Saudi Arabia is evaluating the introduction of professionally accredited certificates of CPC, as a condition for granting road transport licenses for all commercial operations in passenger and freight transport.
94. The introduction of an effective system of mechanical examination of heavy vehicles would produce an immediate improvement in vehicle quality. It would include roadworthiness, compliance with all regulations including the detection of illegal modifications to increase carrying capacity. The Mission was unable to visit a vehicle examination centre, but it is clear that, whether inspection remains a responsibility of government or is undertaken by the private sector, it needs intensive supervision to maintain its integrity. The Mission was unable to review the current vehicle construction and maintenance regulations, but these may also need updating to impose progressively higher levels of fitness and safety.  

**Improve drivers’ quality through selection, training and limitation of driving hours**

95. The selection, training and supervision of drivers is a critical element in heavy vehicle safety. High standards of competence and integrity of training and examination agencies is also vital. Driver fatigue is a major causative factor in accidents especially in the difficult operating conditions in Yemen. It is reported that there are current regulations to limit daily driving hours. However, these may be more effectively enforced by the adoption of relatively low-cost technologies such as tachographs and GPS tracking systems. Vehicle tracking systems are now not only widely used in developing countries, but also produced in developing countries such as China and India.

**Improve operating infrastructure by building logistics platforms**

96. The industry has lobbied government to provide four truck terminals on the approaches to Sana’a, to be managed by the private sector. In 2006, the CTMS also recommended the construction of logistics platforms at the main entry points to Sana’a. They would serve as freight terminals and include facilities for break-bulk (transfer of goods from bulk loads to smaller distributor trucks), parking, vehicle maintenance, re-fuelling and rest and recreation for drivers. These facilities might be provided by government and managed by the private sector.

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33 For an example of frequently updated regulations on vehicle specifications, fitness and equipment see the Road Traffic (Construction and Maintenance of Vehicles) Regulations of Hong Kong which may be downloaded from http://www.legislation.gov.hk/eng/index.htm

34 The Telegraph India reported that Coimbatore City Municipal Corporation had become one of the first local authorities to install a locally-produced vehicle tracking system, now installed on its fleet of 30 garbage collection trucks. Truck drivers have pre-determined routes each with several pickup points. The GPS data is used to ensure that trucks have actually visited all points. Fuel savings are also reported. The Delhi Jal Board (DJB) installed GPS on 229 of its tankers which deliver water to water-scarce residential colonies. The system ensures that loads are not misdelivered and that drivers do not take unauthorized detours or breaks.

IV. PROPOSED FIVE-YEAR ACTION PLAN

An Action Plan to implement the strategies proposed in Part III for the fixed-route public transport sector is presented in graphic form in Figure 1. Figure 2 shows the proposed Action Plan for the freight inter-city transport sector.
<table>
<thead>
<tr>
<th>Program</th>
<th>Component</th>
<th>Duration months</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional Development</strong>*</td>
<td>Increase MOT Capability and create Sana’a public transport agency</td>
<td>6</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transfer Functions MoI to MOT and new agency</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strategy Development</strong>*</td>
<td>Conduct PT study</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Establish Database</td>
<td></td>
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<tr>
<td></td>
<td>Draft, enact regulatory law</td>
<td>3</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Commence annual planning cycle</td>
<td>Annual</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Reduce Capacity, Raise Quality</strong></td>
<td>Cease Registration of 7-seaters</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impose age limits on buses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Eliminate unlicensed vehicles</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Introduce effective vehicle examination</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impose progressive capacity &amp; service quality standards</td>
<td>Progressive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consolidate Bus Operations</strong></td>
<td>Phased network changes thru annual program</td>
<td>Annual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enfranchise existing qualifying routes</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Award pilot franchise for new route</td>
<td>6</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Commence tendered franchising program</td>
<td>Progressive</td>
<td></td>
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</tr>
</tbody>
</table>

* These components are common to both the Bus and Freight Transport Action Plans

**FIGURE 1 - A FIVE YEAR ACTION PROGRAM FOR BUS SECTOR REFORM**
<table>
<thead>
<tr>
<th>Program</th>
<th>Component</th>
<th>Duration months</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Development*</td>
<td>Increase MOT’s capability</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transfer functions Mol to MOT</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy Development*</td>
<td>Develop database of industry structure, fleet, costs, operations</td>
<td>Continuous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop strategy &amp; programme. Publish in White Paper</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Revise legislation to impose higher driver, vehicle standards</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raise Safety &amp; Efficiency Standards</td>
<td>Introduce effective vehicle examination system</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impose progressive truck capacity &amp; driver quality standards</td>
<td>Progressive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop strategy to reduce overloading</td>
<td>12</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Improve Infrastructure</td>
<td>Evaluate feasibility &amp; viability of ‘Logistics Platforms’</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* These components are common to both the Bus and Freight Transport Action Plans

**FIGURE 2 - A FIVE YEAR ACTION PROGRAM FOR ROAD FREIGHT SECTOR REFORM**
Annex 1 - Description and impacts of Land Transport Law of 30 March, 2003

97. Before 2003 road transport services were provided within each Governorate by two syndicates (for passenger and freight transport respectively) which exercised a full monopoly on their market. To be part of a syndicate, private companies had to go through a prolonged registration process and pay a significant registration fee. Road transport prices were fixed by the Governorates within the limits set by the MOT.

98. The Land Transport Law of 30 March 2003, which comprised 84 articles, was the first law to regulate traffic and transport activities in Yemen. The law provided the general framework and conditions under which private companies can operate land transport services. It established an open market for the supply of road transport services for passengers and freight, both domestic and international, which had previously been monopolized by the syndicates.

99. For the trucking industry, the law required new entrants to own a minimum of ten new trucks under 2 years old, and limited the total number of heavy trucks each company or syndicate could operate to 250 (400 medium trucks or 300 light trucks). All truckers were required to provide detailed information regarding, among others, insurance policy, safety regulation, drivers’ contracts, maintenance stations and bank guarantees (en lieu of the registration fee). Based on this information, licenses to operate were to be awarded by the MOT for a one-year period and renewed every year after technical inspection. By 2004 it was reported that as a result of the 2003 Law, freight rates had decreased by about 40%.

100. Trucks are licensed by the Traffic Department. Prior to the enactment of Law 33 in 2003, freight shippers from the port were required to use trucks allocated by the syndicate to transport imported goods, even if they owned trucks. The syndicate set charges and allocated a truck from a queue, frequently an old and poorly maintained truck, or a truck unsuitable for the load to be carried. Law 33 broke the associations’ monopolies and provided for an open market.

101. For passenger services, the 2003 Law required private companies to own a minimum of ten buses and to have stations for receiving and dispatching passengers. Licenses were awarded based on the companies’ fleets, proposed routes and trip schedules. For international transport services, foreign companies were not allowed to offer cabotage services within Yemen. All Yemeni public bus companies were fully privatized after market liberalization, except the General Corporation for Buses (GCB) which remains state-owned. Annual technical inspections of buses were required, as for trucks. Inspections were initially performed by GCB under a temporary arrangement with the MOT but this arrangement has ceased and responsibility now rests with Traffic Department.

102. MOT proposes to sign agreements with private companies authorizing them to perform mechanical inspections of vehicles on behalf of the Ministry, but it is understood that no arrangement has yet been confirmed. Subsequent to Law 33, a series of regulations was enacted which covered various aspects of transport operation. The following list was provided to the Mission by MOT:

36 Subsequently re-named the Local Transport Corporation
37 The Mission was not advised of the detailed provisions of the regulations
### Year & No. | Subject of Regulation | No of Articles | Enacted by
---|---|---|---
28 Oct 2003 No. 319 | Land Transport | 102 | Decree of the President
19 Jun 2004 No. 42 | Transport of Cargo by Trucks | 41 | Minister of Transport
25 Sep 2004 No. 89 | Transport of Passengers by Buses | 35 | Minister of Transport
25 Sep 2004 No. 90 | Transport of Containers (inc. refrigerated) | 11 | Minister of Transport
2 Nov 2004 No. 109 | Car Rental Companies | 38 | Minister of Transport

### Annex 2 – Motor Vehicles by Governorate 2007

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Private Vehicles</th>
<th>Transport Vehicles Bus &amp; Truck</th>
<th>Taxi</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>1 Amanat Al Asimah</td>
<td>82,765</td>
<td>33,761</td>
<td>33,000</td>
<td>149,526</td>
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<tr>
<td>2 Sana’a</td>
<td>55,559</td>
<td>59,433</td>
<td>9,088</td>
<td>124,080</td>
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<tr>
<td>3 Adan</td>
<td>33,837</td>
<td>11,820</td>
<td>6,146</td>
<td>51,803</td>
</tr>
<tr>
<td>4 Ta’izz</td>
<td>23,950</td>
<td>25,786</td>
<td>10,429</td>
<td>60,165</td>
</tr>
<tr>
<td>5 Hadramaut</td>
<td>22,500</td>
<td>23,900</td>
<td>9,800</td>
<td>56,200</td>
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<tr>
<td>6 Al Hudaydah</td>
<td>14,057</td>
<td>24,445</td>
<td>6,041</td>
<td>44,543</td>
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<tr>
<td>7 Ibb</td>
<td>9,527</td>
<td>11,307</td>
<td>4,003</td>
<td>24,837</td>
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<tr>
<td>8 Hajjah</td>
<td>4,056</td>
<td>13,913</td>
<td>647</td>
<td>18,616</td>
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<tr>
<td>9 Dhamar</td>
<td>5,758</td>
<td>13,288</td>
<td>2,847</td>
<td>21,893</td>
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<tr>
<td>10 Sa’dah</td>
<td>3,996</td>
<td>17,012</td>
<td>1,921</td>
<td>22,929</td>
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<tr>
<td>11 Abyon</td>
<td>3,436</td>
<td>5,404</td>
<td>2,025</td>
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<td>12 Lahij</td>
<td>3,915</td>
<td>6,641</td>
<td>2,304</td>
<td>12,860</td>
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<td>13 Al Bayda’</td>
<td>6,217</td>
<td>11,630</td>
<td>2,253</td>
<td>20,100</td>
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<tr>
<td>14 Al Mahwit</td>
<td>643</td>
<td>2,929</td>
<td>768</td>
<td>4,340</td>
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<td>15 Shabwah</td>
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<td>9,757</td>
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<td>16 Ma’rib</td>
<td>1,618</td>
<td>3,674</td>
<td>160</td>
<td>5,452</td>
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<td>17 Al Mahrah</td>
<td>2,957</td>
<td>2,460</td>
<td>725</td>
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<td>18 Al Jauf</td>
<td>288</td>
<td>1,528</td>
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<td>1,895</td>
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<td>19 Amran</td>
<td>2,903</td>
<td>8,310</td>
<td>3,082</td>
<td>14,295</td>
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<td>20 Aldhale’</td>
<td>1,958</td>
<td>2,580</td>
<td>667</td>
<td>5,205</td>
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<td>21 Raymah</td>
<td>162</td>
<td>395</td>
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<td>22 See oun</td>
<td>19,374</td>
<td>15,671</td>
<td>2,323</td>
<td>37,368</td>
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<td><strong>Total</strong></td>
<td><strong>304,212</strong></td>
<td><strong>305,644</strong></td>
<td><strong>99,420</strong></td>
<td><strong>709,276</strong></td>
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</table>

Table 5: Vehicles registered by Governorate - source: MOT
## Annex 3 – The Bus Route Network in Sana’a by Terminal

Source: Traffic Department Annual Report 2006

### 1. Southern Zone

<table>
<thead>
<tr>
<th>Main Terminal</th>
<th>Secondary Terminal</th>
<th>Route No.</th>
<th>Bus Type Capacity</th>
<th>Vehicle Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bab Alyamen</td>
<td>Aljamea’a - Shamlan</td>
<td>1</td>
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<td>226</td>
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<tr>
<td></td>
<td>Alrayadh St.,- Madbah</td>
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<tr>
<td></td>
<td>Asser</td>
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<tr>
<td></td>
<td>Attaheer</td>
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<td>7</td>
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<tr>
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<td>Hadda – Alkhamseen</td>
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<td>Hadda</td>
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<td></td>
<td>Kullayat Alteb</td>
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</tr>
<tr>
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<td>Hay Shumailah</td>
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<td>12</td>
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<tr>
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<td>Moh’d Abdullah Saleh St.</td>
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</tr>
<tr>
<td></td>
<td>Heziaz</td>
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<td>24</td>
<td>314</td>
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</tr>
<tr>
<td></td>
<td>Noqum</td>
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<td>Armadenah-Sawan</td>
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<tr>
<td>Jawlat</td>
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<td>Taiz- Aljamea’a</td>
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<td>Esseeteen- Aljamea’a</td>
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<td>Alalshahi-Bait Boos</td>
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<td>50 St., Darsalm-Hadda</td>
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<td></td>
<td>7 July - Darsalm</td>
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<td>Alkadsia-Alsunainah</td>
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### 2. Central Zone

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<th>Main Terminal</th>
<th>Secondary Terminal</th>
<th>Route No.</th>
<th>Bus Type Capacity</th>
<th>Vehicle Allocation</th>
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</thead>
<tbody>
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<td>Altahreer</td>
<td>Aljamea’a- Asser</td>
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<tr>
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<td>Alrayadh St.</td>
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<td>Asser-Alsubahah</td>
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<td>Haddah</td>
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<td>Sho’oub</td>
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<td>Main Terminal</td>
<td>Secondary Terminal</td>
<td>Route No.</td>
<td>Bus Type Capacity</td>
<td>Vehicle Allocation</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------</td>
<td>-----------</td>
<td>-------------------</td>
<td>--------------------</td>
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<td>Alralafzion</td>
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<td>Sho’oub</td>
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<td>Sho’oub-Noqum</td>
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<td><strong>Sub-total</strong></td>
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<td><strong>9,459</strong></td>
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</table>
Annex 4 - Plan of the Minibus Route Network in Sana’a (2005)

Source: Traffic Management Study for Sana’a City
Annex 5 – Photographs of Transport Vehicles and Facilities in Sana’a, March 2008

PART 1 – Microbuses and Minibuses on Sana’a City Routes

1. One of the few new 9-seat ‘dabab’ – a Daewoo Damas - at the Route 7 terminal near Tahreer Square

2. About 30 Dabab wait their turn for departure from the Route 7 terminal near Tahreer Square. The terminal occupies an entire street.

3. Dabab wait at Alhasabah Terminal. Waiting times are long due to the excessive number of vehicles. The terminal lacks any shelters or facilities for passengers.
4. Many dabab are in very dilapidated condition. The owner of this vehicle in Bab Alyamen Terminal said it was 25 years old.

5. The interior of the dabab above - broken seats and windows.

6. Fourteen seat ‘Nuss-Bus’ in Tahreer Square terminal which accommodates over 1,700 vehicles on 7 routes. The vehicle pictured are Toyota Hiace dating from the 1980’s. Most are in poor condition.
7. Al Hasabah terminal covers a large area, but cannot accommodate the large number of minibuses waiting for departure. About 3,000 buses on 13 routes operate from this terminal.

8. Twenty-six seat Coasters in Bab Alyamen terminal. Most of these vehicles date from the 1980’s

9. A long queue of 26-seat Coasters waiting to load at Bab Alyamen terminal which accommodates 3,200 vehicles on several adjoining sites.
PART 2 – Inter-City Peugeot Services

10. The Peugeot area at Bab Alyamen main terminal.

11. The parking area of the dedicated Peugeot inter-city terminal near Bab Al Yamden main terminal.

12. The loading bays at the dedicated Peugeot terminal near Bab Al Yamden main terminal. Peugeots leave every few minutes on inter-city routes to six major destinations, shown above each bay.
PART 3 – Inter-City Bus and Taxi Service

13. The El Edayi Company, Sana’a’s second-biggest inter-city bus operator, is one of two operators to develop their own passenger terminals.

14. Smaller inter-city bus operators pick up passengers on street – in this case near Bab Aliyamen Old City. They share the informal terminal with taxis and minibuses offering inter-city services.

15. The buses of the state-owned Local Land Transport Corporation also pick up passengers on street.
16. Another informal inter-city bus terminal near the Old City

17. A variety of taxis, pick-ups, minibuses and 4-wheel drives, many unlicensed, pick up regional and inter-city passengers on-street near Bab Alyamoun Old City

18. The Raha Taxi company has recently introduced a fleet of more than 500 new Hyundai taxis which charge a standard rate measured by a taximeter.