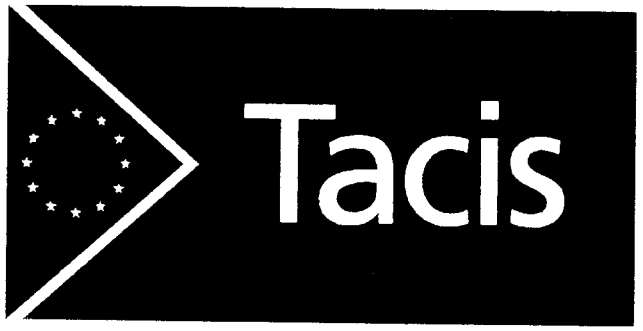

Azerbaijan Railways Restructuring

Final Report, volume 1
5-year Business Plan

February 1999

RESTRUCTURING OF THE AZERBAIJAN RAILWAYS

5-YEAR BUSINESS PLANS FOR 1999 – 2003:

Passenger Business Unit

Freight Business Unit

Network Infrastructure

Rolling Stock

Corporate and Other Activities

Financial Corporate Model

RESTRUCTURING OF AZERI RAILWAYS

BUSINESS PLAN 1999 - 2003

FREIGHT BUSINESS UNIT

RESTRUCTURING OF AZERI RAILWAYS

BUSINESS PLAN 1999 - 2003

FREIGHT BUSINESS UNIT

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1 INTRODUCTION

The Freight Business Unit is one of five new entities which will be established as part of the management restructuring process of the Azerbaijani railways. Business Plans have been developed both for the Corporation as a whole and also for the different entities.

These are based on a number of studies of the existing performance, future projections, market requirements and productivity improvement.

The Business Plan constitutes a Master Plan, for the rail freight business, over a 5 year period which will be rolled over annually on an ongoing basis. It will provide a base for the preparation of the annual revenue and investment budgets and determine profitability forecasts. It will be the focus of management strategy for the on-going development of the freight business.

The business runs at a profit but there is not adequate funding for asset replacement and there is a substantial arrears in maintenance. It is essential to increase revenue and reduce costs with a view to insuring a robust financial position.

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2 MISSION STATEMENT

The Freight Business Unit will convey freight efficiently and at a profit. It will compete on an equal basis with the private transport companies but will enter into agreements with them for the supply of both support and transport services as may be appropriate. Co-operation with neighbouring railways will be further advanced.

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3 STRATEGIC OBJECTIVES

- The transportation of goods in a safe, reliable and profitable manner
- The development of existing and new market segments
- Enhanced relationship with freight forwarders
- Growth of transit and import/export traffic
- Effective management of assets

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4 POLICY AND STRATEGY

- A new railway law will be enacted to establish ADDY as a Joint Stock Company
- The FBU will enjoy management autonomy and will be responsible for its financial performance
- The Ministry of Transport will enter into a 5 year contract with the railway company. A 5 Year Business Plan for the FBU will be prepared, setting out its strategy, development programme and corresponding operational and financial targets. The plan will be reviewed on an annual basis and rolled over.
- The external costs of road transport shall be taken into account in determining the Access Fee.

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5 SCOPE OF THE FREIGHT BUSINESS UNIT

The Freight Business Unit will encompass the freight activities and functions currently provided by ADDY. The new Unit will focus on activities which are consistent with its profit oriented mandate. Unprofitable activities will be discontinued.

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6 INTERNAL ANALYSIS

6.1 Resources

The assets of the FBU will comprise all existing assets including staff which support freight train operation as set out below.

6.1.1 Network

The network will carry about 12.5 ml. Tons of cargo in 1998. The figure for 1990 was 9 ml. The commodities may be divided into three categories as follows:

- Transit and export oil
- Other international freight
- Local freight

The oil traffics are carried on the main East/ West axis and are also distributed internally to the local power stations. General traffics move between the Black Sea and the Caspian.

The carryings by segment and commodity for October 1997 are set out in Table 2.1 below:

Table 2.1 Freight Traffic October 1997 by Segment and Commodity

	Tonnes (000)	Ntkm (ml)
Local	464	113
Import	139	32
Export	369	156
Transit	36	17
Total	1008	317

The Financial Performance is set out in Table 2.2 below :

Table 2.2 Net Operating Result 1997 (Mn bn)

	Revenue	Sales & Depreciation	Result
Freight	333	225	108

Performance is not good. Wagon turn-around time is excessive. Resource utilisation is low.

6.1.2 Human Resources

The total number of staff attached to the Freight Business is 3021. Locomotive drivers and assistant drivers are shown as being allocated to the Rolling Stock Services Unit. The appropriate number will be transferred to the FBU in due course.

Productivity generally is low. The management organisation needs reorientation. Training programmes are also necessary. There should be a ban on recruitment.

6.1.3 Rolling Stock

The rolling stock is generally in poor shape. It is old, maintenance is in arrears and the designs are obsolete. Heavy maintenance is carried out abroad which is expensive and demanding in fleet numbers. New maintenance facilities are required and existing workshops should be upgraded. Productivity is low and management reorganisation is necessary together with improved training. There is a need to plan major investment in new rolling stock.

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6.1.3.1 Locomotives

The electric main line fleet consists of 238 locomotives of which 150 are available for traffic. The daily traffic requirement is 96 of which 42 are for freight. A total of 127 units are overdue major overhaul. The diesel fleet totals 101 for a daily operating requirement of 10, of which 3 are for freight. Some 46 are overdue major repairs. All main line locomotives operate as a pool with no differentiation between passenger and freight.

There is a total of 179 shunting locomotives of which 89 are available for a freight demand of 70.

6.1.3.2 Wagons

The wagon fleet has a total of 23,440 wagons. The total available for use is 15,336 units as compared with a daily requirement of 5,229. The only area where there is a shortage of wagons is for oil tankers Maintenance is in arrears and some 18,000 wagons need attention.

6.1.4 Stations

There are too many stations in relation to the demand. The track layout and signalling at most stations is over elaborate and costly to maintain. The majority of stations have loop lines in addition to the main lines and have two crossings permitting movements between the main lines at either end of the station. This level of infrastructure is excessive. Shunting costs are correspondingly high and give rise to train delay and bad service.

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7 EXTERNAL ANALYSIS

7.1 Market

The export oil has increased in volume and export traffics are the largest single segment by volume. However, unit yields for local traffic are far higher than for the export traffics and over 50% of revenue still comes from the local traffic. The export crude oil traffic is from Ali Bayramli to Georgia whilst the refined product exports are from the Baku refineries.

Traffic volumes on the Trans-Caucasian line steadily increase from 3.7 million tonnes p.a. at the border to a maximum of about 8 million tonnes p.a. near Baku. Between Baku and Alyat, the route carries traffic not only for the trans-Caucasian line proper but also for the main-line to the south and south-west. Volumes slightly reduce after Qaradag, where a cement plant is located, and again after Alyat but then increase after Kazi Magomel, where the crude oil export traffic from the on-shore terminal at Ali Beyramli joins. Traffic on this line represents about 70 percent of net tonne kilometres on the network as a whole.

The recent signing of a co-operation treaty between the Trans-Caucasian countries including Georgia, Azerbaijan and Armenia in Baku on 8th September 1998 may affect the present border closures but this has not been reflected in the business plan assumptions.

7.2 Financial Performance Trends and Targets

It has been assumed that real freight tariffs will be in line with the figures below:

- Transit and export oil –
  reduce by 10% in 1999 then at 5% per annum until 2003 then constant.
- Other international freight -
  reduce by 6% in 1999 and then 5% per annum to 2003 then constant.
- Local freight -
  temporarily reduced by 25 million manat in 1998-99, then increase by 10% in 2000 and 2001 and 5% in 2002 then constant.

The Railway does not provide for bad debts in its accounts.

7.3 Traffic Projections and Trends Analysis

Freight traffic is projected to grow overall by 5.7% per annum between 1998 and 2003. Freight Tonne Kilometres grow from 4 billion in 1998 to 5.4 billion in 2003. Freight Tonnes transported grow from 12.5 million tonnes per annum to 16.5 million tonnes in 2003.

Within this overall figure it is anticipated that transit and export oil would increase to 5 million tonnes by 2003 then remain constant. Other international freight would increase to 4 million tonnes in 2003. Local freight would increase to 7.5 million tonnes in 2003 then remain constant.

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7.4 Competition Analysis

As in most FSU countries, road competition is largely insignificant for the majority of traffics carried by rail. There are rapidly increasing numbers of container trucks but this is not a significant segment of rail's traffic. In the medium-term, it is unlikely that rail will lose short-distance traffics. However, as ADDY is essentially a transit railway and mover of block trains within the country wagon load traffic is a small proportion of the total tonnage conveyed and any losses would be insignificant.

Oil pipelines present the greater threat in the long term and some traffic will transfer when the new AIOC Early Oil Western Route pipeline becomes operational in 1998. There are plans to build another pipeline but it is unlikely to be constructed before 2002 and could be delayed for several years.

The proposed concentration of activities to a limited number of freight stations and working closely with freight road hauliers to provide an integrated transport facility through railheads should also stem loss of business whilst improving the attractiveness and competitiveness of rail.

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8 TARGETS

8.1 Targets

The key business objective of a restructured ADDY should be the safe, timely and efficient movement of freight to provide a commercial return that creates a sustainable and growing business, generating a profit and providing rewarding work for its employees.

The business focus must be directed to satisfying the customer and meeting his or her requirements consistently and economically. This requires the development of quality procedures as part of the marketing strategy which must include a thorough understanding of ADDY's customers and the strengths and weaknesses of the competition. It may also be appropriate to develop a customer's charter that sets out in principle how the business will handle its customers and what service(s) they can expect from ADDY.

The creation of a commercial return and hence a profit will require a change from the present tonne/kilometre performance culture to one where each element of the business generates a profit and contributes to freight's overall success. To achieve this will require the development of traffic costing procedures to provide a thorough understanding of the individual cost elements for each traffic flow. When the costs for each type of traffic are known a tariff policy can be developed to ensure commercial viability.

Safety is a given for railway operation and is one of the traditional advantages that rail has over road transport. Safety is good business, as is environmental awareness, and ADDY must achieve appropriate standards in both areas to ensure compliance with regulations and satisfy public expectations. These standards should be set to achieve risk levels that are as low as reasonably practicable. This process will require an assessment of present arrangements to eliminate prescriptive standards, where appropriate, and introduce output standards and specifications that are based on sound commercial and operating judgement.

8.2 New Management

The Freight Business Unit will be independent and self contained. It will have mangers responsible for marketing/sales, operations, accounts and human resources.

The Unit's main functions will be:

- Transport of goods in a safe, reliable and cost effective manner
- Development and marketing of logistical systems
- Development of combined transport
- Increase in volumes transported
- Close liaison with neighbouring railways
- Contact with customers and shippers
- Management of the assets in a most efficient manner
- Contract with the Rolling Stock Service for heavy overhaul
- Contract with the ISU for track access
- Realisation of financial and other targets laid down at ADDY corporate level

The organisation structure is included in the report.

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8.3 Network Adjustments

The track layouts at stations, freight stations and marshalling yards have not been rationalised since 1988 despite present traffic levels being 20% of those in 1988 and predicted to reach less than 30% of the 1988 levels by the end of the 5-year business plan.

The infrastructure reflects the traffic flows and patterns that existed on 1988. The current traffic flows and patterns are completely different from those of 1988 both in quantity and direction. The present traffic split is 50% for transit traffic, travelling on an east - west axis, with 80% being loaded in Azerbaijan. The remaining 50% is domestic traffic either starting or finishing in Azerbaijan.

Ideally the transit traffic would pass through Azerbaijan without stopping and would require no facilities other than at the port, terminal or border. The facilities at the latter should only be for customs purposes as there need be no railway reason for stopping there.

8.3.1 Freight Stations

The track layouts at stations, freight stations and marshalling yards have not been rationalised since 1988 despite present traffic levels being 20% of those in 1988 and predicted to reach less than 30% of the 1988 levels by the end of the 5-year business plan.

The infrastructure reflects the traffic flows and patterns that existed on 1988. The current traffic flows and patterns are completely different from those of 1988 both in quantity and direction. The present traffic split is 50% for transit traffic, travelling on an east - west axis, with 80% being loaded in Azerbaijan. The remaining 50% is domestic traffic either starting or finishing in Azerbaijan.

Ideally the transit traffic would pass through Azerbaijan without stopping and would require no facilities other than at the port, terminal or border. The facilities at the latter should only be for customs purposes as there need be no railway reason for stopping there.

8.3.2 Marshalling Yards

The main marshalling yard at Baku should be reconstructed to handle domestic traffic sorting with some additional capacity to hold transit traffic that is either waiting forward transit, a technical examination or a change of locomotive/driver. This should permit a reduction in the number of tracks to 25.

8.3.3 Stations

A survey of station layouts should be completed with a view to simplification. At some stations there will be no need for any facilities other than the main lines which will allow simplification of the signalling and control arrangements. The introduction of auto block facilities will further speed up journey times and permit a reduction in operating costs.

8.4 Marketing and Tariff Policy

8.4.1 Marketing

It was identified that a key business objective was to focus on the customer.

Individual customers and the freight market generally are changing in response to market forces and the emerging economic climate both in Azerbaijan and in the countries who forward

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and receive traffic that is conveyed over the ADDY network. ADDY must therefore be responsive to and have a system that can identify change at both international and customer level.

It will be the responsibility of the Marketing department to develop such techniques and to maintain a regular dialogue with its customers. This department must become the driving force of the business by satisfying the customer, identifying traffic opportunities and capturing profitable business. It must be seen as the one railway point of contact for existing and potential customers by co-ordinating the activities of the other departments to deliver the product that it is selling. The activities of running the railway should be invisible to the customer with the Marketing department acting as the link between the railway and the customer.

It will also be the responsibility of the department to develop mutually beneficial business partnerships through contractual arrangements with other transport operators for the following activities:

Collection and delivery of freight between freight stations and customers' premises
Warehousing
Documentation
Loading and unloading
Freight movement information
Special loads

8.4.2 Tariff Policy

The Marketing department will be responsible for defining the business economic internal rate of return and the development of a tariff policy to deliver it.

As a first stage it will be necessary to identify the costs associated with the conveyance of particular traffics and in some cases at the level of individual traffic flows. This requires the introduction of a traffic costing system that can identify the avoidable(i.e. how much would be saved if the traffic was not carried) costs of carrying a particular flow of traffic.

8.5 Market Development

In developing its freight business ADDY must concentrate on rail's traditional strengths of long haul, bulk traffic. Rail in western Europe only becomes competitive with road for transits longer than 300 km. This is not the case in Azerbaijan since road competition is not so well developed but it gives an indication of what may happen in the future. As transit traffic accounts for 80% of ADDY's freight business future efforts must be to retain the present profitable flows and develop block load traffic. It will be necessary to provide a continually improving quality of service whilst reducing costs:

ADDY must critically examine its present wagon load traffic to understand its contribution to the overall business. Where it is shown that some traffics do not cover their costs ADDY will have to make a conscious decision either to cross subsidise from other parts of the business or withdraw from that sector of the market.

There will be more containerisation of non bulk goods and as the economy improves more 'white goods' will flow, predominantly in containers. The traditional loading and unloading methods will need to be replaced by greater mechanisation for handling container and palletised goods. ADDY will have to decide whether this is core to their business or would be better handled through private sidings or by franchised terminal operators at their rented freight stations.

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Identifying non bulk traffic that can be handled at a competitive price will be one of the main challenges facing the marketing department as rail's traditional monopoly is eroded. The development of strategic partnerships with emerging transport operators at an early stage is essential as ADDY needs to lock them into its system before they develop too great an independence.

ADDY must recognise that with the change in the business structure new railway operators could set up in business as direct competitors. It may be appropriate therefore to split the freight business into identifiable market segments e.g.

Oil
Transit
Internal
Containers
Construction
Others

This would create a closer customer focus within the freight business. It would give a greater cost awareness and assist the business sector in improving service delivery whilst being closer to the customer and should improve market intelligence for future business opportunities.

8.6 Quality of Service Targets

Quality of service targets must be developed to enable the business to measure its performance and to satisfy customers that the contract service levels are being provided or bettered. They should also be used to indicate to prospective customers that the railway is capable of delivering its promises.

Where service levels are inadequate then management action can be targeted and results tracked to ensure effective action is being taken. This can then be used to give comfort to customers that the business cares and is acting positively.

ADDY currently measures many of its activities. The list is not exhaustive and quality of service targets should be developed as a integral part of the management information system. Where appropriate these should be driven by the need to satisfy customers and they should be shared with them as part of service delivery and to confirm contract compliance.

8.7 Operations

8.7.1 Strategy

The present strategy is based on maximising train length. When the correct tonnage or number of wagons is reached arrangements are made to send it forward. As such freight trains do not run to a timetable though a theoretical timetable is produced at the start of each timetable period.

With the level of traffic now operating this system is wasteful of resources in that locomotives and train gangs are on constant standby. The benefit however is that track capacity usage is minimised as the least number of trains are operated between any two points during a 24 hour period. Although there are infrastructure problems there is surplus capacity so optimising train paths is not an issue in Azerbaijan.

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Freight trains should be operated to a timetable in the same manner as passenger trains. This will allow the allocation of locomotives and train gangs to specific times and reduce the number of resources required and hence operating costs.

It is recommended that the introduction of a fully scheduled freight timetable should be progressed at the earliest opportunity in line with the present timetable planning process.

At present train gangs are allocated to individual locomotives. This is a recent practice adopted to overcome the poor reliability of the locomotive fleet. The theory is that each gang (3/4) allocated to a locomotive understands its workings and are able to rectify problems when away from the depot. This results in locomotives being changed when train gangs are changed. If this occurs away from the depot the locomotive stands idle until the same train gang has rested (12 hours) before being available to work another train.

This practice must be reduced and eventually eliminated as the most expensive resource (locomotive) is limited in its operational availability by the hours of the least expensive resource (train gang).

8.7.2 Marshalling and Shunting

Freight train marshalling and shunting by its very nature delays wagons and should be reduced to the minimum necessary to achieve an effective and efficient operation. The creation of a timetable service pattern will enable a review of the working hours necessary to handle traffic at the freight stations and marshalling yards. The increase in block trains and in containerisation will further reduce the need to marshal and shunt trains as the proportion of wagon load traffic decreases.

The present and predicted traffic levels are insufficient to support 24 hour operation of freight facilities with the exception of those required for some oil traffics.

Train movements should be planned and the workload assessed to calculate the optimum solution by balancing the effect of rationalisation on quality of service delivery and the risk to performance.

8.7.3 Terminal Handling

The number of freight stations should be reduced to those where a reasonable level of activity currently exists and can be predicted to continue and develop in the future. The following freight stations are identified for retention:

Baku Tov, Karadag, Kyrdamir, Mingetshaur, Gyandsha, Shamkhor, and Dollyar.

The freight stations below to be reviewed to consider their viability:

Khatshmas, Kiliasi, Sumgait, Gyuzdek, and Vatagi,

All others should be closed and their activities and equipment ,if suitable, transferred to the remaining locations.

Gyandsha should be developed to handle 40ft containers as a suitable location in Azerbaijan if the level of container traffic develops in a similar way to Europe but this is not proposed as part of the 5-year plan. Development of Kishli-Baku is not proposed but should have its activities transferred to Baku Sea Port providing the container terminal is developed as proposed under a separate initiative.

A key strategic business decision to be made is whether freight station terminal management should be a core activity of the freight business or whether it should be privatised and if so to what extent.

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8.7.4 Border Crossing Procedures

The present border crossing procedures require trains to stop for lengthy periods for both railway operational and engineering procedures but mainly for customs purposes. Border stops of over 3 hours are normal.

In western Europe border procedures have been changed through adoption of internationally developed agreements concerning both customs and railway operating and engineering standards. These arrangements have either reduced the time taken to complete border procedures or in some cases eliminated stops at borders.

Azerbaijan and Georgia achieved a considerable reduction in border station stop times with the introduction of the Logistics Express container train. It is an indication of what can be achieved and both countries are recent signatories to an agreement made together with the majority of the other TRACECA route countries, to work towards the adoption of western European practice.

As part of this process both countries should consider the benefits of permitting locomotives and train gangs to work across the border to avoid stopping at a location where the only purpose of the stop is to change either locomotive and/or train gang.

8.7.5 Performance

The monitoring of freight operating performance is essential to the understanding of the business; for use as a basis for targeting improvements; to develop future plans; to deliver a quality product and to ensure customer satisfaction. This information forms a key part of the management information system.

Performance targets need to be developed in line with the quality of service targets. At present ADDY measures and records a wide range of data concerning its freight movements. With the development of a freight timetable new data will be required to measure actual performance against the plan and to measure productivity of its resources (e.g. locomotives, wagons, staff)

8.8 Rolling Stock Fleet Optimisation

8.8.1 Wagons

The 1998 traffic levels of 12.5 million tonnes could be handled with an operational wagon fleet of 5,046 wagons. During the business plan period productivity improvements of 20% for oil wagons and 10% for others are assumed which will require 5437 wagons to handle the forecast of 16.5 million tonnes in 2003. This assumes a 300-day operating year with 10% of the fleet undergoing repairs or maintenance at any one time.

A key area for improvement is the wagon round trip times being achieved currently. These vary from 6 days to 60 days dependent on the type of wagon. Major strides to improve wagon loading and unloading times must be pursued with senders and forwarders. Wagons must not be used for storage as they lose revenue generating opportunities which in turn requires a larger wagon fleet than is commercially viable and require additional facilities to repair, maintain and store these additional wagons. 6 days are being achieved for local oil traffic and with the operating and infrastructure improvements contained on the business plan it should be the minimum target for all wagons used either internally or for traffic to/from Georgia.

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8.8.2 Locomotives

With the present locomotive and train gang operating arrangements locomotives rarely achieve a working day of more than 12 hours and 8 hours is nearer the norm. This accounts for the present level of utilisation where locomotives are achieving an average of 202km per day with a daily tonne.km per locomotive of 258. The reasons were explained in 6.6.8 as were some short and long term solutions.

The business plan assumes a 30% productivity improvement during the life of the business plan. The number of electric line haul locomotives peaks in 2000 at 54 then reduces as the tonnage rise slows down but productivity continues to improve giving a 2003 requirement for 50 electric locomotives. This level of reduction requires the changes to operating practices and infrastructure improvements to reduce journey times outlined elsewhere in the plan.

It has been assumed that diesel locomotive requirements will remain constant during the plan time scale with minor fluctuations in civil locomotive requirements corresponding to infrastructure activity. It is recommended however that they are part of the freight business as they own the drivers who will operate the locomotives.

Shunting locomotive requirements show a more dramatic reduction to reflect the proposed rationalisation of freight stations and yards and subsequent concentration of freight activities at a few locations. They fall from 76 to 45 during the plan time scale.

8.9 Better Crew Productivity

Train crews are currently part of the locomotive department. It is recommended that they are transferred to the freight and passenger business as appropriate. This will enable the businesses to have a tight control over one of the main cost elements. This also recognises the difference between the two businesses and will enable them to develop independent strategies appropriate to their individual needs.

The measures to be adopted may be summarised as follows:

Introduction of a freight timetable
Roster gangs to trains not locomotives in a similar manner to passenger services
Review shunting and freight station arrangements to reduce activities to meet business requirements.
Consider the introduction of driver only operation.

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9 EMPLOYMENT LEVELS AND PRODUCTIVITY

The staffing levels below have been identified to the freight business through a process of disaggregation of the present activities into their component parts and summating the figures from these basic building blocks.

It is considered that a 30% reduction in staff numbers is achievable during the life of the business plan through the actions outlined in the freight business section.

The following table provides the total staff numbers for each year of the plan

	Base year	Year 1	Year 2	Year 3	Year 4	Year 5
Freight	3021	2930	2725	2507	2307	2122
% change		3%	7%	8%	8%	8%

The figures do not include any provision for the introduction of driver only operation as it is not considered that this will be achievable during the plan timescale. It should be investigated however to understand the requirements and trials introduced on certain traffic flows as considerable cost benefits stem from this method of operation.

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10 OBJECTIVES OF BUSINESS PLAN

The key objectives of the Business Plan will be to:

- maintain market share over the 5 year plan to achieve 16 million tonnes km in year 2003.
- introduce new management structures and procedures to achieve increases in productivity performance and efficiency.
- create a marketing strategy to achieve targeted annual growth and set tariffs to give profit revenue and cost targets
- increase speed and reliability of freight trains through track upgrading and signalling improvements and rationalisation : speed by 33% and reliability by 20%
- introduce freight timetables for all freight trains and in particular those between the principal marshalling yard at Baku and the remaining freight stations.
- increase block training working to reduce the amount of marshalling.
- achieve productivity improvements for:

  - locomotives of 30%
  - traincrews of 15%
  - wagons of 20% for Oil: 10% for others

- close the majority of freight stations on the designated Trans-Caucasian routes and concentrate activities at:

  Baku Tov
  Karadag
  Kyrdamir
  Mingetshaur
  Gyandja
  Shamkhor and
  Dollyar.

Other freight stations to be reviewed where loaded tonnage is less than 20,000 tonnes per annum or the total number of wagons loaded and unloaded is less than 2000 per annum and either closed, with transfer of activities concentrated at adjacent retained freight stations, or developed into concentration locations themselves.

- retain the major oil terminals.
- develop intermodal systems in respect to combined transport and containerisation at Baku as part of the port developments and at Gyandja.
- Decrease staff numbers by 30% without provision for one man operation which is seen as not being achievable within the plan timescale. The numbers are set out in the table below:

	Base year	Year 1	Year 2	Year 3	Year 4	Year 5
Freight	3021	2930	2725	2507	2307	2122
% change		3%	7%	8%	8%	8%

- Improve rolling stock maintenance and reduce costs

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- Negotiate competitive rates for track access
- Improve return on investment

11 FINANCIAL ANALYSIS

11.1 Key assumptions

The key planning assumptions used in the preparation of the Freight Business Unit projected income statements were as follows.

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
Freight Traffic and Revenue	
Freight Volumes	
- Export oil	(1999 +22.8%),(2000 +15.3%), (2001 +3.2%), (2002 -0.4%), (2003 -2.8%) (Tariff elasticity -0.5)
- other international freight	(1999 +13.1%),(2000 +9.0%), (2001 +6.0%), (2002 +6.3%), (2003 +6.6%) (Tariff elasticity -0.2)
- local freight	(1999 +4.2%),(2000 +4.2%), (2001 +4.2%), (2002 +4.2%), (2003 +4.2%) (Tariff elasticity 0.0)
Freight Tariffs	
- Export oil	reducing by 10% in 1999, and by 5% per annum in real terms thereafter
- other international freight	reducing by 6% in 1999, and by 5% per annum in real terms thereafter
- local freight	stable in 1999 and increasing by 10% in 2000 and 2001, and by 5% in 2002 in real terms
Freight Operating Resources	
- loco fleet	Requirement for 160 loco's declining to 113 by 2003
- loco's per train	1.32 loco's on average per freight train
- wagon fleet	2000 wagons increasing to 2448 wagons in 2003
- wagons per train	34.4 wagon per train increasing to 35 in 2003
Freight Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Traffic Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum

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11.2 Freight Business Unit Projected Income Statement

Freight Revenue : Growth in freight traffic between 1998 and 2003 is set at 46.7%. Tariffs for export oil and other international freight are set in US$ or Swiss Francs and so to compensate for the projected strengthening of the manat a reduction in tariff levels ahs been incorporated into the Business Plan. Domestic tariff as assumed to remain stable in 1999 but to increase by 10% in 2000 (real terms) and by 5% per annum up to 2002.

- ***Domestic traffic*** is forecast to increase by approx 4% per annum over the period of the plan in line with forecast growth in GDP. This category represents about half the current tonnage carried by ADDY and is dominated by the transportation of refined oil products from SOCAR's Baku refinery. Construction traffic, mainly consisting of sand and gravel, is the other major domestic traffic, and it is mostly hauled from the north west of Azerbaijan to the Baku region.

- ***Exports Oil*** traffic is increasing and a major factor in the growth in this traffic is the quantity of Tengiz oil carried for Chevron to Batumi on the Black Sea. Growth in this traffic is expected to be strong in 1999 and 2000 and it will begin to taper off in 2001 and it will decline slightly in 2003 and 2003.

- ***Other International traffic*** This category includes import traffic which is dominated by general freight and the main commodities include grain, flour and sugar from the Black Sea ports and Russia, cement from Turkmenistan and steel from Russia. It also includes transit traffic which mainly consists of cotton westbound from Uzbekistan to Poti and refined oil products from Turkmenistan. Eastbound transit traffic consists of grain for Uzbekistan, together with general manufactured goods and food products. Growth in other international traffic is set to be 22% between 1999 and 2000 and average out at 6% per annum for the period 2001 to 2003.

Direct expenditure on freight services, including the costs of the freight service department, a share of the traffic department costs and the salary costs of freight drivers and assistants, grows by 71% during the period of the plan. This reflects increases in real wages and a growth in expenditure in line with the projected increases in the volume of traffic.

Historical depreciation costs are constant throughout the period of the plan.

The Freight Business Unit must bear a charge for the use of infrastructure which is tentatively estimated at 95.7 billion manats for 1998 and this grows to 156.3 billion manats by 2003 in line with increases in costs of the Infrastructure Business Unit. The charge out is based on freight train gross tonne kilometres.

Rolling stock charges are estimated at 122.0 billion lari for 1998 growing to 208.9 billion manats by 2003. These charges are made up of the cost of supplying and maintaining wagons used by the freight business unit and for the use of locomotives. The wagon maintenance costs are separately identified in the ADDY accounts and can be charged directly to the freight business unit. The charge of locomotive use is based on the number of locomotive kilometres operated in freight service.

The Freight Business Unit must also bear a proportion of the costs of the Administration and this charge has initially been set at 50%.

The projected net result for the Freight Business Unit in 1999 is a profit of 96.4 billion manats which increases to 166.0 billion manats in 2003. The growth in freight traffic and revenue is the determining factor in the improved performance. The increased freight traffic will result in

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higher charges from both of the Infrastructure Unit and the Rolling Stock Business Unit. The Infrastructure and Rolling Stock Units will be embarking on rehabilitation programmes which will see their cost bases rising throughout the plan period and this will result in higher charges for track access and rolling stock use.

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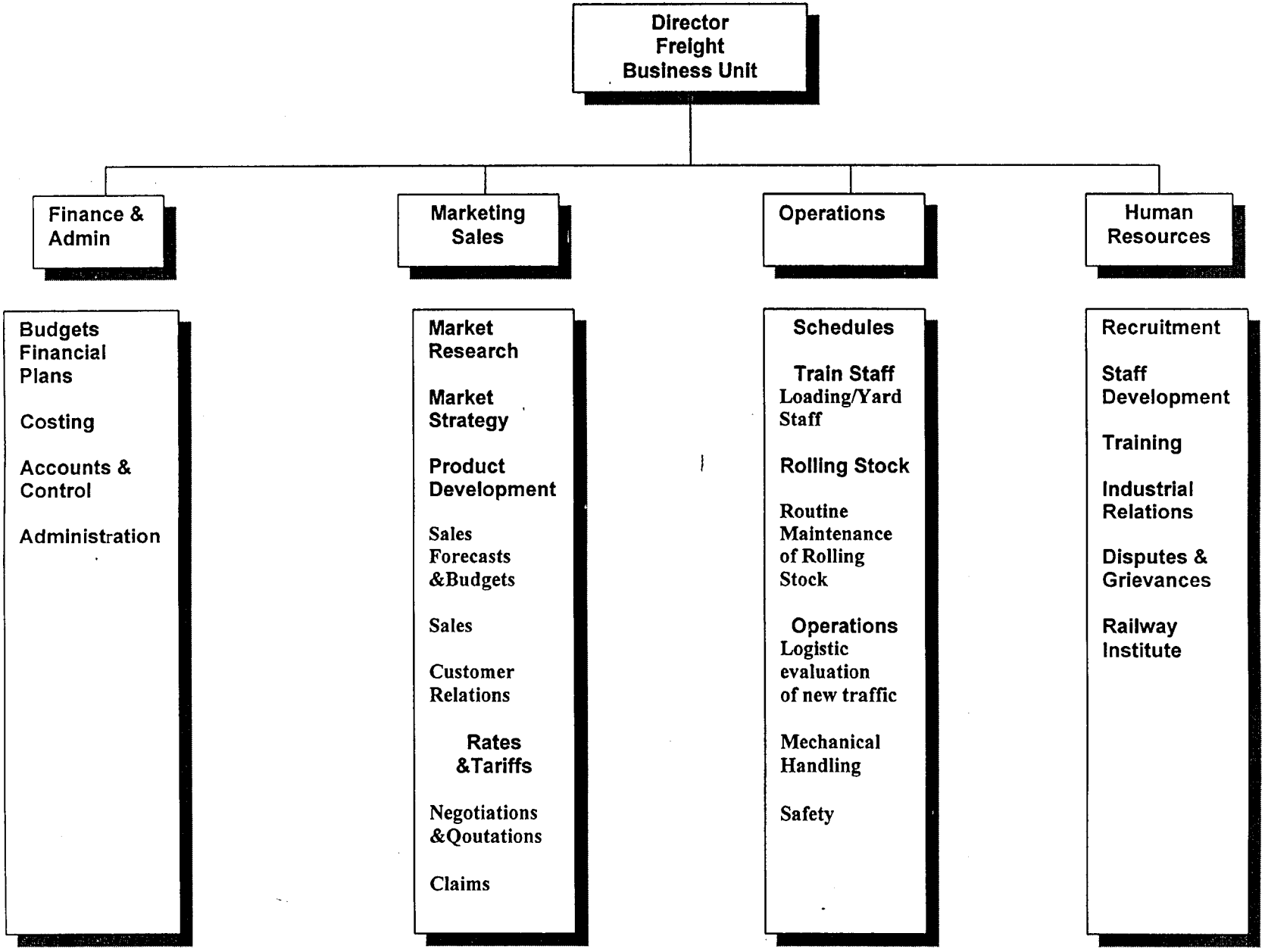
Azerbaijan Railways
Table 11 : Freight Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Freight Revenue	333.1	345.7	394.8	457.8	510.6	556.1	591.3
Salaries & Social Insurance	11.1	16.9	20.9	23.7	25.3	26.6	26.9
Materials	0.9	1.0	1.2	1.5	1.7	1.8	2.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.6	0.6	0.7	0.9	0.9	1.0	1.1
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	2.8	2.9	3.5	4.1	4.5	4.9	5.3
Capital Repairs	0.5	0.6	0.7	0.9	1.0	1.1	1.2
Other	6.3	3.1	3.9	4.6	5.2	5.8	6.3
Total	22.2	25.1	31.0	35.7	38.6	41.3	42.9
Operating Surplus/Deficit	310.9	320.6	363.8	422.1	472.0	514.8	548.4
Depreciation	4.9	6.0	5.9	6.0	6.0	6.1	6.2
Infrastructure Charges	84.9	95.7	107.6	121.2	132.4	143.9	156.3
Rolling Stock Charges	102.6	122.0	142.9	163.1	178.9	194.2	208.9
Administrative Services Charge	8.8	10.5	11.1	11.2	11.1	11.2	11.1
Net Income/Loss	109.8	86.4	96.4	120.6	143.7	159.4	166.0

Azerbaijan Railways
Table 12 : Freight Business Unit : Financial Plan

	Total Cost (Billion Manats current)						
	1997	1998	1999	2000	2001	2002	2003
Freight Services							
Salaries & Social Insurance	2.4	1.7	2.1	2.4	2.6	2.7	2.8
Materials	0.3	0.4	0.5	0.6	0.7	0.8	0.8
Diesel - Other	0.2	0.2	0.2	0.3	0.3	0.3	0.4
Electricity - Other	0.7	0.8	1.0	1.2	1.3	1.4	1.5
Depreciation	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Capital Repairs	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Other	1.7	1.9	2.4	2.8	3.2	3.6	3.9
Total	5.5	5.3	6.5	7.7	8.5	9.2	9.8
Traffic Department - Freight							
Salaries & Social Insurance	4.9	8.6	10.6	12.1	12.8	13.5	13.7
Materials	0.6	0.6	0.7	0.9	1.0	1.1	1.2
Diesel - Other	0.4	0.4	0.5	0.6	0.6	0.7	0.7
Electricity - Other	2.1	2.1	2.5	3.0	3.3	3.5	3.8
Depreciation	4.8	5.8	5.7	5.8	5.8	5.9	5.9
Capital Repairs	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Other	4.6	1.2	1.5	1.8	2.0	2.2	2.4
Total	17.8	19.2	22.2	24.7	26.3	27.8	28.8
Drivers & Assistants - Freight							
Salaries & Social Insurance	3.8	6.6	8.1	9.3	9.8	10.4	10.5


Director
Freight
Business Unit
Finance &
Admin
Marketing
Sales
Operations
Human
Resources
Budgets
Financial
Plans
Costing
Accounts &
Control
Administration
Market
Research
Market
Strategy
Product
Development
Sales
Forecasts
&Budgets
Sales
Customer
Relations
Rates
&Tariffs
Negotiations
&Qoutations
Claims
Schedules
Train Staff
Loading/Yard
Staff
Rolling Stock
Routine
Maintenance
of Rolling
Stock
Operations
Logistic
evaluation
of new traffic
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RESTRUCTURING OF AZERI RAILWAYS

PASSENGER BUSINESS UNIT : BUSINESS PLAN 1999 - 2003

RESTRUCTURING OF AZERI RAILWAYS

PASSENGER BUSINESS UNIT : BUSINESS PLAN 1999 - 2003

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1 INTRODUCTION

The Passenger Business Unit is one of six new entities which will be established as part of the management restructuring process of the Azerbaijani railways. Business Plans have been developed both for the Corporation as a whole and also for the different entities.

These are based on a number of studies of the existing performance, future projections, market requirements and productivity improvement.

The Business Plan constitutes a Master Plan, for the rail passenger business, over a 5 year period which will be rolled over annually on an ongoing basis. It will provide a base for the preparation of the annual revenue and investment budgets and determine profitability forecasts. It will be the focus of management strategy for the on-going development of the passenger business.

Passenger numbers have fallen dramatically since 1990. The slide must be corrected and volumes increased by improving the service. At the same time productivity must be bettered. Support for social services will have to be transparent.

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2 MISSION STATEMENT

- The safe and efficient transport of passengers
- The development of existing and new market segments
- The supply of social services in accordance with Government requirements
- The negotiation of train paths with the ISU

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3 OBJECTIVES

- Improve services and costs
- Intensify marketing effort to better market share
- Increase return on investment

To achieve these objectives the PBU will have to:

- Increase staff productivity
- Decrease traction and rolling stock costs
- Improve fare structures
- Agree compensation costs for PSO with Ministry
- Install new management organisation

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4 POLICY AND STRATEGIES

- A new railway law will be enacted to establish the railway as a Joint Stock Company
- The PBU will enjoy management autonomy and will be responsible for its financial performance.
- The PBU will set fares levels in consultation with the Government. Concession fares will be the responsibility of the PBU
- Loss making services will not be cross-subsidised by freight. A PSO will be negotiated with the Ministry in accordance with agreed procedures.
- The Ministry of Transport will enter into a 5 year contract with the railway company. A 5 year Business Plan for the PBU will be prepared setting out its strategy, development programme and corresponding operational and financial targets. The plan will be reviewed on an annual basis and rolled over.
- The external costs of road transport shall be taken into account in determining the Access Fee.

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5 SCOPE OF THE PASSENGER BUSINESS UNIT

The PBU will serve the same geographic area as EDDY currently. The Regulatory mechanism will allow for the building of new lines and stations and the closure of existing as may be necessary. While the system is seen as offering transport service on a commercial basis the Government may decide to support specific social services.

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6 INTERNAL ANALYSIS

6.1 Resources

The assets of the PBU will comprise all existing assets including staff which support passenger train operations as set out below.

6.1.1 Network

The network carried about 3.8 ml passengers in 1997 and it is estimated that this number will increase to 4.2 ml in 1998. The 1990 figure was 15 ml. The services are divided into 3 categories as follows

International
Local
Suburban

International services operate from Baku to Moscow, Kiev, Tbilisi, Astrakhan, Rostov and Makhackala. Since Azerbaijan's independence there has been some reorientation in the direction of passenger traffic. Services through Nagorno Karabakh and via Armenian territory to Nakichevan have ceased. Services to Russia and Ukraine and Russia were disrupted by war in Chechnya. Services from Georgia to Russia and Ukraine now have to pass through Azerbaijan owing to the problems in Abkazia.

Local services include intercity and regional trains. Suburban services operate in the Baku area.

The heaviest traffic demands are on the east-west axis between Baku and the Georgian border. The busiest sections are between Baku and Evlakh with 9 to 13 pairs of passenger trains operating on a daily basis.

The estimated passenger demand and passenger kilometres by service type for 1998 are set out in Table 3.1

Table 3.1 Estimated Pass Demand and Pass kms 1998

Type of service	Passenger Demand mls	Passenger Kms
International	0.28	59.0
Local	1.1	364.0
Suburban	2.82	139.0
Total	4 .20	562.0

The financial performance is set out in Table 3.2 below.

Table 3.2 Net Operating Result 1997 (Mn.bn)

	Revenue	Sales& Depreciation	Result
International/Local	15.00	50.00	(35)
Suburban	1.00	22.00	(21)
Total	16.00	72.00	(56)

Passenger yields since 1995 have increased from 10 Manats per passenger to 33. International and local traffic accounts for the major share of passenger revenue.

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Train performance is poor. Productivity in terms of resource utilization is low. Journey times are excessive and standards of comfort and service need to be improved.

6.1.2 Human Resources

The total number of staff attached to Passenger Services is 3473. Locomotive drivers and assistant drivers are shown as being attached to the Rolling Stock Services Unit. They will be transferred to the Passenger Business Unit in due course. The train crews are well trained and within the limitations of their situation they perform well. They are skilled in locomotive maintenance and often carry out running repairs which get the trains home to base where otherwise they would have to await replacement power. The station staff also perform well under difficult circumstances.

However, it must be said that productivity is low all around. The management organisation is deficient and changes in work practices are required. It is necessary to place a ban on external recruitment.

6.1.3 Rolling Stock

The rolling stock is generally in poor shape. It is old, maintenance is in arrears and the designs are obsolete. Heavy maintenance is carried out abroad which is expensive and demanding in fleet numbers. New maintenance facilities are required and existing workshops should be upgraded. Productivity is low and management reorganisation is necessary together with improved training. There is a necessity to plan major investment in new rolling stock.

6.1.3.1 Locomotives

The electric main line fleet consists of 238 locomotives of which 150 are available for traffic. The daily traffic requirement is 96 of which 40 are for passenger. A total of 127 units are overdue major overhaul. The diesel fleet totals 101 for a daily operating requirement of 8. Some 46 are overdue major repairs. All main line locomotives operate as a pool with no differentiation between passenger and freight.

There is a total of 179 shunting locomotives of which 89 are available for a demand of 76.

6.1.3.2 Electric Multiple Units

The fleet consists of 74 units with an operating requirement of 48. A total of 46 are serviceable and 36 are overdue major repairs.

They operate mainly on local services on the Apsheron Peninsula and out of Gyanja. Normally in 4 car sets.

6.1.3.3 Passenger Coaches

The total fleet is 813 of which 316 are not available for service. The time table requirement is 391. It is claimed that 60% of the fleet is overdue major overhaul. There is no replacement programme. No new coaches have been purchased since the formation of Addy. The condition of the carriages is not attractive due to lack of investment. All available funding is being used in safety related maintenance.

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6.1.4 Stations

The condition of many stations is poor due to age and maintenance backlog. Most of the passenger stations including Baku, Gyanja and Yalama require repairs to roofs and platforms. In addition given current passenger traffic flows many stations are over designed and inefficient. There are too many and the trackwork and signalling is too elaborate for the requirement and very expensive to maintain. Under normal circumstances stations should not be less than 15 km apart.

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7 EXTERNAL ANALYSIS

7.1 Economic Outlook

The overall economic outlook depends on three key factors:

- The rate of foreign investment, primarily in the oil sector
- Developments in the border areas with Armenia and, to a lesser extent, in neighbouring Dagestan and Chechnya to the north
- Continued progress in economic stabilisation and structural reform

The forecasts assume that stabilisation and structural reform continue within Azerbaijan. However, they assume that the relationships with neighbouring countries are unlikely to be sufficiently normalised in the next five years to effect major changes in passenger demand. This situation needs to be continually reviewed in each year of the plan. Developments within Azerbaijan are assumed to be favourable to external financing. Table 3.3 summarises forecast growth rates from a number of sources.

Table 3.3 Economic Growth Forecasts Azerbaijan 1996 - 2003

	1996	1997	1998	1999	2000	2001	2002	2003	Growth 1997:2003
Real GDP growth - Azerbaijan									
Actual	1.3	5.8							
Minimum			6	5	5	4	3	3	1.29
Maximum			8	11	15	12	10	10	1.89
EIU			7	8					
PlanEcon			6						
Expected			7	8	10	8	7.5	7.5	1.59

Nevertheless, even with these relatively high growth rates Azerbaijan's GDP in 2003 would still be only 75% of its 1989 level.

The GDP forecasts for neighbouring Caucasian countries are shown in Table 3.4.

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Table 3.4 Economic Growth Forecasts Georgia and Armenia 1996 - 2003

	1996	1997	1998	1999	2000	2001	2002	2003	Growth 1997:2003
Real GDP growth									
-Georgia									
Actual	11.4	11.3							
Minimum			9	7	7	7	5	5	1.47
Maximum			12	10	10	10	10	10	1.80
EIU			10.0	8.0					
IMF	10	10	10	8	8	8	6	6	1.56
IBRD	8	10	10	8	8	8	6	6	1.56
PlanEcon	14	12	11	10	9	-	-	-	-
Expected			10	8	8	8	7	7	159
-Armenia									
Actual	5.8	3.1							
EIU			5	6					
Expected					5	5	5	5	1.42

7.2 International Situation

International traffic in particular has made a significant recover from a mere 1 million passenger kilometres in 1995 to an estimated 59 million for 1998. Much of this increase is a result of the resumption of services across the Russian border following stability in Chechnya and Dagestan.

Azerbaijan's ongoing dispute with Armenia has led to prolonged closure of this border and the severance of Azerbaijan from its enclave of Nakichevan. The dispute has also had an effect in Nagorno - Karabakh where rail services have effectively ceased.

Although the rail link terminates at the Iranian border there is a sizeable potential demand for traffic between Azerbaijan and its southern neighbour. Future relations between the two countries will largely depend upon future of oil exploitation in the region.

In summary development of international traffic will depend mainly upon:

The growing economic prosperity and political development of the region.

Developments in relation with Armenia.

Stability in Chechnya and Dagestan.

Development concerning oil particularly affecting relations with Russia and Iran. Resumption of direct services between Georgia and Russia/Ukraine as a result of normalisation in Abkhazia.

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7.3 Traffic Forecasts

In 1997 the railway reported that its passenger traffic mounted to 489 million passenger kilometres. In 1998 passenger traffic is expected to increase to 562 million passenger kilometres. Whilst this represents a 15% increase passenger kilometres has fallen at an average of about 11% per annum since 1995. The forecasts are summarised in Table 3.5 below. The forecast assumptions prepared by EBRD have been used to determine the anticipated passenger traffic growth between 1998 - 2003. Total passenger traffic is expected to grow at an average annual rate of 2% less the effect of tariff increases.

Growth by passenger type may be broken down as follows:

International - 3% per annum
Local - 3% per annum
Suburban - 1.5% per annum

These figures are based upon the assumption that as the economy improves domestic passengers are likely to a) switch from suburban rail to competing modes, b) switch from suburban rail to longer distance services and c) enter the market as passengers of longer distance services as opposed to suburban services.

As a result the total number of passengers carried by ADDY is forecast to rise from an estimated 4.2 million in 1998 to 4.4 million in 2003.

Table 3.5 - Forecast Passenger traffic trends (millions)

	1997	1998	1999	2000	2001	2002	2003
International passengers	0.14	0.26	0.27	0.28	0.28	0.29	0.30
Local passengers	1.24	1.11	1.14	1.16	1.19	1.22	1.25
Suburban passengers	2.41	2.82	2.83	2.84	2.86	2.87	2.88
Total passengers	3.79	4.19	4.24	4.28	4.33	4.38	4.44
International pkm	29	59	60	62	63	65	67
Local pkm	390	364	373	383	392	402	412
Suburban pkm	70	139	139	140	141	141	142
Total pkm	489	562	573	585	596	608	621

7.4 Market

The average hauls of the different passenger categories typify the size of the country and the skewed distribution of the population and rail network density in favour of Baku. Local passenger hauls have changed little since the passenger km trend has followed that of passenger demand. Hauls of both international and suburban passengers have increased reflecting the improvements in international stability in the region and also the change in the suburban passenger market where the shorter distance trips have been lost to competition whereas rail has remained competitive on longer distance trips. The improvement in

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suburban traffic statistics may also be result of improvements in traffic data collection and ticket fraud.

Overall passenger traffic contributes only 3% of the railways turnover and although the focus of investment will be on commercial freight operations the re-structuring plans shown here recommends solutions to the viability and funding issues involved in continuing the provision of passenger services.

It is not easy to identify the market share currently held by the rail passenger business however it is fair to say that rail's market share has declined as a result of growth in competing modes such as air and bus. Competition is strongest on suburban routes and this market segment is expected to decline or remain static in the short term unless measures are introduced to improve the attractiveness of these services. Growth in the rail market share is therefore likely to come mainly on long distance and international routes where the distance factor can give rail the advantage and will be in line with economic growth.

Primarily, as a result of poor infrastructure but also procedural delays, journey times are uncompetitively long. It is hoped that with necessary improvements in infrastructure alone there will be a significant drop in journey times.

The concept of separating the passenger market into two types, regional and intercity needs to be developed. Effort should be spent in developing the intercity service provision as a "flagship" service operating on a minimal, if any, subsidy with excellent marketing and offers.

Facilities on trains range from simple hard seat carriages to international coaches with sleeping facilities and air conditioning. The passenger business needs to identify the size of market willing to pay for extra comfort at a premium. It may be viable to reduce the number of sleeper coaches and replace them with airline style seats to boost patronage. Alternatively the poor comfort offered by some carriages may be deterring some of the market.

Historically the passenger business has not been able to cover its own expenditure through revenue collected from its passengers. It is unlikely that in the short term the passenger business will be able to achieve profit in the commercial sense of the word. However by developing services which are more customer oriented then the business will have the opportunity to raise tariffs at minimum cost in terms of loss of market share. The passenger business, in the short term at least, has to receive a subsidy or withdraw unprofitable services. The government may choose to negotiate a PSO contract for those services which it believes are essential in terms of social need. Support must be conditional on the continuing performance of these services in terms of meeting social objectives and in a cost-effective manner that is maximising revenue direct from the passenger on unprofitable services.

7.5 Competition

Azerbaijan's car ownership levels, although increasing, remain relatively low at around 50 per 1000 inhabitants (1995) and are unlikely to increase rapidly for at least the medium-term. Passenger traffic in the medium-term is likely to face strong competition from buses and, given the financial performance of the segment, should probably withdraw from a number of suburban and branch line services. However, the main line serves a number of relatively large centres and should have the potential to compete effectively against bus competition at least for the medium term. Underlying demand is likely to grow more or less in line with the economy, although this will be dampened by any fare increases which maybe introduced to improve the cost recovery.

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It is essential to focus on key changes that will happen in the next few years in order to seek to be better than competitors and so influence customers to choose to travel by rail. This means understanding what plans competitors have for their product development, new technology and equipment and commercial issues.

The concept of fair competition in the transport market needs to be discussed with government. The support to competing air services and free road access for buses and cars needs to be reviewed as these give such modes an advantage over rail.

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8 PERFORMANCE IMPROVEMENT STRATEGY

8.1 Targets, Standards and Service Levels

ADDY must deploy its capability and resources to achieve its strategic goals and to meet market needs in order to earn profitable revenue. This will be done through positioning the passenger business relative to competition to rail in Azerbaijan to enable the railway to achieve competitive advantage. The main corporate strategy will therefore be to increase the value of the railway to the Government in respect to its return on investment.

The general direction in which the railway will move forward over the 5 years of the plan and beyond is to achieve significant improvements in quality and performance in order to achieve target growth.

The focus must be on satisfying the needs of the customer and meeting his or her requirements consistently and economically. This requires the development of quality procedures as part of the marketing strategy. The marketing strategy itself must include a thorough understanding of ADDY's customers and the strength and weaknesses of the competition.

The passenger business needs to adopt the drive to obtaining a commercial return on its activities. In the purest sense this means a change from the conventional quantitative measures of performance such as passenger kilometres to one where each element of the business generates a profit and contributes to the overall success of the business. Unlike the rail freight business unit the passenger business may have duties and responsibilities which cannot produce a positive return from customer revenue alone. This does not reduce the need for the passenger business to develop proper traffic costing procedures nor to provide a proper understanding of the individual cost elements for each traffic flow. When the costs for each type of traffic are known a tariff policy can be developed to ensure commercial viability.

Safety, together with environmental awareness is good for business and one of the traditional advantages that rail has over competing modes. The passenger business must achieve appropriate standards in both areas to ensure compliance with regulations and satisfy public expectations. Public image or profile can be a powerful weapon or a weak link in the marketing armoury of the railway. The standards should be set to achieve risk levels that are as low as reasonably practical. Present arrangements need to be assessed to eliminate prescriptive standards and, where appropriate, introduce output standards and specifications based on sound commercial and operating judgement. The strategy should introduce modern risk analysis and risk management techniques that then become an integral part of ADDY's standard procedures.

High morale and a well motivated work force is essential if customers are to be attracted to the passenger business. As part of the quality management system a training programme should be developed for all employees covering customer care, management skills and technical development. All employees need to understand the "mission" of the passenger business and to this effect a mission statement should be prepared and distributed. Staff need to appreciate the value of each others work and incentives should be in place to encourage better than expected performance. Performance monitoring of all staff from senior management downwards should be undertaken via regular peer appraisals. At these appraisals strengths and weaknesses can be identified along with remedial action. Most important of all a culture of positive thinking and proactivity needs to be developed with innovation encouraged at all levels in the organisation.

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8.2 New Management Organisation

The Passenger Unit will be independent and self-contained. It will have managers responsible for the main functions of Marketing, Operations, Finance and Human Resources. The organisation structure is shown in the Diagram over.

The main functions of the Passenger Business Unit will be :

- Provision of cost effective and safe public passenger transport in the form of long distance (national and international) and commuter services.
- Ticket pricing and fare structure
- Development of attractive future oriented services
- Management of assets particularly stations
- Management of rolling stock including routine maintenance.
- Contracts with Rolling Stock Service Unit for heavy maintenance of rolling stock
- Contracts with ISU for track access.
- Managing in accordance with the plans and directions of the Corporate Group

8.3 Service Adjustments

The infrastructure and rolling stock requirements should be the minimum consistent with the ability to handle the present traffic levels and allow for the predicted volumes.

The passenger network has changed little despite the drop in passenger demand since the late 1980's Average timetable speeds are very low, partly as a result of wait times at stations and border crossings but also because of infrastructure deficiencies Many of the services operate throughout the day or operate in early morning and evening only. A number of services particularly long distance and international operate over night.

The following steps are recommended:

- Increase travel speed on all services in line with the upgrading planned for the east – west line.
- Eliminate unnecessary delays, e.g. Border delays and stops at non-passenger stations
- Develop the concept of express trains by stopping less frequency on inter city services
- Reschedule services to minimise night time travelling on routes within Caucasus

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- Station closures and service withdrawal.

It is expected that by 2003 there will be a 50% reduction in journey times as a result of upgrade/renewal of rolling stock and infrastructure and a 20% improvement in reliability. On all regional services stops at stations should not exceed 2 minutes. With the exception of termini, stops on inter city services should be reduced to 5 minutes.

8.3.1 International Services (part of the Intercity profit centre)

International services should continue to operate to the current destinations from Baku Passenger station. The frequency should be maintained unless market analysis suggests that demand can justify more services although consideration should be given to reducing the train size in the light of the low load factors. Station passenger figures for 1997 show that 71% of international passengers board at Baku. In addition there are probably a number of local domestic passengers who use international services. By restricting international trains solely for the use of international passengers then all of the following improvements can be made:

- Journey times could be improved by reducing the number of stops on trains between Baku and major destinations across the border.
- Negotiations should be entered into particularly with Georgia and Russia to eliminate border delays.
- Customs checks should be carried out airport style at Baku station and at "check in" points at stations en route. Alternatively, they could be carried out on board whilst the train is in motion. This will help eliminate border delay and on train passenger delay.
- Locomotive and rolling stock inspection should take place prior to the train's timetable departure with no inspections at or near borders.
- Crew changes and loco changes should be eliminated on journeys between Baku and Tbilisi and on Azerbaijan territory.

All of this should be accomplished by 2003.

The expected journey time improvements in Azerbaijan for international services are shown in Table 3.6

Table 3.6 – Proposed journey time improvements

Route	Current 1998	Zero delay	2003 Target
Baku – Russian border	8h 28m	5h 15m	4h 14m
Baku – Georgian border	14h 06m	10h 16m	7h 03m

8.3.2 Long distance intercity services

A network for intercity services within Azerbaijan needs to be agreed on the lines of major population centres. Using the 1997 passenger loading figures as a proxy the network may resemble the following:

Baku Passenger	179km	Khachmas					
Baku Passenger	289km	Evlakh	101km	Dollyar	34km	Gyanja	
Gyanja	74km	Tauz	21km	Akstafa	12km	Kazakh	
Evlakh	32km			Barda			
Baku Passenger	291km	8-3		Lenkoran			

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The expected gain in speeds and journey times on the upgraded intercity network are shown in Table 3.7 below :

Table 3.7 Target speed improvements on domestic intercity journeys

Line section	Current 1998	Target 2003	2003 time
Baku – Khachmas	33.9	67.8	2h 39m
Baku – Evlakh	37.8	75.6	3h 49m
Evlakh – Dollyar	39.3	78.7	1h 17m
Dollyar – Gyanja	39.3	78.7	0h 26m
Gyanja – Tauz	39.3	78.7	0h 56m
Tauz – Akstafa	39.3	78.7	0h 16m
Akstafa – Kazakh	24.0	48.0	0h 25m
Evlakh – Barda	49.9	99.8	0h 32m
Baku – Lenkoran	28.7	57.4	5h 04m

Reduced journey times provide the opportunity to give the intercity services priority timetabling during day times. This will avoid the extra costs of providing sleeping facilities.

8.3.3 Regional Services

The future of regional services is to an extent uncertain. The business contains all the slower local and suburban passenger services and acts as a feeder into intercity services as well as transporting the majority of short distance trips. Unlike inter city services, regional services cannot expect to make a profit without additional revenue from the government or other railway businesses and maintain current or improved levels of service. It is envisaged therefore in the business plan that some form of support will be provided and directed towards supporting lines and stations which, whilst justified in terms of social need, would otherwise be closed on commercial grounds.

If no support is forthcoming the passenger business may have to make some unpopular decisions concerning the withdrawal of local and suburban services (including station and line closures) in order to make savings on operating costs and to divert resources to where there is a greater return.

ADDY currently has no plans to reduce the number of passenger stations. However a review of their number is strongly recommended. Currently there are 60 to 65 unmanned stations mainly on EMU services. These should be assessed in the first instance.

The regional service will be characterised by a larger number of stops and slower journey times compared with inter city services and a more frequent service where there is a market. Data provided for 1997 shows that there are 121 stations that processed passengers in that year. It is recommended that stations which cannot process passengers (issue and collect tickets) should be closed thereby improving network capacity, reducing train journey times and saving station operating costs.

The average distance between the 121 passenger processing stations is about 15km. Where distances between stations are less than 15km then station closures should be considered.

The following sections of line will need to have their station frequency reviewed:

- Osmanli - Goradiz
- Evelakh – Gardabani

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- Balajazi – Sumpait Main
- Sumpait Main – Km 2454

It is assumed in the Business Plan that station closures will go ahead but that there will be no total line closures. It is believed that the government will prefer to support a minimum standard of service on the existing passenger network than see line closure which would worsen the isolation of many rural communities.

The frequency of service on the lines will need to be reviewed. In the first year of the business plan, a detailed passenger survey needs to be carried out to identify load factors on local and suburban services. Where load factors per train are less than 50% then the frequency of service should be reduced and rescheduling needs to be considered. A minimum frequency of four train pairs per week should be considered on the least used lines.

Currently there is an estimated 10 passengers per coach on all services. This is about 19% load factor on a 54 seat coach and 12% load factor on an 81 seat coach. In order to improve the load factor the average train length will need to be halved at the very least.

8.4 Passenger Marketing and Fares Policy

8.4.1 General

This section of the plan summarises the fares, yields and revenues to be achieved in the course of the plan. There is low revenue yield on ADDY Passenger services and the reasons identified for this situation include:

- Fare evasion
- Obligations placed on ADDY to offer reduced fares to certain categories of passenger (officials, elderly, war veterans, invalids, refugees).
- The need to gain approval from government for tariffs.

The steps identified for ADDY to take to improve overall yield includes:

- Continue the fare collection incentive policy and extend it where necessary
- Reduction of fare evasion by improving ticket inspection, removing on train ticket sales developing automatic ticket machines and operating manned and unmanned ticket barriers
- Total independence from government in setting tariffs
- Remove Government determined fare concessions or ensure that Government reimburses PBU with lost revenue from these fares.

8.4.2 Fares Policy

The new fare policy recommended in this Business Plan will result in fares being increased by an average of 2.5% per annum across the domestic network in real terms. Increases on individual services should vary from zero to 10% depending upon the estimated price elasticity of each route with fares on the least sensitive routes being increased most.

Revenue from the passenger business is planned to increase as follows:

- 1998 24093m Manats
- 1999 26194m Manats
- 2000 28483m Manats

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- 2001 30796m Manats
- 2002 33692m Manats
- 2003 36651m Manats

These figures are based upon the 1998 revenue for the first six months of 12046m Manats including 132m Manats for luggage and 5742.6m Manats for sleeping vouchers.

The current fare system is based upon 4 classes of travel. During the course of the business plan the distinction between 4th and 3rd class should disappear so that only 3 classes of travel are offered. As overnight services are replaced by daytime services, 18 sleeper (1st class) coaches should be reduced in number. Thus by the end of 2003 1st class services should only exist on international routes (renamed international class). All domestic services should consist of 2nd and 3rd class standard coaches (renamed 1st and 2nd class).

In line with the upgrading of rolling stock the 4th class fare will be gradually abolished and so will the first class fare on domestic services. Child fares will be between 50% and 66% on domestic service depending on class and 70% on international class.

A range of promotional fares designed to stimulate the domestic market and support the services with low load factors will be introduced. Discounting will be introduced to increase marginal revenue and promotions will be developed.

In the medium term the railway's average yield per revenue passenger kilometre will improve due to:

- a real increase in fares
- increased passenger demand as a result of attractive offers, demographic trends and economic growth
- a shift from short distance to longer distance travel

8.4.3 Marketing Initiatives

The key aim of the marketing initiatives is to make the benefits of rail known to customers and potential customers. The customer buys advantages and solutions and these need to be promoted through effective marketing in respect to:

- Advertising
- Sales promotion
- Publicity
- Sales letters
- Brochures

The business should start categorising demand so that offers are well targeted to maximise demand and revenue. A target customer matrix may consist of categories such as long distance and short distance travellers, business and leisure passengers, international, transit and domestic passengers.

Corporate identity is important. There should be a clear distinction between Intercity and regional services visible to the customer. The customer should easily find his coach and seat on the Inter city service each time he uses it. Thus a consistent sequence of carriage types and numbering is recommended on all inter city services. Inter city travellers should also expect higher comfort standards (e.g. No overcrowding, clean coaches, soft furnishing, air conditioning, clear information and welcoming attitude from staff). On regional services customer expectations are likely to be lower given that traffic is more regular. However basic standards of cleanliness, clear information and correct attitude from staff should still apply.

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8.4.4 Quality of Service Targets

Over the years the railway has had to cut down on service quality and the product has degraded. This plan recognises the need to upgrade the product, improve train services, station facilities and customer care and also create a modern brand image for the railway.

A key aim is to push for new business in the following sectors

International travel
Long distance domestic travel

and to maintain a market presence in suburban and short distance travel sectors.

There is a need to improve product performance and it is proposed to establish staff training programmes on customer relations, interpersonal skills and product offers on the technical side. The plan proposes investment in refurbishment of rolling stock, introduction of improved information systems and ticket sales equipment. There are also plans for upgrading station facilities including waiting rooms and ticket hall refurbishment, renovation of sanitary facilities, resigning and other public information systems.

Quality of service targets must be developed to measure performance and to satisfy customers that published service levels are being provided or bettered. As a marketing tool they will show potential customers that the railway is capable of delivering its promises. Quality of service targets should include both Train and Station Performance.

The monitoring of passenger operating performance is essential:

to the understanding of the business
as a basis for targeting improvements
to develop future plans
to deliver a quality product
to ensure customer satisfaction

This information forms a key part of the management information system.

Performance targets need to be developed in line with the quality of service targets.

8.5 Development of Passenger Stations

Improvements to passenger stations should be carried out in three phases:

Phase 1 – station building, platforms and other facilities for passenger traffic at Baku and Gyanja should be rehabilitated.

Phase 2 – prioritised rehabilitation of stations between Baku and Beyuk Kyasik

Phase 3 – prioritised rehabilitation of remaining stations following review of station numbers.

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8.6 Better Crew Rostering

The operational availability of rolling stock including locomotives and EMU motor units should be maximised by using them over more than one consecutive train crew shift.

Train crews are currently part of the locomotive department. It is recommended that they are transferred to the passenger business as appropriate. This will enable the business to have tighter control over one of the main cost elements and develop an independent strategy appropriate to its needs.

Train gangs (drivers plus assistants) working for the passenger business are assigned to trains and not locomotives this means that the shift for each gang varies on a daily basis but not exceeding the total monthly shift hours of 170.

The total pool of train gangs is currently split between 6 regional depots and total 1156 drivers and 849 assistants. Of these the passenger business uses the following numbers:

124 locomotive drivers and 117 locomotive assistants
136 EMU drivers and 109 assistants

In addition to drivers and assistants on EMU trains there are also 3 inspectors per shift as part of the incentive to reduce fare evasion.

The drivers of passenger locomotives and their assistants are a higher unit cost than their freight counterparts. Whilst it is recommended that they should remain an asset of the passenger business, surplus staff should be "hired out" to the freight business.

The number of train gangs required by the passenger business is expected to fall following the adoption of the recommended measures in this business plan.

In the longer term one man operation should be introduced.

8.7 Rolling Stock Fleet Optimisation

8.7.1 Locomotive Requirement

The current roster (October 1998) is believed to be 44 locomotives (including 4 diesel). Each locomotive consists of two permanently coupled units. It is assumed that these locomotives operate on all international and local services.

Table 3.8 below shows how locomotive productivity may be improved.

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Table 3.8 Forecast Locomotive Roster 1998 - 2003

		Average passenger kilometres per locomotive per day					
Year	Passengers	26354	28028	29778	31680	33663	35722
1998	1372234	44	41	39	37	34	33
1999	1406334	45	42	40	38	35	33
2000	1441281	46	44	41	38	36	34
2001	1477097	47	45	42	39	37	35
2002	1513803	49	46	43	40	38	36
2003	1551421	50	47	44	41	39	37

The business plan assumes a utilisation improvement of 20%. This will see the average passenger train kilometres per locomotive per day increase to 35722 by 2003. The improved utilisation will result in the locomotive roster fall from 44 in 1998 to 37 by the year 2003. The changes in operating practises are fundamental to achieving this target.

8.7.2 Passenger coaches

Productivity for loco hauled carriages is assumed to increase by 20% over the 5 years of the plan. No allowance for maintenance is needed, as coach availability is at least 21% above the daily requirement at any one time.

The requirement of 264 in 1998 will drop to 220 in 2003

8.7.3 EMU Services

It is assumed that EMU trains operate all suburban services.

The trains operate mainly on routes in the Apsheron Peninsula and out of Gyanja, normally in 4 car sets. Half the cars are motored and half are trailers. The daily requirement is 18 four car sets at Baku and 6 four car sets at Gyanja.

Utilisation of EMU trains is assumed to increase by 10% over the 5 years. This would mean that EMU daily roster would fall to 22 by 2003.

8.7.4 Luggage, parcel, mail services

It is not certain if these services are still to be provided by ADDY. If they do it is strongly recommended that mail services should be taken over by the Postal Service of Azerbaijan whose responsibility would then be to identify coach requirement and negotiate with the rolling stock business.

If the post service is to remain part of the Passenger business then there is no clear reason why mail and parcel operations cannot be handled using the same types of coaches.

Subject to the continuation of these services the estimated requirement on a daily basis for these coaches throughout the plan is 10.

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8.8 Employment Levels and Productivity

The staffing levels below have been identified to the passenger business through a process of disaggregation of present activities into their component parts and summating together. It is considered that an overall reduction in staff of 30% is achievable during the life of the business plan as a result of productivity improvements and other actions outlined in the passenger business plan. With the exception of the marketing department and replacement of essential staff, zero recruitment policy should be adopted across business activities with immediate effect.

Reductions in staff costs may be achieved by the following means:

- Outsourcing of activities (e.g. franchising of catering services)
- Greater use of part time staff
- Pay cuts
- Voluntary redundancy
- Compulsory redundancy
- Zero recruitment (e.g. zero replacement of retiring staff)

Table 3.9 - Projected Staff changes in Passenger Business

	1998	1999	2000	2001	2002	2003
Total Employees	3473	3369	3133	2882	2652	2440
% change		3%	7%	8%	8%	8%

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9 FRAMEWORK FOR A PUBLIC SERVICE OBLIGATION CONTRACT

The practice of cross- subsidising passenger losses by using freight profits will have to be discontinued. It is not transparent and does not encourage the operators to improve efficiency and reduce the contribution from the tax payer.

The present system should be replaced by a Public Services Obligation contract in which payments for all non-commercial rail transport services provided by the railway and which are acknowledged as being necessary on socio-economic grounds shall be specified and agreed.

Contracts shall be negotiated on the basis of reasonable cost for the provision of the specific rail services in question which shall be unambiguously defined in both quantitative and qualitative terms. The standards of service shall be monitored by Government to ensure that the railway is performing in accordance with the contract terms.

The charge from the PBU for each particular mandated service shall be calculated in a manner such as to recover the difference between the projected revenue for that service and the variable costs of providing that service together with access charges payable to the ISU for that service and the profit payable to the PBU .

The Ministry will expect that the costs are at the lowest possible level commensurate with meeting the agreed standard. Thus negotiation will centre around the staffing of stations and trains and the productivity of all such staff. Over-manning will require to be curtailed and efficient working methods introduced.

Access charging will require careful handling. The level of track access charges for any particular socio-economic rail service ought to reflect its long run variable cost to the infrastructure company. In the case where a socio-economic rail service is the only service over a section of the railway then the long run variable cost is equivalent to the total of that section of the railway.

The Public Service Obligation Contract should include all the relevant parameters of operations and service.

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10 OBJECTIVES OF PASSENGER BUSINESS PLAN

The key strategic objectives of the Passenger business unit will be to;

- Maintain market share over the 5 year plan to achieve 620.7 million passenger kilometres in year 2003.

- Introduce new management structures and procedures to achieve increases in productivity performance and efficiency

- Create a marketing strategy to achieve targeted annual growth and set tariffs to achieve profit revenue and cost targets

- increases in speed and reliability through track and signalling renewal

- Achieve productivity improvements for rolling stock utilisation:

  - Locomotives 20%
  - Coaches 20%
  - EMUs 10%

- Close underused stations

- Introduce an Intercity Service

- Rationalise International and Regional Services

- Negotiate a PSO contract with the Ministry for local services

- Increase staff productivity as follows:

	1998	1999	2000	2001	2002	2003
Total Employees	3473	3369	3133	2882	2652	2440

- Improve rolling stock maintenance and reduce costs

- Negotiate competitive rates for track access

- Improve return on investment

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11 FINANCIAL ANALYSIS

11.1 Key Assumptions

The key planning assumptions used in the preparation of the Passenger Business Unit projected income statements were as follows.

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
Passenger Traffic and Revenue	
Passenger Volumes	
- international/long distance	3% per annum (tariff elasticity -0.5)
- suburban services	1.5% per annum (tariff elasticity -0.5)
Passenger Tariffs	
- international/long distance	increasing at 1% per annum in real terms
- suburban services	increasing at 1% per annum in real terms
Passenger Operating Resources	
- loco fleet	requirement for 44 loco's declining to 37 by 2003
- loco per train	average of 1 loco per train
- EMU's	24 EMU sets declining to 22 by 2003
- passenger coach fleet	350 declining to 237 by the year 2003
- passenger coaches per train	average of 4.0 remaining constant
Operating Costs	
Passenger Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Traffic Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum

The Passenger Business Unit will also be charged for the use of services by the Infrastructure Business Unit, The Rolling Stock Business Unit, and the Administrative Services Unit. These charges are shown at the end of the income statement.

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11.2 Passenger Business Unit Projected Income Statement

Passenger Revenue: Growth in passenger traffic up to 2003 of 11% is modest and the increase in passenger revenue is largely a reflection of the application of a real increase in passenger fares of 1% per annum throughout the period of the plan. Cost recovery on passenger services in very low and the financial data that is available indicates that passenger services do not even cover the costs of the passenger service unit. Cross subsidisation of passenger services from profitable freight services must be phased out. Support from the State will be required for essential social services and based on the preliminary allocations of costs to the Passenger Business Unit a figure of 20 billion manats per annum has been included from the year 2001. Rationalisation of services is essential if ADDY is to eliminate any residual losses in the passenger business that remain after the payment of the PSO.

Direct expenditure on passenger services, including the costs of the passenger service department, a share of the traffic department costs and the salary costs of passenger drivers and assistants, grows by only 21% during the period of the plan. This reflects increases in real wages, and increased expenditure on materials used in the repair of passenger rolling stock, however the projected staff reductions limit the effect of these increases. The repair of passenger rolling stock is currently the responsibility of the passenger services department although this function should be performed by the rolling stock business unit which would then recharge the costs to the Passenger Business Unit.

Historical depreciation costs are constant throughout the period of the plan.

The Passenger Business Unit must bear a charge for the use of infrastructure which is tentatively estimated at 20.8 billion manats for 1998 and this grows to 21.1 billion manats by 2003 in line with increases in costs of the Infrastructure Business Unit. The charge out is based on passenger train gross tonne kilometres.

Rolling stock charges are estimated at 49.3 billion manats for 1998 growing to 60.6 billion manats by 2003. These charges are for the use of locomotives and EMU's and the charges are based on the number of traction unit kilometres (locomotive kilometres and EMU kilometres) operated by the passenger business unit.

The Passenger Business unit must also bear a proportion of the costs of the Administration and this charge has initially been set at 50%.

The projected net result for the Passenger Business Unit in 1999 is a loss of 82.2 billion manats which rises to 82.9 billion manats in 2000. The payment of PSO of 20.0 billion manats per annum from 2001 onwards reduces the size of the reported loss to 63.8 billion manats in 2001, to 65.1 billion manats in 2002 and to 65.9 billion manats in 2003.

******* FINANCIAL TABLES TO BE INSERTED AFTER THIS SECTION ********

Tables 9 & 10

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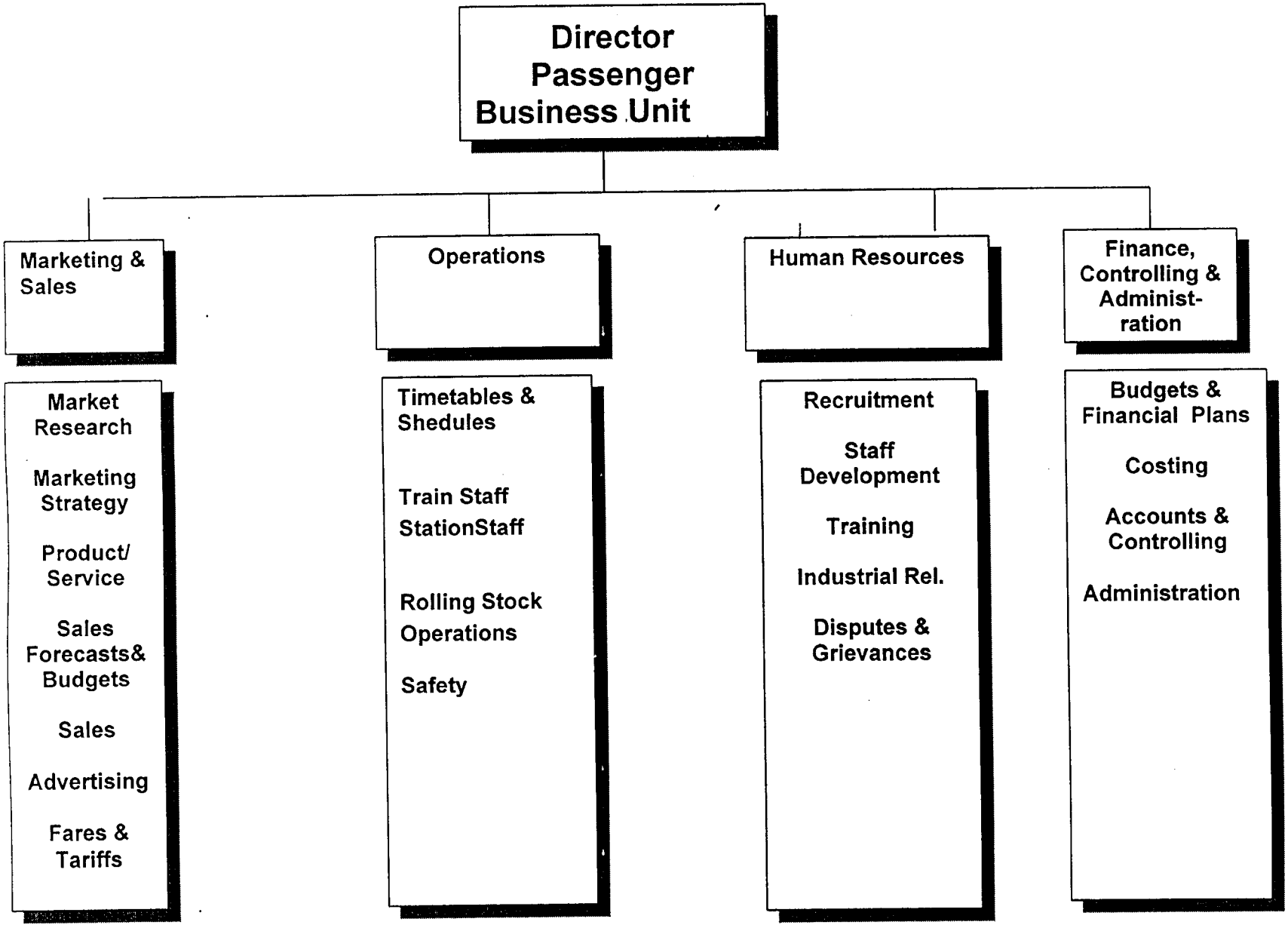
Azerbaijan Railways
Table 9 : Passenger Business Unit : Financial Plan

	Total Cost (billions manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Services Revenue	15.0	24.1	26.2	28.4	30.8	33.5	36.3
Public Service Obligation	-	-	-	-	20.0	20.0	20.0
Total Passenger Revenue	15.0	24.1	26.2	28.4	50.8	53.5	56.3
Salaries & Social Insurance	8.8	14.5	15.2	15.2	15.1	15.0	14.4
Materials	1.7	1.7	1.9	2.1	2.4	2.7	3.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.1	1.3	1.3	1.4	1.4	1.4	1.5
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	1.3	1.3	1.3	1.4	1.4	1.4	1.5
Capital Repairs	4.1	3.0	3.4	3.8	4.3	4.8	5.5
Other	1.9	1.1	1.2	1.3	1.5	1.7	1.8
Subtotal Passenger Expenditure	18.9	22.9	24.3	25.2	26.0	27.0	27.7
Operating Surplus/Deficit	- 3.9	1.2	1.9	3.2	24.8	26.5	28.7
Depreciation	1.5	1.8	1.8	1.8	1.8	1.8	1.8
Infrastructure Charges	20.9	20.8	19.8	19.6	19.9	20.4	21.1
Rolling Stock Charges	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Administrative Services Charge	8.8	10.5	11.1	11.2	11.1	11.2	11.1
Net Income/Loss	- 80.3	- 81.2	- 82.2	- 82.9	- 63.8	- 65.1	- 65.9

Azerbaijan Railways
Table 10 : Passenger Business Unit : Financial Plan

	Total Cost (Billions manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Services							
Salaries & Social Insurance	6.2	10.1	10.6	10.6	10.5	10.4	10.1
Materials	1.5	1.5	1.7	1.9	2.2	2.4	2.8
Diesel - Other	1.0	1.2	1.2	1.3	1.3	1.3	1.4
Electricity - Other	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Depreciation	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Capital Repairs	4.0	2.9	3.3	3.7	4.2	4.7	5.3
Other	0.7	0.8	0.9	1.0	1.2	1.3	1.5
Total	14.5	17.6	18.8	19.6	20.5	21.4	22.2
Traffic Department - Passenger							
Salaries & Social Insurance	1.2	2.2	2.3	2.3	2.2	2.2	2.1
Materials	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Diesel - Other	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity - Other	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Depreciation	1.2	1.5	1.5	1.5	1.5	1.5	1.5
Capital Repairs	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other	1.2	0.3	0.3	0.3	0.3	0.3	0.4
Total	4.5	4.9	5.0	5.0	5.0	5.1	5.0
Drivers & Assistants - Passenger							
Salaries & Social Insurance	1.4	2.2	2.3	2.3	2.4	2.4	2.3

AZERBAIJAN


Director Passenger Business Unit
Marketing & Sales
Operations
Human Resources
Finance, Controlling & Administ-ration
Market Research
Marketing Strategy
Product/ Service
Sales Forecasts& Budgets
Sales
Advertising
Fares & Tariffs
Timetables & Shedules
Train Staff
StationStaff
Rolling Stock Operations
Safety
Recruitment
Staff Development
Training
Industrial Rel.
Disputes & Grievances
Budgets & Financial Plans
Costing
Accounts & Controlling
Administration

RESTRUCTURING OF THE AZERBAIJAN RAILWAYS

BUSINESS PLAN 1999 - 2003

NETWORK INFRASTRUCTURE

AZERBAIJAN RAILWAY/BUSINESS PLAN

NETWORK INFRASTRUCTURE

CONTENTS

1 INTRODUCTION

The Infrastructure Services Unit (ISU) is one of five new entities, which will be established in the management restructuring process of the Azerbaijan Railways (ADDY).

A number of studies including an analysis of the sector performance of Infrastructure Maintenance have been completed. Recommendations for rehabilitation and upgrading have been developed.

The Business Plan deals with the first 5 years of operation i.e. 1999-2003.
Development of the plan necessitates a vision of the business, market potential, planning and the projection of financial results.

The assets of the ISU will comprise all existing assets including associated staff, which support train operations as follows:

Track
Signalling systems
Communications systems
Electrification systems
Fixed mechanical handling equipment
Stations and yards
Equipment Maintenance Centres
Stores and offices
Track maintenance
Locomotives and wagons

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2 MISSION STATEMENT

Operate and maintain the infrastructure in a safe, efficient and environmentally responsible manner.

Determine fees for track access so that the enterprise is profitable.

Give access to private train operating companies in accordance with commercial practice.

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3 STRATEGIC OBJECTIVES

The key objectives of the Business Unit are

- Improve track condition facilitating better train performance
- Increase revenue
- Reduce maintenance costs
- Be profitable and sustainable
- To achieve these objectives the ISU will have to:
- Maintain train timekeeping performance
- Provide adequate and safe train control
- Maintain track to good standard and reduce delays and derailments
- Modernise infrastructure

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4 SCOPE

4.1 Geographic Area

The ISU will serve the same geographic area as the ADDY currently. The Regulatory system will allow for the building of new lines and the closure of existing as may be necessary. The business scope will continue to include current traffic levels but will allow for changes in accordance with customer requirements. Access charges for operating on the infrastructure will be charged to the Freight and Passenger Business Units.

The Access charge will be based on line occupancy coupled with tonnage carried, measured in train-kms and tonne-kms. The structure and calculation of charges will be in accordance with the format laid down by the Government. Volume discounts should also be agreed to make it attractive to customers and to increase traffic.

The business will be responsible for the maintenance of all track, structures, signals, power supply and transmission.

In addition it will have responsibility for providing for the safe control and movement of rail traffic.

The business unit will have to develop a commercial ethos in marketing and selling train paths initially to the freight and passenger businesses and perhaps later to third parties who may wish to operate private trains.

4.2 Key Assumptions

In drawing up the Business Plans it was assumed that the Institutional changes recommended and detailed in the consultants report would be implemented before proceeding with the Business Plan. A new Railway Law providing for the transformation of the current railway department into a joint stock company will be enacted. This will separate the policy, regulatory and operating responsibilities of the railway. The railway will become a market and commercially driven organisation.

The analyses and recommendations of the activity reviews of some of the earlier reports were used in the drafting of the Business Plan.

It must be emphasised that implementation of the Business Plans will be unpractical without changing the Institutional position and the managerial structure of the railway. The proposed transformation is fundamental to improving the performance and service of the railway.

The management of change of this magnitude is a major undertaking and will require considerable dedication and application. The extent to which the major tasks can be run in parallel will have to be considered and assessed.

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5 INTERNAL ANALYSES

5.1 Track Condition in General

The main railway line between Baku and Beyuk-Kyasik on the Azerbaijan Border is generally in poor condition, mainly due to the lack of financial investment in the track maintenance and renewal in the last ten years or so. According to railway standards the track should have had a general overhaul, with a complete rail replacement, once it carried a maximum of 500 MGT (million gross tonnes). As can be seen from Table 4.1 below there are track sections that have carried well in excess of this target.

Table 4.1 Track Sections in Excess of 500 MGT

Road	Station	Station		From [km]	To [km]	Total length [km]	Tonnage [MGT]	Speed limit [km/h]
1.	Baladjari	Ejbat	Westbound	529	518	12	774.9	60
2.	Sagiri	Kerar	"	366	357	10	610.3	40
3.	Kerar	Kiurdamir	"	352	343	10	696.0	50
4.	Udkhari	Alikent	"	295	286	10	687.0	60
5.	Alikent	Udkhari	Eastbound	288	295	8	606.0	60
6.	Udkhari		"	296	-	1	691.0	25
7.	Miusiusli	Karabudkhak	"	329	330	2	578.0	40
8.	Karabudkhar	Kiurdamir	"	331	342	13	578.0	60
9	Kerar	Pagar	"	352	379	18	551.0	60
10.	Gadkhievo	Muran	"	391	405	14	557.0	60
	Total					**98 km**		

Furthermore there are 15 sections of track on the Baku to Beyuk-Kyasik line where due to existing track conditions permanent speed restrictions (PSR) have been imposed. These are shown in Table 4.2 below

Table 4.2 Permanent Speed Restriction (due to track condition)

No.	Section	Road	Length [km]	PSR* [km/h]	Introduced [Year]
1	Baladjari - Eibat	Westbound	12	60	1995
2	Sagiri - Kerar	"	10	40	1993
3	Kerar - Kiurdamir	"	10	50	1993
4	Udjar - Alikent	"	10	60	1995
5	Dalimamedli - Zazaly	"	8	60	1996
6	Tovuz - Govliar	"	11	40	1998
7	Tovuz @108 km	"	1	40	1998
8	Evlakh - Mingechaur	Eastbound	10	40	1993
9	Alikent - Udjar	"	8	60	1993
10	Evlakh - Malai	"	1	50	1993
11	Udjar station	"	1	25	1998
12	Msusuli - Karabudjag	"	2	40	1993
13	Karaburjag - Kiurdamir	"	13	60	1998
14	Kerar - Padar	"	18	60	1993
15	Gadjiev - Mugan	"	14	60	1993
	Total		**129 km**		

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In addition there are 11 track sections with temporary speed restriction (TSR). These are: Shown in Table 4.3 under

Table 4.3 Temporary Speed Restriction (due to track condition)

NO.	Section	Road	Length [km]	TSR* [km/h]	Since [Year]
1	Sagiri station (2nd main track)	Westbound	1	15	1998
2	Karabudjag station (3rd main track)	"	1	40	1998
3	Msusuli - Bargusheti	"	1	25	1996
4	Udjar - Alikent (294 - 291 km)	"	4	40	1994
5	Evlakh - Mingechaur @ 241 km	"	1	25	1998
6	Mingechaur - Evlach (241 - 243 km)	Eastbound	3	25	1997
7	Evlakh station (1st main track)	"	1	40	1998
8	Msusuli station - Turnout No. 10	"	1	25	1998
9	Pirsagat station (1st main track)	"	1	25	1997
10	Pirsagat - Navagi @ 432 km	"	1	40	1997
11	Dzegam - Dolliar @ 144 km	"	1	25	1998
	Total		**16km**		

5.2 Maintenance Performance

The lack of finance within the railway sector in recent years led to a considerable backlog of track maintenance and renewal. In order for the railway to operate a safe train service several temporary speed restriction have been imposed, some as low as 15 or 25 km/h.

324 km of track from a total 1005 km (32%) between Baku and Beyuk-Kyasik carried more than stipulated 500 MGT and therefore in need of renewal and/or replacement at some earlier date. In fact the track section between Ejbat and Puta has carried 940 MGT, nearly twice the maximum target.

5.3 Condition of Track Components

Rails - The main line is predominantly fitted with R 65 flat-bottom (Russian design) self-hardened, heat treated carbon-manganese steel rails with tensile strength of approx. 1000 MPa. Compared to the rest of the track components, such as sleepers and rail fastenings, the condition of the rails are acceptable except for several wheel-burns and battered rail joints. The latter have been caused by lack of track and joint maintenance. At some locations there are traces of rail corrugation.

Rail Joints - Due to insufficient track maintenance in the past years it would appear that the rail joints suffered the most. There are many dipped joints with loose or missing fishbolts. Some joints were out of square as a result of an excessive rail creep/movement during train braking, especially on concrete sleepered track where there are no rail anchors installed.

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Sleepers (Wooden) - Made from softwood species such as pine or larch, mostly imported from Russia and impregnated with creosote at the Gori (Georgia) sleeper impregnation plant, before they are installed in the track.

Resulting from the sub-standard track maintenance and actual age of the track components many sleepers are split with deep baseplate galls not capable of holding spikes firmly in place. Approximately 20 -25% are in need of urgent replacement.

Sleepers (Concrete) - Pre-stressed concrete monoblock S 56 type to a Russian design. The design in particular is dated with many practical problems. For example rail baseplates are held in a position with two holding down bolts inserted and turned in sleeper recesses. The bolts, once broken under the traffic load and several were seen as such, are impossible to remove and replace unless the whole sleeper assembly is removed, which is labour and time consuming.

The sleeper can only accommodate the non-resilient type of rail fastenings.

Rail Fastenings - Both D0 on wooden sleepers and KB 65 type on concrete sleepers are of dated non-elastic type assemblies. Under traffic movement, especially on sites with sub-standard track maintenance, these rail fastenings are prone to become loose and/or damaged.

Track Ballast - Under normal circumstances the track ballast should perform two functions. To drain water away from the track structure and to support the track, both vertically and laterally.

Most of the track ballast is in a very poor condition, polluted with sand, dust and other foreign materials either blown or dropped onto the track. Apart from poor ballast condition there is also, at some locations, insufficient ballast leaving the end of the sleepers exposed without any ballast shoulder and thus allowing lateral track displacement which could result in track buckling.

5.4 Signals and Telecommunication

The existing system is based upon track circuits and panel operated signal boxes with light signals. All equipment is of Russian manufacture. The system is designed for the traffic levels previously handled. Accordingly there is ample capacity within the system for the current reduced traffic levels. The technical condition of the equipment is reasonable and the railway is capable of repairs and maintenance to a level sufficient to ensure satisfactory operation. Of the signalling irregularities which do occur, some 70% are attributed to track faults. These occur owing to the poor condition of ballast and sleeper rail insulation which disrupt the track circuits.

It can be assumed that the proposed upgrading of the track will resolve much of the signalling problem. It is accordingly not necessary to make significant change to the signalling system in order to ensure safe working. Proposals to deal with these deficiencies are dealt with later.

5.5 Operations

Azerbaijan Railways is predominantly a freight railway. However, a significant number of passenger trains are also operated. Trains typically have two locomotives and thus average 3000-3500 trailing tonnes.

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Train performance is completely unacceptable mainly due to deficiencies in the Infrastructure. Overall speeds are currently limited 40km/h with some temporary speed restrictions to as low as 5 km/h.

Slow freight trains are also unattractive. They are expensive to run in that the slow speeds tie up equipment and staff. Slow and unreliable delivery times are also unattractive to the customer. It costs him money in goods in transit time and can upset his customers.

These problems are mostly caused by deficiencies in the Infrastructure which the new Service Unit will have to address.

While the system shows a profit, manning levels are high, and with the inevitable increase in real wages the railway will find it difficult to maintain its financial position. Some sections of the system are very lightly loaded and rationalization will have to be carried out. The network may have to be reduced, stations closed and trackwork taken out.

5.6 Energy Supply

The existing system for overhead power is based upon a 3000V DC system. It is functional but there are defects that will require to be corrected by an ongoing programme of renewal and transformers.

In the future a change to an AC system should be considered.

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6 EXTERNAL ANALYSES

6.1 The Customers

The main customers of the ISU will be the Passenger and Freight business units. Volumes will be price sensitive and will compete with road hauliers and pipelines.

The projected volumes are set out in the Freight and Passenger business plans.

6.2 Contracts with Freight and Passenger Business Units

A selling buying relationship will be set up between the ISU and the Passenger and Freight Business Units and the ISU will enter into contracts with the Passenger and Freight business units, which will include the payment of access fees to the infrastructure.

6.3 Access Fees

The Access charge will be based on line occupancy coupled with tonnage carried, measured in train-kms and tonne-kms. The structure and calculation of charges will be in accordance with the format laid down by the Government. Volume discounts should also be agreed to make it attractive to the customers and to increase volumes.

Charges for other items will have to be levied as follows:

- Electric energy
- Leasing of stations and freight yards
- Leasing of equipment
- Delay, damage and demurrage

The cost headings should also be considered as follows:

- Fixed costs
- Variable costs
- Administration
- Investment
- Profit

A number of options are available to increase the return on investment in addition to volume discounts already mentioned. These could include increasing the fees, reducing investment, reducing operating costs and increasing the throughput of trains. The last option is the most attractive. The ISU will seek to maximise train frequency as follows:

- Fees will be set at a level attractive to train operatives
- Efficient train operation will be encouraged financially
- Higher volumes will be discounted

Detailed cost analysis will have to be carried out to assess the financial robustness of the ISU. The establishment of the fixed and variable costs and the breakdown between labour and material costs will have to be established.

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Fees will be set at a level attractive to train operatives. Efficient train operation will be encouraged financially and high volumes will be discounted.

6.4 Service and Cost

(a) Services

The ISU will make a range of services available to the train operators in return for payment. These services will include adequately maintained routes, the dispatching and control of trains, electric power and special services to deal with emergencies. Station and freight facilities will also be provided on a rental basis.

The ISU will also have responsibility to ensure that track maintenance standards are adequate, train control efficient and traffic offered is carried. It will also have a responsibility for loss or damage to third party property.

(b) Description of Services

- Rail routes
- Train schedules
- Train control
- Communications
- Electric power
- Station and freight facilities
- Emergency response

(c) Responsibilities

- Track standards
- Provision of efficient service
- Liabilities for damage or delay to traffic
- Closure of lines and Public Service Obligations

(d) Service Costs

- Labour
- Materials
- Overheads
- Profit

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7 PERFORMANCE IMPROVEMENT STRATEGY

7.1 Performance Improvement

It is imperative to upgrade the performance of the ISU in the operating and financial areas. Improved operations will lead to lower costs and greater competitiveness in the market place. Increased profits will support investment. The areas which should be targeted are investment and staff productivity. As is well known the infrastructure is in bad condition. Track maintenance and renewal is in arrears and much of the rails and track components are worn out and in need of replacement. Maintenance equipment is obsolete and the staff organisation needs overhauling.

The specific areas recommended for immediate attention, baring in mind the cash limitations are set out below:

- Track renewal and repairs
- Track maintenance equipment
- Signalling and telecommunications
- Bridges
- Staff reorganisation and downsizing

7.2 New Track Components

By installing new track form i.e. new rails, concrete sleepers with elastic rail fastenings to a proven and acceptable design and new track ballast the selected 25 km of track, proposed for the track renewal, should be virtually maintenance free for a number of years, apart from routine patrolling/checking and adjusting. The same should also apply, to a lesser extent, to the sites proposed for track rehabilitation totalling 50 km of track.

7.3 Refurbishment of Existing Equipment

ADDY owns a number of heavy track renewal and maintenance equipment such as Platow track relay machines, SCHOM-4 ballast cleaning machine and VPR/VPO-3000 track alignment and tamping machines. Even though this equipment is dated in comparison with today's technology it is essential to keep them in a working order, at least until finance is available to replace them. However consideration must be given to replacing at least some of the existing equipment within next three to five year period.

7.4 Purchase of Modern Technology

To assist with the efficient relaying of 25 km length of track a new, modern ballast tamping machine, capable of tamping at least 1000 sleepers an hour, is essential. The good track geometry alignment will considerably improve passenger ride comfort, have less damaging effect on rolling stock and extend the life of track components thereby reducing future track and rolling stock maintenance costs. Any new ballast tamping machine should be equipped with automatic track line and levelling equipment.

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However, to rehabilitate existing track a ballast cleaning machine is essential, especially when so much ballast is solidly compacted and contaminated with dust, clay and other foreign matter. It is highly unlikely that a new continuous tamping machine would be able to perform under present conditions. Therefore one of the Railways' priorities must be to purchase a new ballast cleaning machine so that new ballast tamping machine can be used on the existing track rather than on relaid track only.

7.5 Introduction of New Concepts

- **Change LWR into Continuously Welded Rail CWR**

As mentioned earlier most of the track maintenance problems of the Azerbaijan Railway are with rail joints, whether this is with dipped joints, broken fastenings, missing spikes and/or broken or missing fishbolts. One of the solutions is to extend, where track geometry will permit, 800 m LWR sections into a CWR and thus reduce the number of rail joints. To change the existing practice will require new track installation standards/methods such as building up sufficiently strong ballast shoulders to prevent track buckling with change in temperature together with training permanent way district staff in CWR maintenance and destressing methods. Furthermore the introduction of alumino-thermic in situ rail welding would be of great practical benefit to the railway so that it does not need to rely solely on long welded rail plant and/or mobile flush-butt welding train.

- **New Track Relaying Method**

Similar to the other FSU countries ADDY's process of installing new track is by prefabricating 25m long track panels at a special track depots. These are then loaded on special wagons and installed by special purpose built Platow track relay cranes. This method is now dated, costly and time consuming. It is therefore suggested that the Railways adopt a direct track installation method using portal cranes.

7.6 Signal and Communications

- Review operation of signalling as track condition is upgraded, to identify any remaining system faults. Action to take place over the 5 year period.

- Review visibility of signals and consider changes to lens system if found lacking. Review in Year 2; unplanned action Year 5.

- Rationalise infrastructure provided to cater for the reduced needs of the passenger and freight businesses, including removal of redundant stations, loops and in-section signalling. This will reduce maintenance costs and may provide a source of equipment for maintenance of the remaining installations. Review requirements with the passenger and freight business in Year 2, co-ordinate with the track managers. Implement as track renewal is carried out over the 5 year period or as repair or renewal of signalling equipment becomes necessary if this is earlier.

- Introduction of modern technology for the interlockings should be considered as they become due for renewal, or the layout is simplified to such as extent that replacement is the cheapest option. For the smaller interlockings modern processor based systems, coupled with the use of the fibre optic cable, give the opportunity for remote control of interlockings giving both better overall control and staff savings. This work should commence in Years 5 and 6.

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- Introduction of centralised control, or at least central information systems from each interlocking via to fibre optic link, to allow better train planning thus enabling bottlenecks etc. to be avoided. This should commence in Year 4.

- Ensure power supplies for signalling are stabilised to avoid outages by Years 5 and 6.

- Maintenance staff should be divided into three categories by Year 5. These should be for:

  - Routine skilled activities (mechanical or non-electronic) such as points testing etc.

  - First level maintenance of modern electric equipment such as the fibre optic cable and associated transmission equipment and axle counters etc. This should be limited to changing units or cards within the equipment when a fault occurs. Staff to be suitably trained.

  - Second and third level maintenance of technical equipment. These staff may need to be recruited and suitably trained. They would investigate which could not be rectified by simply changing cards and also investigate faulty units or cards.

- Review signalling on branch lines. Simplified signalling should be introduced where appropriate in Years 2 and 3.

7.7 Overhead Power Systems

- Renew corroded catenary supports on an ongoing basis.
- Reconstruct defective sub-stations. Years 1 and 2.
- Reconstruct catenary workshops. Years 1 and 2.
- Renew worn catenary wires. Years 1 to 5
- Renew auxiliary transformers. Year 1 to 3
- Reinstate SCADA systems. Year 5
- Consider change to AC system. Beyond Year

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8 STAFF REORGANISATION AND DOWNSIZING

8.1 General

The setting up of a separate Service Unit for infrastructure will require that a new internal organisation be established. The Unit will be commercial in its approach and will have to concentrate on giving a good service to the customer, generating a profit and providing its own investment. The service will have to be well marketed so that train numbers and frequencies are increased. Access charges will have to be calculated and levied.

The changing of the maintenance philosophy towards a more flexible approach and the re-equipment of the track staff will also require organisational changes, which will allow for maximum performance. The track must be maintained to the highest possible level and best safety standards ensured.

8.2 Proposed Organisation

The proposed organisation is shown in Annexe The Director has three Assistant Directors responsible to him covering the functions of :

- Operations
- Maintenance
- Infrastructure Support

The Operations Director will develop a marketing strategy for Access and track usage. He will contract with the train operators for the supply of paths and maintain close contact with them. He will advise on infrastructure investment proposals. He will ensure that Train Control is well managed and monitored.

The Maintenance Director will prepare plans, schedules and budgets for maintenance and renewals of the Permanent Way. He will execute the plans and purchase the necessary materials. He will ensure that all work is done to the highest standards and that safety is a top priority. He will manage the Signalling & Communications and the Traction Power Supply sections in accordance with the standards laid down.

The Infrastructure Support Director will provide a design service to the Maintenance group. He will set the Technical standards and advise on material purchase. In the Accounting area he will prepare budgets and monitor the financial results. The Personnel manager will ensure adequate staffing and the recruitment, training and development of staff.

8.3 New Organisation for Maintenance of Way

The organisation is set out in the Annexes. The Divisional Engineer reports directly to the Manager Maintenance and he in turn co-ordinates the Assistant Divisional Engineers for the functions of track maintenance, signalling and electric power. He also directs the Technical Office and the Maintenance of Way Inspectors. The Maintenance of Way Inspectors are responsible for the patrol and mobile gangs. The Offices for Safety and Administration respond directly to the Divisional Engineer.

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9 INVESTMENT PROPOSALS

Investment Plan & Sources of Finance				
Project	Cost in US$ Millions			
	EBRD	TACIS	Local	Total
Track renewal	11.5		3.03	14.53
Track rehabilitation	1.5		2.15	3.65
Equipment	4.0			4.0
Telecommunications		6.14	1.01	7.15
Power supplies			5	5

The financial internal rates of return for the project components have been calculated as part of a previous constancy project and they are as follows :

Project FIRR by Component (% p.a.)		
Project Component	Cost (US$ million)	FIRR (%)
Track renewal	14.53	8%
Track rehabilitation	3.65	23%
Tamping machine	4.0	20%
Telecommunications	7.15	13%

The main benefits included:

- reduced transit times through increased line speeds arising from improved track condition and increased traffic capacity and improved rolling stock productivity
- reduced track and rolling stock maintenance costs and fuel consumption through improved track condition
- improved rolling stock utilisation and operating efficiency through the provision of an upgraded communications system

The track nominated for renewal is as follows:

Baladjari-Ejbat	westbound	528-518 km	11 km
Ejbat-Puto	westbound	511-509 km	3 km
Sangachali-Karadag	eastbound	485-499 km	14 km
Duvanni-Alyat	westbound	468-466	2 km
Alyat-Atbulag	westbound	460-448	13 km
Sagiri-Kerar	westbound	376-353	15 km
Total			58 km

In addition there is provision for 50 km rehabilitation which includes spot resleepering with a total of 23,000 sleepers.

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10 TARGETS

The main business objective is to ensure that the business is profitable and sustainable. To achieve this it is imperative that a proper depreciation policy be adopted and that there is sufficient investment in the future to ensure the safety of the infrastructure. Track and associated works will have to be upgraded to ensure that traffic can operate at line speed thus making rail travel more attractive to the customer whether it be passenger or freight.

It is necessary to improve track condition, which will facilitate a safer and better train performance. This requirement is catered for in the investment plan, which will allow over 100km of track to be upgraded or renewed. It should be pointed out the further investment in the future will be required in order to cater for the backlog of track maintenance and renewal which exists.

A cost reduction programme with particular emphasis on track maintenance will be introduced with a more cost effective approach to track maintenance. The purchase of new tampers provided for in the investment plan will assist this process.

It is essential to maximise the revenue from track access charges and this can best be done by responding to the requirements of the main businesses of both Freight and Passenger.

Targets should be challenging but achievable.

- Introduce new management structure within one year.
- Introduce new maintenance specifications and practices within 2 years
- Prepare new track renewal methods and specifications
- Carry out 5 year investment programme
- Reduce number of temporary speed restrictions by 20% per annum
- Review operation of signalling as track condition is upgraded, to identify any remaining system faults. Action to take place over the 5 year period.
- Achieve other targets set out under the Signalling and Telecommunications heading.

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11 FINANCIAL

11.1 Key Assumptions

The key planning assumptions used in the preparation of the Infrastructure Business Unit projected income statements were as follows.

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
Track Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Signalling	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Electricity Supply	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Buildings	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum

11.2 Income statement

The Infrastructure Business Unit expenditure is projected to increase by 52% during the course of the plan. The bulk of the increase in costs is in the track department reflecting rehabilitation work on track and bridges. The main cost increase is in capital repair work which rises from 29.0 billion manats in 1998 to 62.9 billion manats in 2003.

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

Historical depreciation charges declines from 28.6 billion manats in 1998 to 27.2 billion manats in 2003 .
The Infrastructure Business Unit must bear the costs of the interest charges associated with the EBRD loan which is targeted at infrastructural improvements.

The entire costs of the Infrastructure Unit is charged out to the Passenger and Freight Business Units based on the gross tonne kilometres calculated for each of those units. The charge out to the Freight Business increases more rapidly due to the increased traffic levels.

******* FINANCIAL TABLES TO BE INSERTED AFTER THIS SECTION ********
Tables 15 & 16

INSERT ANNEXES ORGANISATION CHARTS HERE
1. INFRASTRUCTURE ORG 2 MAINTENANCE OF WAY ORG

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

Azerbaijan Railways
Table 15 : Infrastructure Business Unit : Financial Plan

	Total Cost (billions manats current)						
	1997	1998	1999	2000	2001	2002	2003
Infrastructure Business Unit Total							
Salaries & Social Insurance	20.9	34.4	36.5	37.8	38.5	39.2	38.8
Materials	13.0	13.3	15.6	18.2	21.2	24.6	28.5
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.5	1.8	1.9	2.0	2.2	2.3	2.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	4.1	3.3	3.5	3.6	3.8	4.0	4.2
Depreciation	23.4	28.6	27.0	27.3	29.3	28.2	27.2
Capital Repairs	39.0	29.0	34.2	40.2	46.7	54.3	62.9
Other	3.9	5.8	6.8	8.0	9.4	10.9	12.6
Infrastructure Expenses	105.8	116.2	125.6	137.3	151.1	163.5	176.6
Loan Interest & Charges	-	0.4	1.8	3.5	1.1	0.8	0.7
Total Expenditure	105.8	116.6	127.3	140.8	152.2	164.3	177.4
Passenger Business Unit (Gtkm)	1,944.5	1,944.5	1,903.1	1,863.5	1,825.2	1,788.0	1,752.1
Freight Business Unit (Gtkm)	7,887.9	8,939.2	10,363.5	11,541.0	12,165.6	12,621.7	12,981.1
Total (Gross Tkms)	9,832.4	10,883.7	12,266.6	13,404.5	13,990.8	14,409.6	14,733.2
% Passenger Business Unit	20%	18%	16%	14%	13%	12%	12%
% Freight Business Unit	80%	82%	84%	86%	87%	88%	88%
Passenger Business Unit Charge	20.9	20.8	19.8	19.6	19.9	20.4	21.1
Freight Business Unit Charge	84.9	95.7	107.6	121.2	132.4	143.9	156.3
Total Charge out	105.8	116.6	127.3	140.8	152.2	164.3	177.4
Net Result	-	0.0	0.0	-	-	-	-

Azerbaijan Railways
Table 16 : Infrastructure Business Unit : Financial Plan

	Total Cost (billion manats current)						
	1997	1998	1999	2000	2001	2002	2003
Track							
Salaries & Social Insurance	10.0	16.4	17.2	18.1	18.5	18.9	18.8
Materials	6.5	6.7	8.0	9.4	11.0	12.8	14.9
Diesel - Other	0.8	1.0	1.1	1.2	1.2	1.3	1.4
Electricity - Other	0.7	0.1	0.1	0.1	0.1	0.1	0.1
Depreciation	17.8	21.7	20.5	20.7	22.2	21.4	20.7
Capital Repairs	30.4	20.0	23.8	28.2	32.9	38.3	44.4
Other	0.8	4.1	4.9	5.8	6.7	7.8	9.1
Total	67.0	70.0	75.6	83.4	92.7	100.7	109.4
Buildings							
Salaries & Social Insurance	1.5	2.5	2.7	2.7	2.8	2.8	2.8
Materials	2.4	2.5	2.9	3.3	3.9	4.4	5.1
Diesel - Other	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Electricity - Other	0.3	-	-	-	-	-	-
Depreciation	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Capital Repairs	3.8	6.7	7.7	8.9	10.3	11.9	13.8
Other	0.3	0.7	0.8	0.9	1.1	1.2	1.4
Total	8.9	13.1	14.8	16.6	18.8	21.2	23.9
Signalling							
Salaries & Social Insurance	5.6	9.2	9.8	10.1	10.2	10.4	10.2
Materials	2.1	2.1	2.4	2.8	3.2	3.7	4.3
Diesel - Other	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Electricity - Other	2.1	2.2	2.3	2.4	2.5	2.7	2.8
Depreciation	2.4	3.0	2.8	2.9	3.1	3.0	2.9
Capital Repairs	3.3	1.6	1.8	2.1	2.5	2.8	3.3
Other	1.4	0.9	1.0	1.2	1.4	1.6	1.8
Total	17.1	19.2	20.5	21.7	23.2	24.4	25.6
Electricity							
Salaries & Social Insurance	3.8	6.3	6.7	6.9	7.0	7.1	7.0
Materials	2.0	2.0	2.3	2.7	3.1	3.6	4.1
Diesel - Other	0.3	0.4	0.4	0.4	0.5	0.5	0.5
Electricity - Other	1.0	1.0	1.1	1.1	1.2	1.2	1.3
Depreciation	2.8	3.4	3.2	3.2	3.5	3.4	3.2
Capital Repairs	1.5	0.7	0.8	0.9	1.1	1.2	1.4
Other	1.4	0.1	0.1	0.1	0.2	0.2	0.2
Total	12.8	13.9	14.7	15.4	16.4	17.1	17.8

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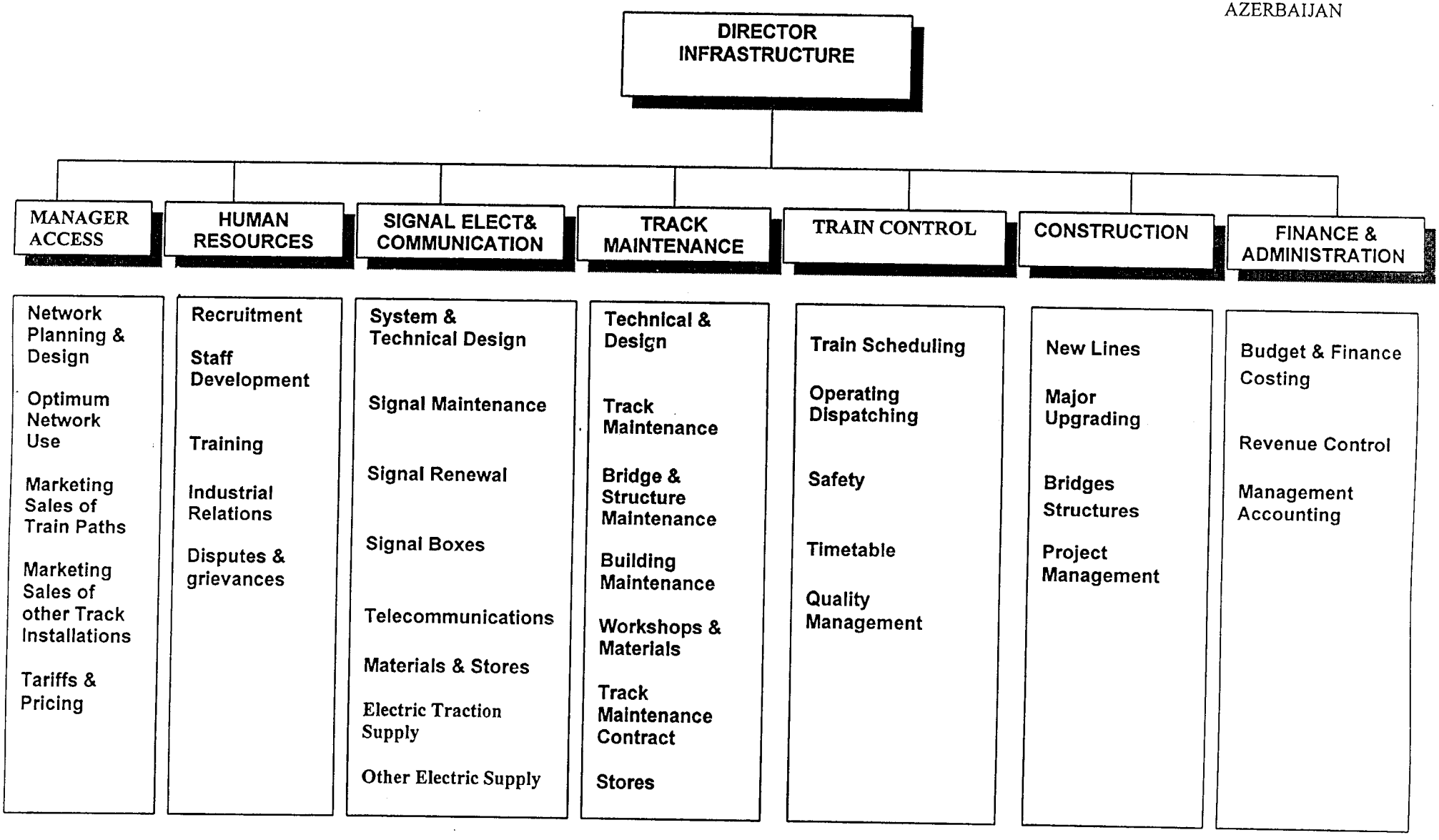
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TRAIN CONTROL
CONSTRUCTION
FINANCE & ADMINISTRATION
Network Planning & Design
Optimum Network Use
Marketing Sales of Train Paths
Marketing Sales of other Track Installations
Tariffs & Pricing
Recruitment
Staff Development
Training
Industrial Relations
Disputes & grievances
System & Technical Design
Signal Maintenance
Signal Renewal
Signal Boxes
Telecommunications
Materials & Stores
Electric Traction Supply
Other Electric Supply
Technical & Design
Track Maintenance
Bridge & Structure Maintenance
Building Maintenance
Workshops & Materials
Track Maintenance Contract
Stores
Train Scheduling
Operating Dispatching
Safety
Timetable
Quality Management
New Lines
Major Upgrading
Bridges Structures
Project Management
Budget & Finance Costing
Revenue Control
Management Accounting

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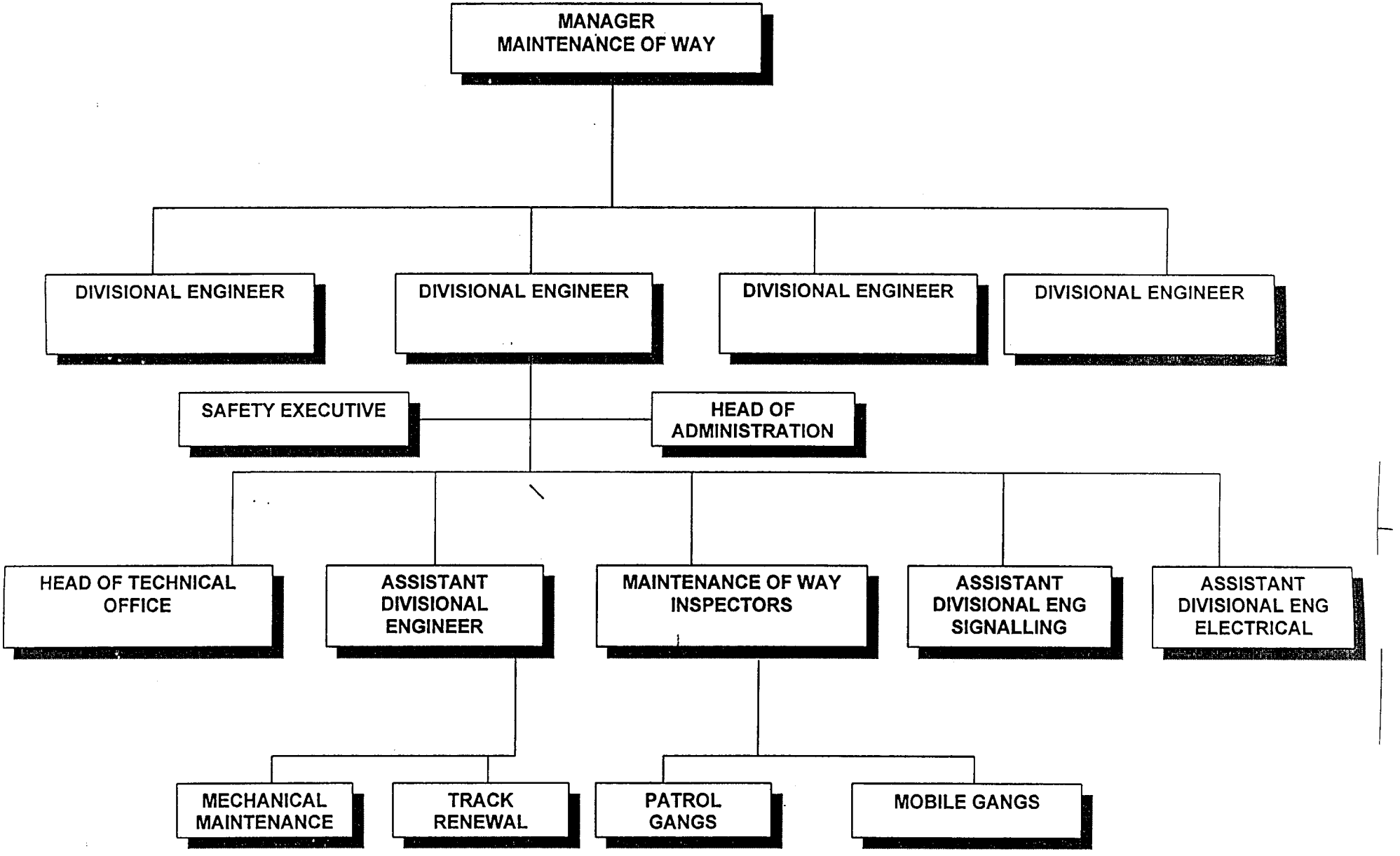
MANAGER
MAINTENANCE OF WAY
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MECHANICAL
MAINTENANCE
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MOBILE GANGS

RESTRUCTURING OF THE AZERBAIJAN RAILWAYS

BUSINESS PLAN 1999-2003

ROLLING STOCK

CONTENTS

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

1 ROLLING STOCK

1.1 Introduction

It is proposed to establish a Rolling Stock Business Unit as a stand alone unit which will carry out maintenance and overhauls for the Passenger and Freight Business Units on locomotives, passenger carriages, and freight wagons. It will operate as an autonomous enterprise with its own technical, workshops, accounts sales and human resource managers. It will negotiate contracts for the supply of maintenance services to the Passenger and Freight Business Units.

The option should be kept open for the Rolling Stock Unit to own rolling stock, which it would then lease to the Passenger and Freight Business Units and to other licensed operations.

The Rolling Stock Unit will be encouraged to provide engineering services to third parties on a commercial basis.

1.2 Mission Statement

To provide and maintain locomotives, freight wagons & passenger coaches to meet the requirements of the freight and passenger business units at a competitive and profitable price

1.3 Strategic Objectives

The principal objectives of the Rolling Stock Service Unit will include:

- major maintenance and overhaul of rolling stock, including locomotives (electric and diesel), passenger carriages and freight wagons;
- contract with Passenger and Freight Business Units, and third party customers where profitable, for major maintenance, overhaul and other engineering services;
- development of best practice methods, systems, equipment and workshops for engineering work;
- management, training and development of staff;
- achievement of financial and other targets set by Rolling Stock Unit and approved by Board of ADDY.

1.4 Scope

The Rolling Stock Business Unit will be responsible for all major maintenance of all rolling stock including locomotives, freight wagons, passenger coaches and maintenance rail vehicles. In addition the Unit will have maintenance facilities throughout the country.

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

While it is envisaged that the Freight and Passenger Business Units should own their own rolling stock the option for the Rolling Stock Unit to own its own rolling stock will be retained. This would allow the Unit to lease rolling stock to third parties in the future.

The Rolling Stock Business Unit will enter into service contracts with the Freight and Passenger Businesses and this will involve the development of a commercial ethos.

1.5 Internal Analysis

1.5.1 SWOT Analysis

There is a popular management tool used in analysing businesses. It examines the strengths, weaknesses, opportunities and threats of the business. This is usually referred to as SWOT analysis. Using this technique the Rolling Stock Business Unit is analysed below:

Strengths

- Management expertise
- Monopoly situation
- Own workshops
- Large fleets
- Dedicated workforce

Weaknesses

- Old locomotive fleet
- Old wagon fleet
- Old passenger fleet
- Lack of spare parts
- Lack of modern management techniques
- Management organisation

Opportunities

- New organisation
- New management technique
- New focus on business
- Autonomy
- Work for third parties
- Less staff
- Bigger profits
- Reduction in fleet size
- Sell off surplus assets

Threats

- New pipe-lines
- Competition from other maintenance businesses
- Loss of business to road haulage

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

1.5.2 Fleet Conditions

Main Line Electric Locomotives

The ADDY electric main line fleet consists of 238 locomotives, of which 150 are currently available for traffic. They are used for both freight and passenger working.

The age profile of the electric locomotives is as follows:-

Type Age	under 5	5-9	10-14	15-19	20-24	25-29	over 30
3VL 22M	-	-	-	-	-	-	1
VL 23M	-	-	-	-	-	-	2
VL 8	-	-	-	-	-	14	178
VL 11M	-	43	-	-	-	-	-
TOTAL	-	43	-	-	-	14	181

The age profile is such that all the electric locomotives, with the exception of the fleet of 43 VL 11 locomotives, which are comparatively new (1988), have exceeded their 28 year life. The FSU regulations imposed a life limit, but as, unlike wagons and coaches, the locomotives are confined to Azerbaijan, ADDY have the freedom to extend the life span if practicable, and intend to keep the life expired locomotives in service if possible. However there is a requirement for a major investment in new locomotives to be considered in less than 10 years time.

The condition of the locomotives is as follows:

Type	Total Fleet	Condition			Operating
		Downgraded	Major Repair Overdue	Serviceable	Daily Requirement
3VL 22M	1	1	1	-	}Freight :42
VL 23M	2	2	2	2	}Passgr :40
VL 8	192	192	138	111	}Civil eg :14
VL 11M	43	-	26	37	
Total	238	195	127	150	96

Oct 98
Numbers for main line locomotives are per complete operational locomotive.
i.e. 1 locomotive = 2 permanently coupled units.
There are four crews attached to each locomotive.

Main Line Diesel Locomotives

The ADDY main line diesel locomotive fleet consists of 101 locomotives, of which 18 are currently available for traffic. The locomotives operate mainly on the line to the south to Astara, which is not electrified beyond Osmanli, nor is the line in the occupied territories from Goradiz to Ordubad.

The age profile of the locomotives is as follows:-

Type Age	under 5	5-9	10-14	15-19	20-24	25-29	over 30
TE3	-	-	-	-	2	34.5	6.5
2M62	-	22	-	-	-	-	-
2TE10M	-	24	-	-	-	-	-
3TE10M	-	-	1	9	2	-	-
Total	-	46	1	9	4	34.5	6.5

Tacis

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

The fleet of modern 2TE 10M and 2M62 locomotives, acquired just before the break up of the FSU, means that ADDY is relatively well equipped with diesel power compared with many other CIS railways.

The condition of the ADDY diesel main line locomotive fleet is as follows :

TYPE	Total Fleet	Condition			Operating
		Downgraded	Major Repair Overdue	Serviceable	Daily Requirement
TE3	43	43	5	6	}Freight ; 3
2M62	12	5	7	8	}Passgr : 4
2TE10M	22	-	15	5	}Civil eg : 1
3TE10M	24	-	19	3	
Total	101	48	46	24	8

Numbers for main line locomotives are per complete operational locomotive.
i.e. 1 locomotive = 2 permanently coupled units.

Shunting Locomotives

The ADDY shunting diesel locomotive fleet consists of 179 locomotives, of which 89 are currently available for shunting duties.

Type	under 5	5-9	10-14	15-19	20-24	25-29	over 30
TEM1	-	-	-	-	-	-	1
TEM2	-	2	32	39	38	7	4
ChME3	-	39	11	-	-	-	-
Total	-	41	43	39	38	7	5

The condition of the diesel shunting locomotives is as follows :

Type	Total Fleet	Condition			Operating Daily Requirement
		Downgraded	Major Repair Overdue	Serviceable	
TEM1	1	1	1	1	}Freight : 70
TEM2	128	29	70	70	}Passgr : incl
ChME3	50	-	20	18	}Civil eg : 6
Total	179	30	91	89	76

Electric Multiple Units

The ADDY fleet of electric multiple units consists of 74 units:

Type	under 5	5-9	10-14	15-19	20-24	25-29	over 30
ER2	-	-	8	31	16	15	4

The condition of the multiple units is :

TYPE	Total Fleet	Condition			Operating
		Downgraded	Major Repair Overdue	Serviceable	Daily Requirement (motor units)
ER2	74	2	36	46	Baku 36 Gyanja 12

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They operate mainly on local services on the Apsheron Peninsula and out of Gyanja, normally in 4 car sets. Half the cars are motored, and half are trailers. Above units are motor units, giving 18 four-car sets in Baku and 6 four-car sets in Gyanja.

There have been no internal improvements made to the railcars to make them attractive to passengers. They are providing basic transportation for workers.

Passenger Coaches

The ADDY passenger coach fleet consists of a total of 815 carriages.-

	Age	Under 5	5-9	10-14	15-19	20-24	25-29	over 30	Total
TSMO	Open - 54 seat/36 sleeper	-	48	181	68	59	26	-	382
TSMK	Compartment - 36 sleeper	-	61	86	42	57	51	4	301
SV	Comfort 18 sleeper	-	2	5	10	6	3	6	32
TSMR	Restaurant cars	-	-	21	3	4	-	-	28
TSMB	Postal / Luggage	-	-	-2	3	9	26	5	45
	Service	-	-	-	2	-	1	3	6
	Technical	-	-	-	-	-	4	11	15
ZAK	Others (prison vans)	-	-	-	2	1	2	1	6
	Total	-	111	295	130	136	113	30	815

Jan 98, -age profile adjusted.

Of the fleet of 815 carriages, 715 (87%) are passenger carrying, and of these around 300 are unfit for service, giving an available fleet of around 415.

The availability of the coaches at present is as follows :

			Stored	KR overdue	DR overdue	Available	Daily Need
TSMO	Open - 54 seat/36 sleeper	382	37			153	136
TSMK	Compartment - 36 sleeper	301	31			145	115
SV	Comfort 18 sleeper	32	-			19	13
TSMR	Restaurant cars	28	7			10	10
TSMB	Postal / Luggage	45	6			24	10
	Service	6	6				-
	Technical	15	15				-
ZAK	Others (prison vans)	6	6				-
	Total	815	108	39	344	351	284*

Dec 97

Freight Wagons

There are over 20,000 freight wagons in the ADDY system.

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The age profile of the ADDY wagon fleet is as follows:

	Age	under 5	5-9	10-14	15-19	20-24	25-29	over 30
KR	Covered	6	380	1047	1241	1416	873	680
PL	Platforms	2	494	721	793	1053	695	601
PV	Open semi	10	992	1228	1241	1059	435	236
TS	Tank	-	370	655	692	799	700	1012
RF	Refrigerated	-	160	412	780	441	338	78
	Hopper	122	115	84	33	56	89	748
	Others	-	676	1082	891	602	290	648
	Total	140	3117	5229	5671	5426	3240	4017

Dec 1997

In addition there are 2.500 wagons in Nakhichevan.

The wagon fleet condition is as follows:

Type	Total	Need repair	KR overdue	DR overdue	Available for use	Daily requirement
Covered KR	5127	2617	543	3752	2510	572
Platforms PL	3892	2896	202	1860	996	485
Open semi PV	4634	780	421	4082	3854	610
Tank TS	3866	873	896	3328	2993	2333
Refrigerated RF	2105	188	118		1917	92
Others	3849	783	223	2170	3066	965
Total	23,440	8,173	2285	15,192	15,336	5,229

Statistics - Oct 98

Of the available 15,336 wagons, about 7500 are held in reserve, with 500 used for internal railway traffic, and 2000 for other railway needs, including 1230 for housing refugees and 523 refrigerated motor units.

The only area where there is a shortage of wagons is for oil tankers. 400 tankers have been hired from Ruski Mir, and hire of other tank wagons is being considered.

Maximum train weight of loaded wagons westwards is 2500 tonnes.

1.5.3 Maintenance Facilities and Organisation

At the break-up of the FSU, all the facilities in the territory of what has become Azerbaijan, for locomotives, passenger coaches, and freight wagons, were basically running maintenance facilities only.

The only exception to this was the Baku Tank Wagon Repair Works, which was one of three works in the centralised soviet system for the overhaul of tank wagons from the entire network. The other two were Gyzlarbat in Turkmenistan, and Vladikavkaz in Russia.

As the overhaul of all other types of stock was carried out in what is now other countries, ADDY has had to either look for hard currency to have the work carried out abroad, or try to create facilities in house for major overhauls.

All passenger coaches and freight wagons moving outside Azerbaijan must comply with rigid CIS standards of overhaul and inspection. Locomotives, being confined to Azerbaijan do not, and ADDY can agree its own standards.

Tacis

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

Locomotive Depots

There are six main locomotive running depots on ADDY, at which locomotives are maintained, as follows :

Location	Year of construction/ re-construction	Staff	Type of Repair		Condition
			Electric	Diesel	
Baku	1957	660	TR3	-	Reasonable
Balajari	1962	1475	TR2	TR2	Reasonable
Gyanja	1890/1980	984	TR2	TR2	Reasonable
Salyany	1941	104	-	TR1	Poor
Imishli	1950	366	TR2	TR3	Reasonable
Djulfa*	1940	393	TR1	TR1	

*Djulfa is in Nakhchevan and is currently isolated from the rest of the system (but part of Salyany division)

Major Overhauls

ADDY does not undertake any major overhauls KR1 (5 years) or KR2 (10 years) to locomotives themselves in Azerbaijan.

Locomotives are sent to Ukraine or Russia for major overhauls. A KR1 for a 2TE10 diesel is reported to cost $200,000 per loco section in Uzum, Ukraine., an electric VL8 section $200,000 in Yaroslavl, Russia, and a shunting TEM2 loco $170-200,000 in Astrakhan, Russia. All repairs abroad must be paid in hard currency.

Due to the lack of finance it has not been possible to meet the major overhaul programme over the last number of years.

Passenger Coach Depot

- The maintenance of all passenger coaches on ADDY is carried out as an integral part of the Passenger Unit. All maintenance on passenger stock is carried out at a central depot in Baku, except for maintenance on electric commuter railcars which is carried out by the Locomotive Unit at Baku Locomotive Depot.

The Baku Passenger Coach Depot carries out the annual DR overhaul of all ADDY passenger coaches, and carries out TO2 and TO3 running maintenance examinations.

There is a separate location, which prepares and makes up train sets for operation, and washes trains, at which the train conductors are based. From October 1998 this will become part of the Passenger Coach Depot.

Freight Wagon Deports

The ADDY freight wagon fleet is maintained by four depots, each depot being responsible for running maintenance of wagons in a section of the line, as well as on other lines in their area:-

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Location	Year of construction/ improvement	Staff	Capacity/ year	Condition Type of work
Balajari	1934/1965	367	4500 DR	Poor condition - rehabilitate later. DR of tank wagons
Gyanja	1978	310	4500 DR	Satisfactory DR of covered wagons
Aliat	1982	1200	2400 DR	Satisfactory DR of refrigerated wagons
Kazi-Magomed	1968	296	1600 DR	Rehabilitation required DR of semi and hopper wagons

In addition there are operating depots at Shirvan, Imishili, and Djulfa for running maintenance only. Shirvan is a new depot (staff 222) and was built in 1996 to serve Sumgait Terminal. There is also a depot at Kishli (Baku) for container repair.

Major overhaul (KR) record

		1993	1994	1995	1996	1997	1998*
KR	Covered	-	-	-	-		382
PL	Platforms	-	-	-	-	-	38
PV	Open semi	-	-	-	-	-	20
TS	Tank	280	223	361	457	374	500
RF	Refrigerated	-	-	-	-	-	60
	Others	-	-	-	-	-	-
	Total	280	223	361	457	374	1000

KR of covered, platform and open semi wagons has started at both Gyanja and Alyat, and KR of refrigerated wagons at Aliat.

Baku Tank Wagon Works

The Baku Tank Wagon Repair Workshop occupies an area of 3.4 ha. close to the centre of Baku. The works were built in 1891, and until 1919 was mainly engaged in manufacturing components for oil refineries. It was adapted in 1932 as a works for the capital repair of railway tank wagons, repair of wheel sets, and manufacture of wagon spare parts.

Balajari Tank Wagon Washing Plant

The plant is designed to wash both interior and exterior washing of the tank wagons. It uses steam generated from a variety of sources and the effluent is treated before being recycled or, when no longer suitable for use, being discharged from the plant. All elements of the plant are old and requiring maintenance, if they are functioning at all.

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1.6 External Analysis

1.6.1 Contracts with Freight and Passenger Business Units

Rolling Stock Requirements

A selling buying relationship will be set up between the Rolling Stock Business Unit and the Passenger and Freight Business Units. It is the responsibility of the Rolling Stock Business Unit to provide rolling stock to the operating business units to the specification laid down by these business units.

The specification will include:

Locomotives

- the number of locomotives required during the daily cycle
- trailing load
- max speed
- journey time required
- type of locomotive
- location

Of course this would be agreed between the Rolling Stock Business Unit and the Freight and Passenger Business Units.

Freight Wagons

- number of wagons
- wagon type
- location
- max speed
- journey times
- braking characteristics

Like the locomotives these would be agreed in advance in discussions.

Passenger Coaches

- number of passenger coaches required
- location
- max speed
- quality
- heating
- catering cars
- sleeping cars

It is quite clear that the number of units of locomotives, passenger coaches, and freight wagons available exceeds what is required in the foreseeable future.

This will present a dilemma both for the operating units and the Rolling Stock Business Unit. On the one hand the Freight and Passenger Business Units will want the flexibility of having additional rolling stock available to them if and when required. There will of course be a cost associated with this.

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1.7 Performance Improvement Strategy

1.7.1 Main Line Electric Locomotives

There is no requirement in the plan period to replace electric locomotives.

Even though the VL8 locomotives are beyond their book life, it is considered that with the provision of additional electrical overhaul equipment, the locomotives can be kept operational for another 10-15 years.

Provision should be made as far as practicable for the major overhaul (KR) of mainline electric locomotives to be carried out within Azerbaijan at Baku Depot. However it is critical that funds are made available for the required machinery for this work, as well as provision of spare parts.

The only alternative is to send locomotives abroad for KR, which has been deferred up to now due to the much higher cost.

There are sufficient locomotives to meet the short term TRACECA Rolling Stock Maintenance Report fleet recommendation of 105 locomotives (210 units). This figure is in line with the consultants' proposed revised operating requirements for main line locomotives.

It is recommended that the fleet size, including operational and maintenance spares, should be as follows:

Main Line Electric Locomotives

Year	1	2	3	4	5
Passenger	40	40	40	40	40
Freight	42	42	41	40	38
Civil	14	14	14	14	14
Spare	20	20	20	20	20
Total	116	116	115	114	112

Provision will have to be made within 10 years for the replacement of around 70 electric locomotives.

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Civil	14	14	14	14	14
Spare	20	20	20	20	20
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1.7.3 Shunting Locomotives

The age profile shows that no investment in new shunting locomotives is required within the next ten years.

The proposed revised operational requirements of the business units are as follows:

Shunting Locomotives

Year	1	2	3	4	5
Passenger	not allocated	not allocated	not allocated	not allocated	not allocated
Freight	70	70	70	70	70
Civil	6	6	6	6	6
Spares	16	16	16	16	16
Total	92	92	92	92	92

Facilities should be provided to undertake the KR1 overhaul of TEM2 shunting locomotives at Balajari Depot, with electrical components being sent to Baku depot. Initially the Chech ChME3 shunting locomotives should be overhauled abroad, but this should be reviewed in the future.

With the known unreliability of the ChME3 units the opportunity should be taken to re-introduce a programme of major overhauls.

1.7.4 Electric Multiple Units

The entire fleet of multiple units is approaching the end of its working life, and it is difficult to see how many of the vehicles can be kept serviceable for more than 8-10 years as a maximum.

The effective fleet is now 72 vehicles (motor units), with 48 rostered on a daily basis.

Unless steps are taken to obtain more modern second hand vehicles, it is likely that it will be necessary to reduce suburban services.

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1.7.5 Passenger Coaches

There is a surplus of passenger coaches with an operating requirement currently of 276.

	Year	1	2	3	4	5
TSMO	Open - 54 seat/36 sleeper	122 (132[a])	117 (127)	113(123)	108 (118)	104 (114)
TSMK	Compartment - 36 sleeper	111 (115)	107 (110)	103 (106)	99 (102)	95 (98)
SV	Ritz 18 seats and sleeper	13 (5)	12 (5)	11 (5)	11 (5)	11 (5)
TSMR	Restaurant cars	10	10	10	10	10
TSMB	Postal/Luggage([b])	10	10	10	10	10
	Open - 81 sent	10(0)	10(0)	10(0)	10(0)	10(0)
	Total	276 (272)	266 (262)	257 (254)	248 (245)	240 (237)

Service, Technical and Special Coaches not included

(a) Figures in parenthesis are following re-classification of rolling stock.

(b) Not required if postal/luggage service no longer exists (See Passenger Business Report)

The condition of passenger coaches is not attractive to passengers as practically all maintenance funds are required to maintain the basic safety features of running the coaches.

There is little likelihood of ADDY investing in new coaches in the immediate future.

It is recommended that coaches should have their passenger amenities upgraded by additional work on interior surfaces, floor coverings, fabrics and fittings during KR. Materials will be required for this and around $30,000 per coach should be allowed.

The new Passenger Business Unit should give consideration to the conversion of sleeping coaches to seated coaches, which would increase capacity, particularly with average journeys ADDY around 300 km.

Consideration should be given to a joint agreement with Georgia, similar to the agreement for freight wagons, to enable joint operation of coaches outside the limits imposed by the CIS agreement.

Facilities should be provided to undertake the major overhaul (KR1) of all passenger coaches in Azerbaijan. The present rate of partial KR of 4 per month should be increased to 10.

1.7.6 Freight Wagons

The current size of the freight wagon fleet is far in excess of the current requirements and all anticipated growth of traffic.

It is recommended that the future fleet size should be as follows:

Year	1	2	3	4	5
Covered KR	601	637	643	643	638
Platforms PL	522	550	555	554	550
Open semi PV	658	692	698	697	693
Tank TS	2438	2485	2431	2353	2265
Refrigerated RF	99	104	105	105	104
Others	1040	1095	1105	1103	1096
Total	5358	5563	5537	5435	5346

Surplus wagons should be scrapped. However there is little requirement within Azerbaijan for scrap steel at present, and the government has a ban on the export of steel.

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The age profile of the wagon fleet is such that a replacement programme should be started. However the wagon condition is such that it is considered that there is no need to commence a replacement programme at present if the life of the wagons can be extended.

The obstacle to this is the CIS regulations which place an absolute limit on the life of a wagon irrespective of its usage and condition. Every effort should be made to have the regulations changed so that suitable wagons can be repaired and kept in service.

It is understood that, as long as all relevant examinations and safety checks have been carried out, informally, over-age wagons will be accepted by other CIS administrations

it is recommended that facilities should be provided to carry out the major overhaul (KR) of all freight wagons within Azerbaijan.

1.7.7 Maintenance Procedures

The reorganisation of ADDY into business units should include a revision of maintenance procedures. The old system, where everything was decided centrally and detailed instructions sent, out meant that by sticking to "the plan" there was no taking of individual responsibility. Maintenance procedures were laid out at a time when the objective was to provide employment for everyone. Part of the introduction of Business Units should be educating management in accepting responsibility for change, and in the delegation of authority.

For example, there is too much inspection of vehicles in service. However there seem to be no easily available records of what is found, and it will be very difficult for anyone to accept responsibility to increase intervals because of the perceived reduction in safety. It is an identifiable area for staff reductions.

1.7.8 Improvement of Workshops

Locomotive Depots and Workshops

All major overhauls (KR) to electric main line locomotives and shunting locomotives, formerly carried out in other CIS countries, should be undertaken in Azerbaijan.

No provision should be made for the major overhauls (KR) of diesel main line locomotives which should to be sent abroad.

Baku Depot should be developed and re-designated as a Works for TR3 and KR, with the EMU running maintenance as a separate unit, and provide units to other depots on an exchange basis.

Baku Depot has the skilled staff capable of undertaking KR overhauls, and an investment should be made for machinery for the undertaking of electrical repairs.

The new Rolling Stock Business Unit should review the need for the present number of Locomotive Depots. It is unlikely however that without political settlement, and further electrification, that further reductions could be made.

Other locations outside Baku are required mainly for operational reasons. Running maintenance depots should be kept purely to suit operational requirements, with running maintenance transferred accordingly. This would retain depots at Balajari, Gyanja, Salyany, and Impishli, as bases for drivers, locomotives and running maintenance up to TR1, TR2. The latter two are required mainly because of the non-electrified sections of line. The Djulfa depot is currently isolated

The Rolling Stock Unit and the Freight and Passenger Business Units should review the need for outlying sub-depots, which should be transferred to the business units.. Any maintenance work above TO2 carried out at the sub-depots should be transferred to main depots or done

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by Rolling Stock Unit staff based at the depot. The need to retain sub-depots should be determined by the Business Units.

Inspections (TO1 drivers daily inspection, TO2 three day inspection over pit, TO3 seventeen day or 12,000 km inspection and component check) and running maintenance (TR1 - 25,000 km servicing of electrical machines, brakes etc.) should all be carried out wherever the locomotive is relocated.

The Rolling Stock Unit should centralise the overhaul of components, with most maintenance being carried out by exchange of unit on the locomotive.

Centralised specialised units for component overhaul for the whole of ADDY should be set up in one depot, and exchange components supplied to other depots.

New workshops have already been constructed at Baku Depot for the overhaul of electrical machines.

An investment should be made in the proposed machinery required, estimated at US $ 3.5m.

The main principle should be to have the capability for the complete assembly/disassembly of locomotives, with stocks held of re-conditioned components for unit exchange.

There is no need to have the capability to completely overhaul every part in house. Specialised repairs such as overhaul of generators, would still need to be undertaken abroad.

The work should only be undertaken if a satisfactory stock of spare parts is held, and stock levels are kept high enough to avoid any interruption to the work flow. A stockholding of around US $ 3 m of components parts and materials will be required.

Facilities to be incorporated in the new shops for KR1 are as follows:

Traction motor removal
Bogie washing plant
Bogie overhaul
Disassembly of electrical machines
Electrical component repairs
Varnishing section
Assembly of electrical machines
Testing station
Armature repair section
Coil repair section

Hydraulic press for wheel-sets
Axle lathe
Vertical boring mill
Tyre shrinking equipment
Jigs and stands for engine overhaul
Jigs and stands for engine component overhaul
Machine tool replacement programme

Of the $ 10m annually required to be spent abroad for say 25 major overhauls (KR), but deferred (not including the current backlog), mark-ups of 100% are mentioned because of lack of competition. If ADDY could reduce the cost of major overhauls by $ 5m by being able to carry out the work themselves, the above expenditure could be easily justified.

Baku Locomotive Depot should be set up as a separate locomotive repair business unit within the Rolling Stock Business Unit, separately from the running maintenance of locomotives.

Tacis

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All TR3 overhauls of main line electric locomotives should be centred on the depot. Specialised units should be set up and exchange components supplied to all depots.

Balajari Locomotive Depot should be set up for the overhaul of diesel shunting locomotives, with electrical components sent to Baku, and abroad in the case of generators.

There is a proposal to upgrade Gyanja Depot costing US $ 2-3 m. Columns have been cast for an extension to the depot which was started in 1988, but deferred. This should be reviewed by the Rolling Stock Unit in the light of the centralisation of heavier repairs in Baku.

Generally depots are structurally in reasonable condition, but annually $0.2 m should be allowed for general maintenance, structural repairs, power and lighting improvements.

Passenger Coach Depot

The passenger depot at Baku should be upgraded to give the full facilities for undertaking KR1 Major Repairs. Additional space may be required by lengthening the existing shop, and widening it to provide additional subsidiary shops. There is sufficient space available to set up the additional facilities if required. The staff have the necessary skills.

Improvements are required in facilities for overhaul of electrical and electronic components.

The current number of 4 partial KR per month will have to be increased to 10 per month for a fleet of 500 coaches.

A feasibility study should be carried out on whether the planned extension should go ahead, or whether with the reduced fleet, the necessary equipment can be accommodated within the existing workshops

The proposed planned extension is estimated US $ 3 / 3.5 m.
Machinery is estimated at US $ 2 m.

Consideration should also be given in the upgrading to the provision of a separate paint shop

To ensure that the work is carried out efficiently, a satisfactory stock of spare parts should be held, and stock levels kept high enough to avoid any interruption to the work flow. A stockholding of around US $ 1.0 m will be required to be held at all times. Parts requirements should be forecast in detail 12 months in advance, and the forecast reviewed at 3 monthly intervals.

The present expenditure level of US $ 1 m. p. a. on parts is insufficient to bring the fleet up to a reasonable condition. This should be at least doubled.

Maintenance procedures for passenger coaches are still strictly regulated through the CIS Council of Railway Administration. It is consequently unlikely that one country could deviate from the laid down requirements, because of the control of coach condition at border crossings. However, the possible move to kilometre based passenger coach maintenance from time based maintenance should be perused.

Wagon Depots

All DR depot repairs should be concentrated on Gyanja, Aliat, and Balajari Depots. The need to retain the depot at Kazi-Magomed should be reviewed.

The other depots should be reduced to concentrate on the running aspects of wagons, with in service failures dealt with by unit exchange, including wheel-sets, and sent to the above depots for repair.

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The specialised parts of the above depots for repairs of air brake components, wheel-sets and bearings, couplers and draft gear, should be set up as separate units. This is in line with the TRACECA Rolling Stock Report recommendation for component reconditioning to be carried out by 4th level independent units.

The major repair (KR) of all freight wagons should be concentrated at Baku, and the works expanded to provide the specialised facilities

Maintenance procedures for wagons are still strictly regulated through the CIS Council of Railway Administration. It is consequently unlikely that one country could deviate from the laid down requirements because of the control of wagon condition at border crossings. However, the possible move to km. based wagon maintenance from time based maintenance should be perused.

In addition changes in the present centrally applied CIS rules are essential if major investment in new wagons by ADDY is to be deferred. The life assigned to both wagons and bogie frames is conservative and could be extended by 5-10 years. This should be perused.

The need to have wagons examined at frequent intervals should be reviewed. ADDY stop and examine wagons every 150 km, whereas European practice is to examine wagons only as the commencement of the journey.

1.7.9 Baku Wagon Works

Baku Wagon Works should be considered as a separate entity providing services under contract to the railways. Consideration should be given to converting it to a Joint Stock Company.

The relocation of this facility to a new location is currently under consideration.

1.7.10 Balajari Tank Wagon Washing Plant

The plant is designed to wash both interior and exterior washing of the tank wagons. It uses steam generated from a variety of sources and the effluent is treated before being recycled or, when no longer suitable for use, being discharged from the plant. All elements of the plant are old and requiring maintenance, if they are functioning at all.

Interior Wash Plant

The interior wash plant consists of three tracks holding fifteen wagons each, with two platforms each 175 m. long running alongside at tank top level for operator access.. Tanks are cleaned out with steam lances and residues then rinsed out with hot water. Heavy oils require a pre-spray of diesel oil to the interiors. Lighter oils require fumes to be extracted.

All waste oil / water is emptied onto a concrete area beneath the tracks contained by a bund wall. There are drainage channels at each side where the emulsified oil is collected and pumped to a mechanical separation plant where the oil is skimmed off for resale (1996 - 4000 tonnes, 1997 - 1500 tonnes, and 1000 tonnes to end may 1998). The sludge on the apron is collected periodically, together with processing sludge which is collected in a concrete lined pond, and taken to a designated dumping area.

Staff are required to go inside tanks both during depot repairs (DR) for inspection and major overhaul (KR) for possible repair. The Baku Wagon Works claims that 20% of the wagons are not properly cleaned and must be returned to Balajari. Balajari Maintenance Depot also have to return some wagons for further cleaning. This is due mainly to insufficient steam being available to clean each wagon.

The plant capacity, when fully functional, was reported as 455 wagons per 24 hours (summer) and 350 wagons per 24 hours (winter). Currently up to 90 - 100 wagons per day can be

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washed, of which 20 are for Balajari Depot. A rake of 15 wagons can be cleaned, with normal steam supply, in around 2.5-3 hours in winter, and 1.25-2.3 hours in summer, depending on product. Throughput in 1997 was 25,000 wagons, and forecast at 28,000 wagons in 1998.

Each wagon requires around 2 tonnes of steam per wagon for all operations - steaming, heating of recirculating hot water, and oil separation.

TRACECA forecasts show that up to 100,000 tank wagons will be required to be cleaned annually by 2000. The existing installed steam capacity of 384 tonnes / day could not meet this demand, as around 550 tonnes / day would be required. Two additional boilers of 10 tonnes / hour would meet this demand, giving a total installed capacity of 864 tonnes / day, and providing sufficient reserve when the plant is fully re-instated.

Water Treatment Plant

Prior to 1990, mechanical separation only of oil and water was considered sufficient. Following pressure from the State Ecological Committee of Azerbaijan in 1992, ADDY installed some chemical treatment equipment at the cleaning plant, as effluent from the plant was being discharged into Beyuk Shor Lake, and the discharge levels were much higher than permitted levels, understood to be 20 mg / litre. The chemical plant, supplied by Kary of Bremen, Germany, consists of four units in series for sedimentation, balancing, flotation, and regeneration, but is only capable of treating 120 m^3 of effluent in 24 hours, compared to the daily output of 500-600 m^3. The equipment was supplied as a barter deal in exchange for recovered oil from the plant.

In 1995, as part of the pollution reduction programme for the lake, the discharge was piped through a new water treatment plant at Hovsany. ADDY cannot meet the requirements for effluent discharges, which are currently being made illegally.

Oil concentration is 200-400 mg / litre after mechanical treatment, compared to 0.2 - 0.4 mg /litre after full chemical treatment. After partial chemical treatment concentration is 50-100 mg / litre. The chemical treatment also improves the operatives health and safety conditions, as most of the effluent is re-cycled, as well as for eventual discharge.

There are also the following disused plants, which do not operate any longer, among other reasons because of the non-availability of steam.

Bitumen Wagon Cleaning Plant

There is also an adjoining plant for the interior cleaning of liquid bitumen tanks. The plant has not been used since 1995 due to lack of steam, and worn our pumping equipment. When it was used, bitumen was heated and discharged into an adjacent pond within the site, about 8-10 metres deep. Wagons took 5 hours in summer and 2 days in winter to clean, and needed to be heated with steam coils. 305 wagons were cleaned in 1995.

One part of the pond is provided with heating elements so that when sufficient bitumen had accumulated, it could be heated and pumped into rail wagons and sold. It is reported that the pond currently contains about 2000 tonnes of bitumen.

Exterior Washing Plant

There was also a plant at Balajari for washing the outside of tank wagons before repair, one tank at a time, but this has not been operating for over thirty years due to slippage of the foundations, and it is now derelict. Until 1985 tank exteriors were washed at a plant at Baku Tank Wagon Works before repair, but this plant ceased to operate and no funds were available for reinstatement. Since then tank car exterior have not been cleaned except for some hand scraping at Baku Works before overhaul. For environmental reasons it is better that future exterior cleaning facilities are away from the Baku city centre area.

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The current proposal is to re-instate the exterior washing plant on the original site at Balajari. The plant would be physically separate from the interior cleaning plant but share the same steam supply. As the cleaning mix contains caustic soda, separate effluent treatment will be required, and the tank cleaning must be under cover.

Hot water at 80 C was generated through heat exchangers from boiler steam, and applied at very high pressure to the wagon exteriors, together with a caustic solution.

Boilers

The five original 10 tonne per hour steam boilers which powered the above plants ceased operating in 1995, due to age and lack of spare parts. From that time until early 1998, the only source of steam was provided from an old (1954) steam locomotive, which can provide a maximum of 2 tonnes steam per hour. This considerably restricted the output of the plant, and reduced the quality of the cleaning.

Two new boilers of 8 tonnes steam per hour capacity each at 10 bar, have been installed and are operating, but are not yet fully commissioned. There is a problem with the gas supply pipeline, but proposals are in hand for this to be replaced.
The boilers are used sparingly due to the cost of diesel fuel, and the old steam locomotive has been kept in use. Around 20 tonnes of steam per hour are required for full functioning of the interior cleaning plant alone in winter.

Diesel oil is reported to be 10 times more expensive than heavy fuel oil.
(3.6 times the price, and 2.9 times the consumption).

It is planned that the plant would operate on diesel oil for at least one month per year. With the monthly consumption of diesel estimated at 320 tonnes, additional costs of US $ 40,000 per month are arising because the current boilers do not have the capacity to burn heavy fuel oil. This operational time on diesel is much greater at present due to the unreliability of the gas supply.

The upgrading of this facility is provided for in the Investment Proposals.

A full report on the washing plant is available in the CIE Project Identification Report for the EBRD dated June 1998.

1.7.11 Scrap Materials

There are considerable quantities of scrap materials lying around in all depots, amounting to several tens of thousands of tonnes.

The sidings of all depots are filled with complete and partially dismantled vehicles which will clearly never operate again, including steam engines.

As well as this, depots have what is clearly scrap heaps, both in areas outside the shops, and in many instances actually within the shops.

It is proposed to dispose of this scrap material.

1.7.12 Improvement of Workshop Techniques

World Class Manufacturing Techniques

This involves setting up teams including management and operatives into teams to decide on the best method of carrying out maintenance work on all rolling stock. Generally work teams are set up to carry out the work and they work as a team.

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The fact that the people who are involved in the actual work on the ground are consulted and decide the best method will give them a feeling of being involved in the decision making process and will improve the morale of the staff concerned.

It is suggested that if it is decided to introduce such techniques that this be introduced initially as on a shop by shop basis.

Productivity

There is a common practice in the west whereby production targets are set in advance and agreed with the workforce. If these targets are exceeded, then the workforce benefit by enhanced payment.

In this way both the enterprise and the workforce gain. The enterprise gains by increased production and the workforce by improved payments.

Quality

The introduction of Quality Management Systems can be expected to give benefits in both output and quality.

Safety Systems

Safety is paramount importance to all railway operations. Railways for too long have been very inward looking. This has changed in recent years where the experience gained in the Nuclear and Chemical Industries has been used to good effect in the railway industry.

Leaders in the chemical field have been ICI Imperial Chemical Co in the UK. They have developed their own Safety Rating System. Some railways have adopted an international Safety Rating System, which was developed in the United States. Similar systems have been introduced in British Railways and Irish Railways.

This allows the railways concerned to measure their management of safety in a logical manner and is subject to external audit. There are different levels of competencies which can be aspired to on a year by year basis and this method introduces a discipline which benefits the railway in the long term by the reduction in accidents and fatalities and represents a good return in time and effort.

To implement such a system requires a big commitment from management and staff. The level of safety required under this system is not easy to attain.

1.7.13 Management Information Systems

In order to operate a good business management, requires a good management information system which would give useful and timely information. Unfortunately computerisation and the necessary communications highways are some years away.

In the meantime it is recommended that local area network computers be set up which would assist in tracking locomotives, freight wagons and passenger coaches, costing, human resources, etc. This information could then be despatched in the short term to a central location by email.

1.7.14 Operating issues to be addressed

Some issues to be addressed include

- through running of locomotives
- transfer of drivers and assistants to the Freight and Passenger Business Units

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Through Running of Locomotives

Currently locomotives operate in confined areas with frequent changing of locomotives during the journey. This causes additional delays and reduces the availability and utilisation of the locomotive fleet.

It is hoped that this practice will be changed in order to improve the availability and effectiveness of the service.

Transfer of drivers and Assistants to Freight and Passenger Business Units

In order to give as much control as possible to the operating business units it is proposed to transfer drivers and their assistants to the Passenger and Freight Business Units. This will allow the units to roster more effectively and to improve the overall cost effectiveness.

Consideration will be given in the future to the introduction of one person operation of locomotives. This will involve close liaison with the Safety Manager to ensure that safety in operation is not impaired.

1.8 Staff Reorganisation and Downsizing

There is little doubt that the Rolling Stock Unit is currently grossly over-staffed. This is due to a number of factors. The matter has not been helped by the present situation, which allows staff to remain at work after the official retiring age. Neither is the situation helped by the current low level of state pensions and this problem cannot be solved by the Rolling Stock Unit alone and must be tackled as an overall problems in Azerbaijan Railways. The current levels of employment is about 2,500 (excluding drivers and drivers assistants). It is likely that with improved management and working techniques this number could be reduced to substantially lower numbers in the region of 1,500 or less.

1.8.1 Management Organisation

The management organisation of the Unit is shown in the Annexe.

1.8.2 Staff Levels

The considerable reduction in both the freight and passenger traffic since 1990 has not been reflected by a corresponding reduction in staff numbers, although some effort has been made to reduce numbers by natural means.

The age profile of the shop floor staff is high. The people are old, there are too many, and young people of any ability have left for better paid work.

Staff productivity is very low, and a considerable increase in productivity, as well as a considerable increase in wage levels, can only be achieved by a reduction in numbers.

It is recommended that in setting up Business Divisions with accountability, there will be considerable scope for staff reductions in the Rolling Stock Unit.

It should at least be possible to obtain staff reductions as follows, with no adverse effect on operations, based on an initial 3% the first year during reorganisation, then 7% then following year, and subsequently 8% reduction per annum along the following lines :
Rolling Stock Maintenance Staff

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Year	1	2	3	4	5
Locomotive Department	1081	1016	945	879	817
Pass. and Fgt. Wagon Dept.	2281*	2144	1994	1854	1725
Allocated staff	15	14	13	12	10
Total	3480	3147	2952	2745	2552

*This figure includes Technical Examination Unit staff, most of whom will have to be transferred to Freight Business Unit.
It is assumed that all locomotive drivers, assistants and train crew are assigned to either the Freight or Passenger Business Units, but still undertake TO1 examinations and report back to the Rolling Stock Unit :

The drivers and assistant drivers have been removed from the above numbers. Other locomotive department staff such as shunters, fuellers etc to be transferred to the Business Units will have to be agreed.

The depot at Alyat employs 900 refrigerator train attendants who travel with the vehicles. It is assumed that they will be transferred to the Freight Business Unit, and they have also been taken out of the above figures.

In addition there are Wagon Technical Examination Units throughout the country, for shunting, examination etc. Their numbers are still included in the above Wagon Dept. staff, and the allocation must be agreed between the Rolling Stock Unit and the Freight Business Unit.

An opportunity exists to re-train staff in modern workshop practices such as quality programmes and world class manufacturing techniques. This involves participation by all levels of staff and an result in a big improvement in staff morale and big productivity gains.

This involves people working smarter but not necessarily harder.

1.8.3 Training

The main training needs of the ADDY Rolling Stock Unit will not be technical, but in relation to modern management skills, and western accounting and costing systems, and the creation of a commercially driven work ethos.

Western costing systems should be introduced, where costs are based on actual time taken for jobs, instead of costs derived from predetermined FSU "norms" giving standard times.

Materials management and stores stockholding is an area where training could be of great benefit. The old system was producer driven and has for example created considerable quantities of used spare units lying around all depots, when what was required was a system of unit exchange with the producer. There is no central system of control of spare parts, and even within depots control and housekeeping of parts leaves a lot to be desired.

The supply system in CIS does not appear to have adopted to meeting customer requirements, and having parts available for sale to support products, rather than producing parts as directed for distribution to a central plan. This may be an area where the EC could provide assistance in formulating better buyer / seller relationships by providing training in purchasing techniques.

Training in modern production control would also be required. Main control systems at present are based on hand written notebooks kept by individuals.

There would be considerable benefit in exposing ADDY staff to training with European railways for periods of, say, three to six months.

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1.9 Targets

In setting targets for the future it is important to be able to measure if progress is being made in the various areas of the business. Targets should be challenging but achievable and offer a great opportunity to staff to accomplish.

It is proposed to set the following targets.

- Introduce new organisation-within 3 months
- Introduce Project Implementation Units-4 months
- Prepare contacts for Freight and Passenger Business Units-12 months
- Agree allocation of offices and maintenance facilities-6months
- Introduce International Safety Rating System or equivalent –18 months
- Achieve Level 4 of International Safety Rating System or equivalent within 5 years
- Produce rolling 5 year Business Plan within 12 months
- Plan for introduction of MIS including coding system-4 years
- Improve locomotive availability to 85% within 5 years
- Reduce cost of maintenance by 30% within 4 years
- Improve locomotive reliability by 10% within 2 years
- Introduce through working of locomotives –1 year
- Dispose of surplus rolling stock 10% per year
- Improve availability of freight wagons 10% per year
- Improve availability of passenger coaches 10% per year.
- Introduce World Class Manufacturing techniques within 3 years

1.10 Investment Plan

There are no proposals in the current EBRD plan for investment in rolling stock.

The only proposals for investment in depot facilities is the Balajari Tank Washing Plant.

It is proposed to defer the investment proposals for Baku Wagon Works and to look at its possible relocation to a new site.

The investment plan of ADDY has been the subject of extensive study and evaluation as part of the Trans-Caucasian Rail Link Project and the proposals have been incorporated into the

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Corporate Financial Model. Brief details of the investment components are given in the table below.

Investment Plan & Sources of Finance				
Project	Cost in US$ Millions			
	EBRD	TACIS	Local	Total
Balajari Washplant	3.2	0.56	0.74	4.51

1.11 Financial

1.11.1 Key assumptions Income statement

The key planning assumptions used in the preparation of the Rolling Stock Business Unit projected income statements were as follows. It must be noted that the Passenger Services department has taken over the responsibility for the maintenance of Passenger Rolling stock and these costs are therefore included in the Passenger Business Unit Cost projections.

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
Locomotive Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- fuel (diesel & electric traction)	constant in real terms
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Wagon Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	5% increase per annum
- other costs (excluding depreciation)	5% increase per annum

1.11.2 Income statement

Expenditure is projected to increase by 57% during the period of the plan. The increase is predominantly due higher expenditure on materials and capital repair due to a combination of local inflation, growth in the level of traffic, which results in higher levels of activity. The backlog of maintenance activity has resulted in artificially low unit costs and these need to be adjusted upwards. The planned reductions in staff offset the projected increases in wages so that salaries and social insurance costs only increase by 47% during the period of the plan.

Passenger coach maintenance costs are not reflected in the income statement as these are currently included in the costs of the passenger service department by ADDY.

The locomotive fleet and the rolling stock fleet are much larger than required and therefore the costs of operations are based on operating requirements rather than existing levels of vehicle

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ownership. Scrapping or disposal of surplus vehicles needs to be addressed by ADDY during the period covered by the business plan.

Traction fuel costs rise by 55% during the period of the plan however it has been assumed that fuel prices remain constant in real terms. The increase in expenditure is due to a combination of inflationary increases and higher levels of activity.

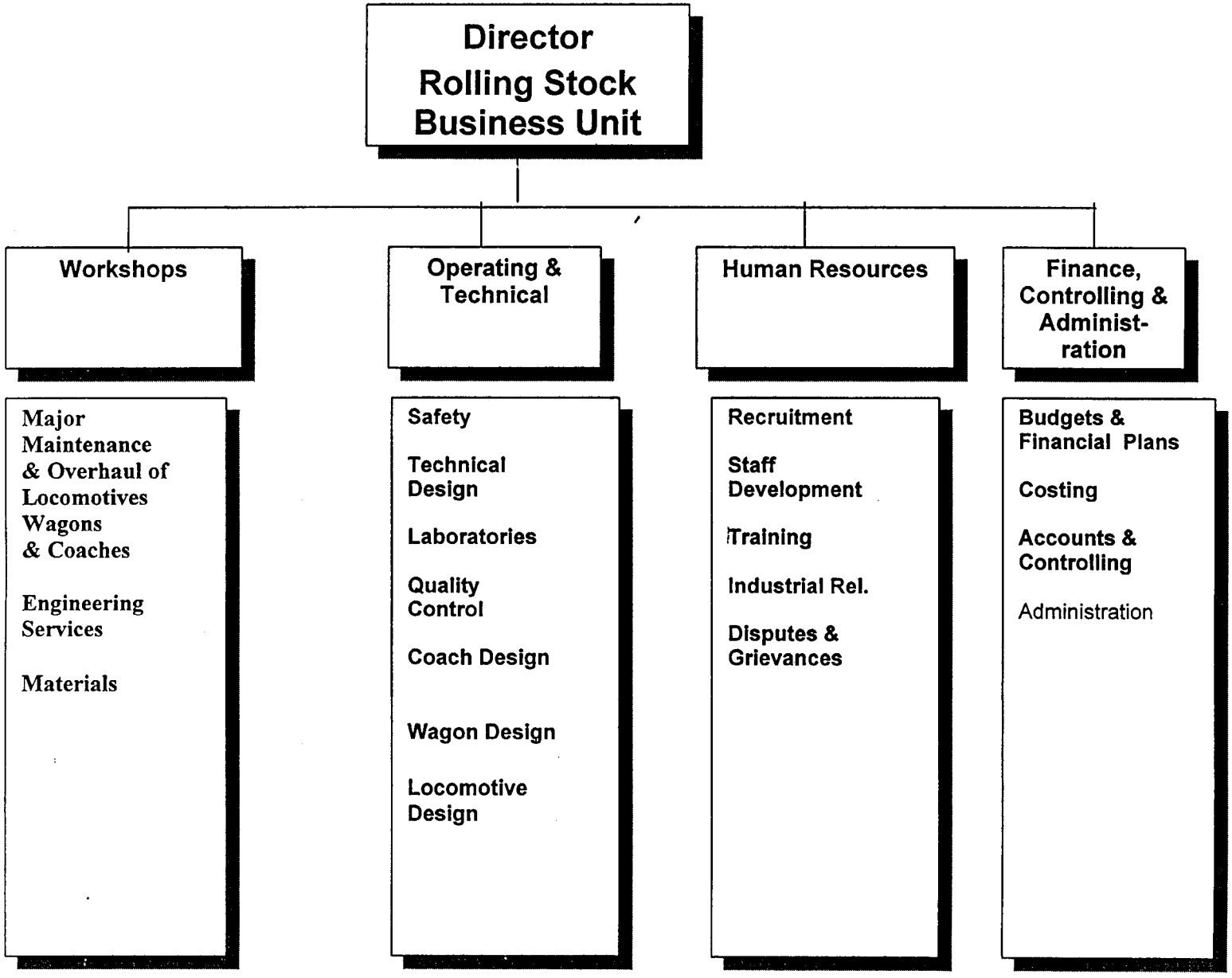
The expenditure of the rolling stock business unit is charged out to the Passenger and Freight Business Unit without any mark-up and therefore there is no reported net surplus.

Azerbaijan Railways
Table 13 : Rolling Stock Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Rolling Stock Revenue							
External Loco hire/demurrage etc	-	-	-	-	-	-	-
Salaries & Social Insurance	18.4	31.2	37.2	41.4	43.7	45.6	46.0
Materials	11.3	11.8	14.8	18.0	21.1	24.4	28.1
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	2.7	4.0	4.7	5.3	5.8	6.3	6.8
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	3.0	5.4	6.1	6.9	7.4	7.9	8.4
Depreciation	30.1	37.0	36.5	36.9	37.3	37.6	37.9
Capital Repairs	10.5	14.1	17.7	21.6	25.3	29.2	33.5
Other	13.4	8.6	10.9	13.3	15.5	17.8	20.3
Total Expenditure	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Passenger Business Unit Charges	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Freight Business Unit Charges	102.6	122.0	142.9	163.1	178.9	194.2	208.9
Total Charges	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Net Surplus/Deficit	- 0.0	0.0	-	-	-	-	-

Azerbaijan Railways
Table 14 : Rolling Stock Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Locomotives Department - Passenger							
(excl Drivers & Assistants)							
Salaries & Social Insurance	4.1	7.0	7.4	7.5	7.5	7.5	7.3
Materials	2.6	2.7	3.1	3.5	4.0	4.6	5.2
Diesel - Traction	4.9	5.5	5.7	5.8	6.0	6.1	6.3
Diesel - Other	0.4	0.9	0.9	1.0	1.0	1.0	1.1
Electricity - Traction	24.9	24.7	25.4	26.1	26.8	27.6	28.4
Electricity - Other	1.0	2.2	2.3	2.4	2.4	2.5	2.6
Depreciation	2.2	2.7	2.7	2.7	2.7	2.7	2.8
Capital Repairs	1.8	2.8	3.2	3.6	4.1	4.7	5.4
Other	3.3	0.8	0.9	1.0	1.2	1.3	1.5
Total	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Locomotives Department - Freight							
(excl Drivers & Assistants)							
Salaries & Social Insurance	4.0	6.7	8.2	9.3	9.9	10.4	10.5
Materials	2.5	2.6	3.5	4.4	5.3	6.3	7.5
Diesel - Traction	4.7	5.3	6.5	7.5	8.3	9.1	9.8
Diesel - Other	0.4	0.9	1.1	1.3	1.4	1.5	1.6
Electricity - Traction	23.9	23.7	28.8	33.7	37.3	40.7	43.9
Electricity - Other	0.9	2.1	2.5	2.9	3.2	3.5	3.8
Depreciation	2.1	2.6	2.6	2.6	2.6	2.6	2.7
Capital Repairs	1.7	2.7	3.6	4.6	5.5	6.6	7.8
Other	3.1	0.7	0.9	1.2	1.4	1.7	2.0
Total	43.3	47.3	57.7	67.6	75.2	82.4	89.6
Wagons Service							
Salaries & Social Insurance	10.3	17.5	21.6	24.6	26.3	27.8	28.2
Materials	6.2	6.5	8.3	10.1	11.8	13.5	15.4
Diesel - Other	1.9	2.2	2.7	3.1	3.4	3.8	4.1
Electricity - Other	1.1	1.1	1.3	1.6	1.7	1.9	2.0
Depreciation	25.8	31.7	31.3	31.6	31.9	32.2	32.5
Capital Repairs	7.0	8.6	10.9	13.4	15.6	17.9	20.3
Other	7.0	7.1	9.0	11.1	12.9	14.8	16.8
Total	59.3	74.7	85.2	95.5	103.7	111.8	119.3


Director
Rolling Stock
Business Unit
Workshops
Operating & Technical
Human Resources
Finance, Controlling & Administ-ration
Major Maintenance & Overhaul of Locomotives Wagons & Coaches
Engineering Services
Materials
Safety
Technical Design
Laboratories
Quality Control
Coach Design
Wagon Design
Locomotive Design
Recruitment
Staff Development
Training
Industrial Rel.
Disputes & Grievances
Budgets & Financial Plans
Costing
Accounts & Controlling
Administration

RESTRUCTURING OF AZERI RAILWAYS

CORPORATE AND OTHER ACTIVITIES : BUSINESS PLAN 1999 - 2003

RESTRUCTURING OF AZERI RAILWAYS

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CONTENTS

1 INTRODUCTION

The Government of Azerbaijan with the support of Tacis and the EBRD decided to undertake a major restructuring study of the railway in 1998. This restructuring, would include not only the assets and operations but would also require that the Institutional and Organisational position of the railway be looked at and proposals for improvement developed and implemented.

C.I.E. Consult carried out an assignment in the Caucusus in 1997, at the request of EBRD and made recommendations for investment in the infrastructure and in certain workshops. The Azeri Railways requested a loan from the EBRD to carry out this work. The present study is defining and specifying in more detail the work involved. The servicing of the loan is a major issue. It will be necessary for Addy to adopt a commercial approach in its activities and this will require a fundamental change in its management structure and institutional base.

In response to the TOR a Business Plan for the 5 years 1999/2003 to cover Corporate and other Activities was developed. This plan deals with legal and institutional issues, transport policy and proposes a new management organisation for Addy. It includes a Financial Model which was developed to project the financial position of the railway in accordance with predicted changes in revenue and expenditure.

A special study on the legal position of the Railways was undertaken. The recommendations of a similar study in Georgia were made available for discussion and consideration. The Azerbaijan Railways have an unusual position in that they have no Ministry of Transport, a position that is in course of correction.

The Policies of the Ministry with regard to the railway and its position in the national transport scene were closely examined. Recommendations were made as seen to be appropriate.

The Management Organisation was reviewed and proposals made for improvement. A change of such magnitude is a big undertaking and will require legal support. This is included in the legal recommendations. It will also have a fundamental effect on the management and will call for careful implementation.

IT was seen as critical to the development of MIS and to increasing efficiency in administration, particularly at Corporate level. However, there are no investment allocations at this stage.

Business Plans for the 5 years 1999/2003, to cover the major activities, have been prepared as follows:

Passenger
Freight
Rolling Stock
Infrastructure

Commentaries were prepared on the above and are included. In addition commentaries on Legal Considerations, State/Railway Relationships, IT, the Environment and Human Resources were completed.

The proposals for investment in the Tank Wagon Workshop in Baku have had to be postponed pending decisions on the plans which are being reviewed.

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2 LEGAL CONSIDERATIONS

2.1 Introduction

It is understood that a railway law has been drafted some years ago but this draft has not been acted upon. The TRACECA model draft has also been furnished to the government.

A Ministry of Transport does not presently exist. By decree of the President dated 5th August 1998 a Ministry of Transport is required to be established and given, inter alia, responsibility for railway transport. It is anticipated that the Ministry will be established following the October Presidential election. It would normally be expected that this Ministry will take some time to determine its structure and functions. The decree was made by the President pursuant to his powers under Article 109.7 of the constitution of Azerbaijan.

Guidance notes on a suggested draft law have been prepared. The latter have to do with essential components of anew railway law which could be along the lines of that prepared for Georgia.

2.2 Legal Framework

To date the railway administration has come within the functions of the Cabinet of Ministers. By decree of the Cabinet of Ministers No. 171 dated the 8th August 1995 the charter/regulations of the Azerbaijan state railways was established. The main provisions are:

- Azerbaijan state railway is a state owned enterprise under the Cabinet of Ministers.
- Azerbaijan state railway operates having regard to the law "On enterprises", is a legal entity, may conclude contracts and exercise property and non property rights and duties, sue and be sued.
- It has a separate balance sheet and operates on a self supporting and self financing basis.
- It represents railway interests nationally and internationally and may enter into joint ventures.
- It has its own legal personality.
- Its objectives are essentially railway orientated but also include social matters for the benefit of employees.
- Its property belongs to the state; Azerbaijan state railways exercises the property rights.
- Azerbaijan state railways is not responsible for government obligations and *vice versa*.
- The budget of the railways is independent of the state; profits remain at the disposal of the railway.

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- The head of the railways is appointed by the Cabinet of Ministers with the agreement of the President. The Deputies are similarly appointed but are subordinated to the head of the railways. The departmental heads are appointed by the head of railways.

- The head of railways with the deputy heads and other senior staff, workers and other employees form the Board of Azerbaijan state railways; the number and membership is subject to the approval of the Cabinet of Ministers.

- The head of railways, in case of disagreement, implements his own decisions and must report the disagreement to the Cabinet of Ministers. The members of the Board may separately express their opinion to the Cabinet of Ministers.

- Executive authority resides with the head of railways.

The existing railways administration is capable of functioning with a high degree of autonomy; nevertheless in order to operate commercially certain changes are indicated, which are dealt with in the recommendations below.

The law "On enterprises" (at Article 1) provides that an enterprise is ".....an independent economic unit ..... producing and selling products, carrying out works and rendering services to satisfy public needs and to gain profit". The reference to this law in the charter of Azerbaijan state railways is indicative of an intention on the part of the Cabinet of Ministers that the railways shall be allowed commercial freedom.

International traffic is dealt with on the basis of international agreements dating from 1951 and updated in January 1998. Within the countries the USSR regulations still operate.

2.3 Recommendations

- It is recommended that the charter of Azerbaijan state railways should be changed to accommodate the organisational structure, accounting and reporting procedures contained in the management re-organisation proposals listed in the restructuring study.

- Consideration should be given to the future incorporation of Azerbaijan state railways as a joint stock company, with the railway infrastructure remaining the state property made available to all railway operators including Azerbaijan state railways.

- A railway law should be enacted to replace the 1991 law, and should address the following issues.

- The code should legislate for railway transport as a system of transport rather than as a state monopoly.

- In the case of Azerbaijan state railways it should provide that management, within the context of a performance agreement, shall be independent in the direction, management and administration of its enterprise and from the administrative and economic control and internal accounting of the state, and managed according to the principles which apply to commercial companies.

- It should provide for a definition of what constitutes "railway infrastructure"; railway infrastructure should be owned by the State; management of the infrastructure should in future be undertaken on behalf of the State by Azerbaijan state railways on

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the basis of a commercially orientated contract, to be interlinked with the performance agreement referred to below.

In this way the State will be fully informed of where the money is being spent and on the physical state of the infrastructure and participate in the planning process in accordance with the objectives for railway transport.

- It should require that the accounting system of Azerbaijan state railways and any other railway enterprise clearly it separates infrastructure matters from other activity, that separate accounts are maintained in respect of freight transport and passenger transport and in respect of public service obligations, thus ensuring transparency and financial matters.
- It should require a formal business planning process on a "rolling" 5 year basis.
- It should guarantee freedom of tariff setting and freight transport except to the extent that monopoly situations need to be addressed.
- It should recognise that where the government imposes any non commercial obligations to operate loss making services or to offer uneconomic discounted tariffs to particular groups of customers then the government should observe the principle that financial compensation ought to be paid in respect of such services.
- The stripping out of social services from the railways should be facilitated.
- Private sector participation and investment should be encouraged.
- Environmental protection laws should be applied to the railway.
- A system of licensing of the competence of railway operators and their rolling stock should be provided, to apply to international as well as to international operators. All licensed operators should be eventually entitled as of right to access to the railway infrastructure on non discriminatory terms.
- It should provide for State supervision of railway safety through the appointment of inspectors and the making of regulations. This function should be a Ministry function rather than a function of Azerbaijan state railways.

2.4 Draft Railway Law

In a developing situation, it is a better approach to provide a framework permitting transition and development at a pace which is sustainable. If the law is too elaborate, it will not be fully observed, for reasons of practicality, and this will tend to undermine the law as a whole.

Amendment of the model code, if it is to be used, is therefore indicated. As an alternative, regard might be had to the draft law prepared for Georgia. This draft consists of amending the existing law, and follows the principle currently being applied or proposed within the countries of the European Union, and allows for the implementation of the recommendations of this report. Amendment to allow for the local differences could be undertaken by the Ministry of Transport as one of its initial products following its establishment. It is strongly recommended that a framework approach should be adopted allowing flexibility that will enable the development, without legal impediment, of a successful railway transport system.

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3 STATE/RAILWAY RELATIONSHIPS

3.1 The need for External Restructuring

The report proposes a reorganisation of ADDY. This will not, however, be sufficient to prepare the present railway administration of Azerbaijan for the future challenges. As was the case with railways in most Western European countries Azerbaijan Railways need entrepreneurial autonomy in order to survive and perform well in the arising national and international transport market. This can only be achieved if the relationship between the state and ADDY is completely reshaped. We call this the external reform of ADDY. A number of good reasons can be given to the Government of Azerbaijan why the ongoing discussion of the draft for a new railway law should be used to get the reshaping process started.

At the moment Azerbaijan Railways established as a state enterprise with its own charter

Works to old Soviet norms
Lacks autonomy
In addition to rail transport is a provider of social services-education, hospitals.
Lacks entrepreneurial spirit
Provider of uneconomic passenger services

3.2 Appraisal of Present Situation

3.2.1 Need to save public money

As the experience in other parts of the world has shown railway restructuring and streamlining can essentially reduce the financial burden on the government (and the tax payer) and set free capital that might be used to develop the railway system faster or spent for other purposes.

3.2.2 Need to attract private capital

It would also be a benefit for the government budget if private capital could be attracted to investing into some of the rail activities. Prerequisites for interesting private capital are efficiency and business profitability or at least a solid prospect for it.

3.2.3 Role of banks

Generally development banks will lend money to organisations if they are satisfied that that there is a sufficient return on investment and the investment meets the strategic objectives in the development of the economy of the country.

3.2.4 Present monopoly position of ADDY

The present monopoly or Azerbaijann Railways will not last as the Azerbaijann market economy develops. A market economy will be introduced, road infrastructure will improve essentially under the pressure of the owners of private cars, and the emerging freight truckers will take advantage of this, and as the experience with other countries of the former Soviet Union shows,real competition for the railways will arise.

It is therefore in the interest of the Republic of Azerbaijan that ADDY transforms itself into an efficient, market driven organisation ready to compete with road operators.

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3.2.5 International dimension

The railways in Azerbaijan form a vital link between east and west and vice a versa. The route between Baku in Azerbaijan and Poti in Georgia represents the main TRACECA route from China to Europe and connects with the EU CORRIDOR No 4. While connections to Armenia are currently closed due to the political unrest hopefully this will be resolved in due course.

Addy will continue to play a strategic role in this corridor and this role must be recognised.

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4 POLICY ISSUES

There are a number of major Policy Issues which will have to be considered as part of the restructuring process. These are set out below:

4.1 Harmonisation of competition

It is in the state interest to have competition in the transport sector in such a way as hidden subsidies are eliminated and that there is a "level playing field" for all transport modes.

This is particularly true for road and rail. The cost of road infrastructure is often carried and hidden in a central budget, and is not recovered from trucks, cars, and buses which use the road infrastructure. On the other hand the cost of renewing, and maintaining the railway infrastructure is clearly identifiable and is charged in full to the railway. This is a matter which should be addressed taking into account the external costs of both road and rail transport modes.

4.2 Government managed enterprise

The experience in the countries of Western Europe with a tradition of state owned companies and heavy state participation in the economic activity of the country has shown that in the long run this is not only very costly but also very often inefficient. State run enterprises have enormous difficulties to compete with private ones in the deregulated market. However, it is not recommended that Addy be privatised at this stage.

4.3 Incompatibility of government's and railway's interests

The hierarchical subordination of the railways under the government can lead and mostly does lead to management decisions that are not compatible with the entrepreneurial, particularly commercial, interests of the railways, which will have to obey the rules of the rising transport market.

4.4 Public service obligations

One of the objectives of the state should be to ensure the continuing availability of social passenger services at an affordable price in certain circumstances. The service should be provided in a cost-effective way by means of a Public Service Obligation contract.

4.5 Price Controls

While it is recognised that Government have a role in fare determination Tariff levels are a commercial matter and should be left to the Freight Managers. Concession fares are on the other hand also commercial.

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4.6 Human Resources

Restructuring will inevitably give rise to staff downsizing. In an organisation like Addy it is a social problem. It is a matter for the state to deal with. It will be necessary to finance early retirement, training and retraining. There will have to be a "Social Safety Net " to deal with redundancies.

4.7 Third Party Access

This would allow private or state railway companies to operate with their own trains on the state infrastructure and compete for business. The new Railway Code should provide for this.

4.8 Freight Forwarders

It is understood that most traffic movements with an international dimension is organised by freight forwarding enterprises and this role has passed from being operated directly by the railways to private limited companies. These play an important role in developing business for the railways, and is an example of part privatisation. The number of freight forwarders operating will ensure a competitive situation.

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5 PROPOSALS FOR A NEW STATE/RAILWAY RELATIONSHIP

5.1 Existing Situation

As was the case in West European countries before the restructuring of their railways it seems that the Azerbaijan Government plays a multi-functional role vis-à-vis ADDY, namely as :

- the requirer of services of public interests from the railway;
- the owner of the railway
- approves ADDY's capital needs;
- the political institution getting involved in railway matters on behalf of the general interest of the country.

These four functions are carried out arbitrarily in daily administrative management. The result is a lack of transparency in the relationship between state and railways, which makes it difficult to fix business responsibility, and prevents a clear answer to question whether ADDY as a whole or its individual performances are micro-economically profitable or not. It also bears the heavy risk that public money is wrongly allocated.

The existing relationship between state and ADDY should be changed in the sense that entrepreneurial and state functions should be clearly separated and excessive involvement of the state in the business management of railways eliminated.

5.2 The Future role of Government

The future role of Government initially would be that of:

- the owner, of the railway enterprise (not the operator which will be operated under commercial principles).
- the railway sector supervisory authority, particularly concerning safety, guaranteeing fair competition between the modes, licensing railway enterprises and deciding on transport policy in general,
- the purchaser of all services which are in the global interest of the Republic of Azerbaijan and defined in private law contracts between ADDY and the purchasing bodies,
- the provider of finance for the investments into the transport infrastructure

It is also recommended that not all of the remaining state functions should be performed by the same government body, like for example the proposed Transport Ministry, but by several.

5.3 The Role of the State with Respect to Infrastructure

The railways are of vital importance to the economy of the country. The railways forms the main transport link between east and west. For these reasons it is the consultants view that the infrastructure should always remain the property of the state.

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5.4 Fair Competition

At present the Government is responsible for the development of the road system in Azerbaijan. It seems only logical that in the in order to provide fair competition that the Government should have the responsibility for developing and maintaining the railway infrastructure.

Part or all of the cost of this investment should come from charges, which would be imposed on the railway operators as will be described later

5.5 Regulation of the Railway

Nowadays most of the World's Railways are regulated and supervised by a Railway Department in the Ministry of Transport. It is recommended that the Government of Azerbaijan give consideration to the setting up of such a Division.

5.6 Further Restructuring Options Proposed - Third Party Access

As the political aim should be to discourage monopolies but to encourage efficient rail transport on a general basis, third parties should not only be allowed to build and operate access lines but to operate freight and passenger trains on the main network. There they would be in competition with ADDY. They would have to pay the same user fees as the operating Business Units of ADDY (discussed later) and should not be discriminated against in any way.

5.7 Accompanying Measures Needed

It is recommended that other modes, particularly road traffic (private car and truck) should bear infrastructure costs to the same extent as the railways in the medium and long term. This could be achieved via the existing road tax, a fuel tax or other means of taxation. External costs should for all modes be included as far as possible in order to avoid wrong allocation of scarce investment money in the interest of the country as a whole. Noise, pollution, need of land, energy consumption, accidents etc have to be taken into account.

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6 INTERNAL REORGANISATION OF ADDY

6.1 Introduction

The re-structuring of ADDY cannot be achieved satisfactorily unless a new management organisation structure is put in place. The present organisation has served the railway well over the past few years since the break-up of the former Soviet railway system in laying the basis for a separate independent national railway administration of Azerbaijan.

As has been underlined there are many reasons plead in favour of adapting the existing organisation to future needs and challenges. ADDY must urgently be made more efficient and customer-oriented, must reduce its production costs, and reach a higher degree of transparency in its decision making process in order to be prepared for the rising transport market in an increasingly deregulated economy.

It is generally considered desirable to have separate funding, accounting and management for infrastructure, which may have to be supported in the general interest.

There is a need for greater commercial freedom and separate accountability in the provision of passenger and freight services.

6.2 Present Organisation Structure

The present organisation structure of ADDY is characterised by a strict top down management.

The railway organisation is formally headed by the Director General who co-ordinates the different services. The Director General is appointed by the Cabinet of Ministers with the agreement of the President. The organisation is of the functional type with over fourteen people reporting directly to the Director General.

It is largely influenced by the existing state-railway relationship. There is significant scope for rationalisation of activities and functions within the present structure. Re-organisation can, above all, lead to more transparency in the management process and define responsibilities better. The establishment of a new relationship between state and railway organisation as proposed above is, however, a prerequisite for a successful re-organisation.

Though the organisation of ADDY could be significantly improved, while retaining a functional structure, we do not consider that this approach would be sufficient to meet the challenge of the future. Our proposals for a new organisation are based on a new type of structure, which will provide a new type of structure for the future development of Addy.

6.3 Proposed Management Organisation Structure

6.3.1 Overall Structure

A proposed new organisation structure chart is shown in the report. It is based on the principle of separate Business Units for passenger and freight services which are the main commercial activities of ADDY, with service units for both the rolling stock and infrastructure.

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There is also provision for the establishment of a Corporate Services Group which would supply services to the Business and Service Units.

6.3.2 Business and Service Units

The separate establishment of the Infrastructure Service Unit will introduce costing transparency in this sector and will facilitate potential third party operator access in the future. We propose that many functions be devolved to the SBUs; however there are other tasks which should be retained at ADDY headquarters outside the Business Units because they can be provided centrally more economically and effectively, or because they are essential to enable ADDY to operate as a single corporation. For this purpose we recommend the establishment of a unit for Corporate Services.

Business Units should be responsible for its own marketing and sales, be they performed within or outside the corporation, for the operation of its services, the management of its own staff and its own accounting and controlling. This will create specific cost consciousness, will allocate profit responsibility to each Business Unit for the services it provides, and also give control over the resources it needs to achieve profitability.

Each BU will operate very much like a private commercial company. The guiding principle for a new organisation structure in detail must be that the Business Unit Management has a maximum influence on the development of costs related to its performance output.

Another leading principle to be applied is that decisions should be taken as far as possible at the level on which the value is added.

6.3.3 Supervisory Board

The new proposals call for the setting up of a Supervisory Board. This Board of Directors would be appointed by the government (as the shareholder) and generally consist of about ten people who would have a variety of skills including business people, an accountant and a person with marketing skills. These would be all non executive directors.

Traditionally in western Europe the Chief Executive and Director Finance also sit as members of the Board but we understand under present legislation this may not be possible in Azerbaijan. It is also common to have trade union representation on the Board.

6.3.4 Executive Board

We propose that each of the Business Units, Service and Headquarters Units be led by a Director. These six Directors under the Chairmanship of the General Director, will constitute the Executive Board. The Executive Board should meet regularly in order to co-ordinate the activities of ADDY.

The Executive Board - chaired by the Director General - will be the supreme executive organ responsible for overall direction of ADDY in accordance with the corporate mission, strategy, policy and budget as established by law or as agreed with the Cabinet of Ministers.

The Executive Board will co-ordinate the activities of the Business Units and the Services Units, monitor their performance and take corrective action where necessary.

6.3.5 Corporate Service Group

The services which we propose to be grouped in the Corporate Services Unit are:

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Corporate Planning,
Finance & Controlling,
Computer Systems,
Procurement and Real Estate.
Organisation,
International Relations,
Human Resources,
Legal Services and Audit.

An organisation chart is attached.

6.3.6 Freight Business Unit

The Freight Business Unit will have its own marketing and planning, sales, stations as well as operating and technical, finance/controlling/administration and human resources functions with corresponding managers. It will develop and sell freight services in the national and international markets.

It will employ, manage and develop its own staff. It will prepare its own financial plans and budgets, and define its products/services. It will operate as a self-contained business with profit responsibility, within the overall corporate goals and strategies of ADDY, and in collaboration with the other Business and Services Units in ADDY.

6.3.7 Passenger Business Unit

Like the Freight Business Unit, the Passenger Business Unit will be independent and self-contained. It will be structured in a similar way with managers responsible for marketing and planning, sales, stations, operating and technical, human resources and finance/controlling/administration.

6.3.8 Infrastructure Service Unit

We propose that all infrastructure activities and functions should be grouped together in an Infrastructure Service Unit. This will facilitate separate accounting for the infrastructure and possible funding from public sources and thus make it much easier to prevent cross-subsidisation between the different functions in the Corporation. . This facilitates an equal treatment of all modes and thus permits harmonisation of competitive conditions. The establishment of a separate Infrastructure Service Unit will also facilitate charging for use of the infrastructure and access of third party operators, if that is considered desirable at some time in the future.

The Infrastructure Service Unit will be self-contained with its own managers for planning and for sales of train paths, for path management and operating, construction, track maintenance, signalling and communications, human resources, and finance/controlling/administration.

The Infrastructure Operations Manager will carry responsibility for central dispatching, controlling track capacity and train running for both passengers and freight. He will be responsible for the overall timetable and will have a neutral position with respect to selling train paths to the Freight Business and Passenger Business Units of the Corporation or to third party operators.

6.3.9 Rolling Stock Service Unit

We propose the establishing of Rolling Stock Service Unit, which will carry out maintenance and overhauls for the Passenger and Freight Business Units on locomotives, passenger carriages, and freight wagons. It will operate as an autonomous enterprise with its own technical, workshops, accounts and human resource managers. It will negotiate contracts for the supply of maintenance services to the Passenger and Freight Business Units. The option

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should be kept open for the Rolling Stock Unit to own rolling stock, which it would then lease to the Passenger and Freight Units to other licensed operators.

The Rolling Stock Unit will be encouraged to provide engineering services to third parties on a commercial basis. There should be potential for expansion of profitable business, especially from industrial railways and other adjoining railways.

6.3.10 Management Relationships with ADDY

It is recommended to create a selling/buying relationship between the Business Units. One of the main selling/buying relationships will be the one between the Freight and Passenger Business Units on one hand, and the Infrastructure Business Unit and Rolling Stock Units on the other. The former will be responsible for a well functioning railway network, setting up train paths and selling them to the operating units, who will pay user fees on a train-km basis. The Rolling Stock will lease the rolling stock to the Freight and Passenger businesses.

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7 CORPORATE BUSINESS OBJECTIVES 1999/2003

- Assist Ministry of Transport and Government in enacting new Transport Legislation.
- Consult with Ministry on a new approach to State/Railway Relationships and the introduction of policies to govern the emerging changes in the transport area.
- Assist and advise Minister and Ministry on setting up of new Board
- Set up Executive Board
- Agree with the Ministry the basis of a PSO contract
- Complete the internal management reorganisation of the railway by 2001
- Develop the investment plans on an ongoing basis
- Reduce Corporate Services Staff from 386 to 271 over the period
- Reorganise the IT section as recommended. Make plans to computerize all the major administrative activities. Develop MIS and TMIS.
- Monitor the progress of the Business and Service Units. Roll over the targets of their business plans annually.
- Check on corporate staff movements and costs on an ongoing basis.
- Introduce Training Programmes at all levels starting with management
-

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8 FINANCIAL PLAN

The consultants have developed a corporate financial computer model in order to achieve two objectives :

- To demonstrate the impact of specific recommended measures on the financial performance of the railway;
- To make the economics/accounting personnel of the railway familiar with the techniques of financial modelling in order that they may develop their own financial projections in future.

The key assumptions used in the preparation of the financial forecasts are set out below. The draft financial projections that are presented in this report will form the basis of discussions with the railway at which time the consultants will seek to involve railway managers in the preparation of a revised financial projections. This process of communication is an essential part of gaining local management acceptance of the changes proposed and also provides an opportunity for the railway to become actively involved in the preparation of the plan.

The structure of the corporate model is discussed in detail in a separate report and a brief summary of the output from this model is provided as part of this corporate plan for ADDY.

Output from the Corporate Financial Model

Income Statements

- ***Projected Business Unit Income Statements*** : Projected income statements are produced for the Freight and Passenger Business Units, and projections of costs for the Rolling Stock Business Unit, the Infrastructure Business Unit, and Administrative Services Unit. The costs of the Rolling Stock Business Unit, the Infrastructure Business Unit and the Administrative Services Unit have been charged to the Freight and Passenger Business Unit. These costs have been charged out in the cost projections in order to establish the principle that the freight and passenger units will pay for the services they receive. The exact size of the charges will have to be determined through a process of negotiation between the business units.

- ***Projected Consolidated Income Statements***: The model also produces a consolidated income statement for the total railway. Even after the restructuring of the railway into separate business units it will still be necessary to produce consolidated or "group accounts" for the railway which summarises the overall financial results for all of the business units.

Cash Flow Statements

The model produces projected cashflow statements for the total railway. To produce meaningful cashflow statements for the new Business Units it would be necessary to have opening balance sheets for each unit and these are not currently available. The cashflow statement reflects the impact of the investment programme and the repayment of the EBRD loan which at this time is deemed to be the responsibility of "the railway" and not of individual Business Units.

Consolidated Balance Sheets

The model produces projected balance sheets based on the opening balance sheet position as at 01.01.1998. The balance sheets are completely automated and any changes made to the corporate model will be carried through to the balance sheet.

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When the railway has had an opportunity to determine the split of assets and liabilities between the business units and produce individual balance sheets for them, then the model should be updated to project these business unit balance sheets.

8.1.1 Key Assumptions

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
General economic parameters	
- Inflation	- inflation of 5.0% per annum from 1999 to 2003
- Exchange rate	- base 3,850 to US$ in 1998, strengthening to 3,266 in 2001 and to 2,947 in 2003
Freight Traffic and Revenue	
Freight Volumes	
- Export oil	(1999 +22.8%),(2000 +15.3%), (2001 +3.2%), (2002 - 0.4%), (2003 -2.8%) (Tariff elasticity -0.5)
- other international freight	(1999 +13.1%),(2000 +9.0%), (2001 +6.0%), (2002 +6.3%), (2003 +6.6%) (Tariff elasticity -0.2)
- local freight	(1999 +4.2%),(2000 +4.2%), (2001 +4.2%), (2002 +4.2%), (2003 +4.2%) (Tariff elasticity 0.0)
Freight Tariffs	
- Export oil	reducing by 10% in 1999, and by 5% per annum in real terms thereafter
- other international freight	reducing by 6% in 1999, and by 5% per annum in real terms thereafter
- local freight	stable in 1999 and increasing by 10% in 2000 and 2001, and by 5% in 2002 in real terms
Passenger Traffic and Revenue	
Passenger Volumes	
- international/long distance	3% per annum (tariff elasticity -0.5)
- suburban services	1.5% per annum (tariff elasticity -0.5)
Passenger Tariffs	
- international/long distance	increasing at 1% per annum in real terms
- suburban services	increasing at 1% per annum in real terms
Freight Operating Resources	
- loco fleet	Requirement for 160 loco's declining to 113 by 2003
- loco's per train	1.32 loco's on average per freight train
- wagon fleet	2000 wagons increasing to 2448 wagons in 2003
- wagons per train	34.4 wagon per train increasing to 35 in 2003
Passenger Operating Resources	
- loco fleet	requirement for 44 loco's declining to 37 by 2003
- loco per train	average of 1 loco per train
- EMU's	24 EMU sets declining to 22 by 2003
- passenger coach fleet	350 declining to 237 by the year 2003
- passenger coaches per train	average of 4.0 remaining constant
Operating Costs	
Passenger Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum

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Freight Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Traffic Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Locomotive Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- fuel (diesel & electric traction)	constant in real terms
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Wagon Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	5% increase per annum
- other costs (excluding depreciation)	5% increase per annum
Track Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Signalling	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Electricity Supply	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum

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Buildings	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Administrative Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Ancillary	
- labour productivity	Staff reduction (1999 -0%), (2000 -4%), (2001 -100%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001,
- materials	
- other costs (excluding depreciation)	
Working Capital	
- accounts receivable	90 days in 1999 remaining constant to 2003
- accounts payable	90 days in 1999 remaining constant to 2003
- inventory	193 days stock in 1999 reducing to 120 days by 2003
Investment	
- project investment (US$ 1998)	$10 million in 1999, $24.0 million in 2000
- other investment (billions manats)	38 billion manats in 1998, 60 billion manats per annum from 1999 to 2003
- rolling stock refurbishment	refurbishment as required by freight and passenger business units
Funding	
- Sources of Funds	EBRD $20 2million (1999-2000) No other foreign loans
- Borrowing Terms	EBRD 7% for 21 years (3 years grace)
- Government Contribution	None
Public Service Payments	20 billion manats in 2001, 2002, 2003

8.1.2 Financial Statements

Consolidated Income Statement

The financial statements produced as part of the draft business plan for ADDY must be regarded as a starting point for further discussions with management on the future of the railway. They are baseline projections which will be modified once senior management have had the opportunity to review the document and comment of the changes that have been proposed by the consultants.

The traffic and revenue projections are consistent with data prepared for the EBRD by CIE Consult and presented as part of the Trans-Caucasian Rail Link Project report. The projections used are those contained in the Base Case scenario of that document.

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The financial projections for ADDY are based on estimates of departmental expenditure data provided to the consultants for the full year 1998.

Passenger Revenue: Growth in passenger traffic up to 2003 of 11.0% is modest and the increase in passenger revenue is largely a reflection of the application of a real increase in passenger fares of 1% per annum throughout the period of the plan. Cost recovery on passenger services in very low and the financial data that is available indicates that passenger services do not even cover the costs of the passenger service unit. Cross subsidisation of passenger services from profitable freight services must be phased out. Support from the State will be required for essential social services and based on the preliminary allocations of costs to the Passenger Business Unit a figure of 20 billion manats per annum has been included from the year 2001. Rationalisation of services is essential if ADDY is to eliminate any residual losses in the passenger business that remain after the payment of the PSO.

Freight Revenue : Growth in freight traffic between 1998 and 2003 is set at 46.7%. Tariffs for export oil and other international freight are set in US$ or Swiss Francs and so to compensate for the projected strengthening of the manat a reduction in tariff levels has been incorporated into the Business Plan. Domestic tariff as assumed to remain stable in 1999 but to increase by 10% in 2000 (real terms) and by 5% per annum up to 2002.

- ***Domestic traffic*** is forecast to increase by approx 4% per annum over the period of the plan in line with forecast growth in GDP. This category represents about half the current tonnage carried by ADDY and is dominated by the transportation of refined oil products from SOCAR's Baku refinery. Construction traffic, mainly consisting of sand and gravel, is the other major domestic traffic, and it is mostly hauled from the north west of Azerbaijan to the Baku region.

- ***Exports Oil*** traffic is increasing and a major factor in the growth in this traffic is the quantity of Tengiz oil carried for Chevron to Batumi on the Black Sea. Growth in this traffic is expected to be strong in 1999 and 2000 and it will begin to taper off in 2001 and it will decline slightly in 2003 and 2003.

- ***Other International traffic*** This category includes import traffic which is dominated by general freight and the main commodities include grain, flour and sugar from the Black Sea ports and Russia, cement from Turkmenistan and steel from Russia. It also includes transit traffic which mainly consists of cotton westbound from Uzbekistan to Poti and refined oil products from Turkmenistan. Eastbound transit traffic consists of grain for Uzbekistan, together with general manufactured goods and food products. Growth in other international traffic is set to be 22% between 1999 and 2000 and average out at 6% per annum for the period 2001 to 2003.

  Azerbaijan Railways operating costs, expressed in current prices, grow by 50% between 1998 and 2003.

Staff numbers are projected to decline by 30% over the period of the plan spread across all of the Business Units but the financial impact of this is eroded by the projected increases in real wages. Salaries are assumed to increase in by 5% per annum for the entire period of the plan. These increases are in addition to inflationary adjustments. and are broadly in line with the level of increases contained in the financial projection produced for the EBRD and presented as part of the Trans-Caucasian Rail Link Project report.

Expenditure on materials and capital repair grow by 112% during the period of the plan. The increase in due to a combination of local inflation, growth in the level of traffic which results in higher levels of activity and assumed increases in expenditure. It has been assumed that the Rolling Stock Business Unit will increase it expenditure on materials by 10% per annum in the Locomotive Department and by 5% per annum in the Wagon Maintenance department. It has been assumed that the Infrastructure Business Unit will increase expenditure by 10% across

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all its departments during the period of the plan. The backlog of maintenance activity has resulted in artificially low unit costs and these need to be adjusted upwards.

The locomotive fleet and the rolling stock fleet are much larger than required and therefore the costs of operations are based on operating requirements rather than existing levels of vehicle ownership. Scrapping or disposal of surplus vehicles needs to be addressed by ADDY during the period covered by the business plan.

Fuel costs rise by 49% during the period of the plan however it has been assumed that fuel prices remain constant in real terms. The increase in expenditure is due to a combination of inflationary increases and higher levels of activity.

Depreciation is shown in the Business Plan based on asset values shown in the ADDY balance sheet and the projected levels are consistent with the figures contained in the EBRD financial projections. The increased charges for depreciation compared to 1997 reflect the impact of the proposed investment.

The projected net income shown in the Business Plan is positive through the period 1999 to 2003 however it is assumed that the Government is contributing to the support of socially necessary passenger services from 2001 onwards.

Consolidated Cash Flow

Operating cashflow is positive from 2001 onwards which will allow ADDY to fund a significant amount of maintenance activity to clear the backlog that has arisen in recent years. This rehabilitation work will supplement the investment programme that is being funded by the proposed EBRD loan. The growth in freight traffic provides the funds to support the projected increases in wage rates and higher levels of expenditure on materials and capital repairs. The assumed funding of passenger services by the State contributes 60 billion manats cumulatively to the cash flow and overall cashflow would remain positive at a significantly reduced level of contribution.

Consolidated Balance Sheets

Current assets increase from 246.9 billion manats in 1998 to 452.5 billion manats in 2003 mainly due to the accumulation of a large cash surplus. The cash position is contingent upon the payment of the PSO and in the event that ADDY does receive a substantial contribution from the State it is likely that the additional cash would be used to fund additional investment. It has been assumed that there will be a reduction in the level of accounts receivable with receivable days reducing to 102 days in 1998 and to 90 days thereafter for the period of the plan. The value of inventory increases due to inflationary prices increases and the assumed increase in the level of expenditure on materials. Improved inventory management practices, however, are assumed to reduce the number of inventory days to 193 days in 1999 and to as low as 120 days in 2003.

The increase in the value of fixed assets reflects the investment programme funded by the EBRD and ADDY's own rehabilitation/investment programme.

Current liabilities increase from 442.1 billion manats in 1998 to 458.6 billion manats in 2003 largely as a result of the increasing quantity and cost of materials purchased. It has been assumed that the payables days figure is reduced during the period of the plan from an initial figure of 126 in 1998 to 90 days outstanding in 2003.

Long term debt increases from an initial balance of zero to 25.3 billion manats in 1999 and to 52.3 billion manats in 2003 and the equity and reserves balances grows mainly as a result of accumulated operating surpluses. The debt to equity ratio increases from 1% in 1999 to 3% in 2000 and then declines to 2% from 2002 onwards.

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Azerbaijan Railways : Financial Plan

	Total Cost (millions manats current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Business Unit Total							
Salaries & Social Insurance	8.8	14.5	15.2	15.2	15.1	15.0	14.4
Materials	1.7	1.7	1.9	2.1	2.4	2.7	3.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.1	1.3	1.3	1.4	1.4	1.4	1.5
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	1.3	1.3	1.3	1.4	1.4	1.4	1.5
Depreciation	1.5	1.8	1.8	1.8	1.8	1.8	1.8
Capital Repairs	4.1	3.0	3.4	3.8	4.3	4.8	5.5
Other	1.9	1.1	1.2	1.3	1.5	1.7	1.8
Total	20.4	24.7	26.1	27.0	27.9	28.8	29.5
Freight Business Unit Total							
Salaries & Social Insurance	11.1	16.9	20.9	23.7	25.3	26.6	26.9
Materials	0.9	1.0	1.2	1.5	1.7	1.8	2.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.6	0.6	0.7	0.9	0.9	1.0	1.1
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	2.8	2.9	3.5	4.1	4.5	4.9	5.3
Depreciation	4.9	6.0	5.9	6.0	6.0	6.1	6.2
Capital Repairs	0.5	0.6	0.7	0.9	1.0	1.1	1.2
Other	6.3	3.1	3.9	4.6	5.2	5.8	6.3
Total	27.1	31.1	36.9	41.7	44.6	47.4	49.1
Rolling Stock Business Unit Total							
Salaries & Social Insurance	18.4	31.2	37.2	41.4	43.7	45.6	46.0
Materials	11.3	11.8	14.8	18.0	21.1	24.4	28.1
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	2.7	4.0	4.7	5.3	5.8	6.3	6.8
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	3.0	5.4	6.1	6.9	7.4	7.9	8.4
Depreciation	30.1	37.0	36.5	36.9	37.3	37.6	37.9
Capital Repairs	10.5	14.1	17.7	21.6	25.3	29.2	33.5
Other	13.4	8.6	10.9	13.3	15.5	17.8	20.3
Total	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Infrastructure Business Unit Total							
Salaries & Social Insurance	20.9	34.4	36.5	37.8	38.5	39.2	38.8
Materials	13.0	13.3	15.6	18.2	21.2	24.6	28.5
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.5	1.8	1.9	2.0	2.2	2.3	2.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	4.1	3.3	3.5	3.6	3.8	4.0	4.2
Depreciation	23.4	28.6	27.0	27.3	29.3	28.2	27.2
Capital Repairs	39.0	29.0	34.2	40.2	46.7	54.3	62.9
Other	3.9	5.8	6.8	8.0	9.4	10.9	12.6
Total	105.8	116.2	125.6	137.3	151.1	163.5	176.6
Corporate Services Total							
Salaries & Social Insurance	7.3	11.6	12.4	12.7	12.8	13.1	12.9
Materials	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Depreciation	0.6	0.8	0.8	0.8	0.8	0.8	0.8
Capital Repairs	7.0	5.8	6.0	6.0	5.9	5.8	5.7
Other	1.1	1.2	1.2	1.2	1.2	1.2	1.2
Total	17.5	21.0	22.1	22.4	22.3	22.4	22.1
Railway Expenditure Total							
Salaries & Social Insurance	66.5	108.6	122.1	130.9	135.4	139.5	139.0
Materials	27.2	28.1	33.9	40.2	46.7	53.8	61.9
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	6.2	8.1	9.1	10.0	10.7	11.4	12.1
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	12.1	13.8	15.4	16.9	18.0	19.1	20.2
Depreciation	60.5	74.2	72.0	72.8	75.2	74.6	74.0
Capital Repairs	61.1	52.5	62.1	72.5	83.2	95.2	108.9
Other	26.6	19.8	24.0	28.5	32.8	37.3	42.3
Total	318.6	364.3	405.0	445.0	480.5	514.5	546.8

Azerbaijan Railways : Financial Plan
Table 1 : Consolidate Income Statement

	(billion manats/current prices)						
	1997	1998	1999	2000	2001	2002	2003
Volume (million)							
Passenger (pass-km)	490	562	574	586	599	611	624
Freight (tonne -km)	3,521	4,010	4,678	5,233	5,521	5,730	5,885
Total Traffic Units	4,011	4,572	5,252	5,819	6,119	6,342	6,509
Traffic Units/core employees (000's)	134	153	181	215	246	277	309
Revenue							
Transport							
- Passenger	15.0	24.1	26.2	28.4	30.8	33.5	36.3
- Freight	333.1	345.7	394.8	457.8	510.6	556.1	591.3
- PSO Compensation	-	-	-	-	20.0	20.0	20.0
- Subtotal	348.1	369.8	420.9	486.2	561.5	609.5	647.7
Ancillary/other	-	-	-	-	-	-	-
Total Revenue	348.1	369.8	420.9	486.2	561.5	609.5	647.7
Expenditure							
Transport							
- Salaries	66.5	108.6	122.1	130.9	135.4	139.5	139.0
- Materials/other	114.9	100.4	120.0	141.2	162.6	186.3	213.0
- Fuel & Energy	76.7	81.1	90.8	100.1	107.3	114.1	120.8
- Subtotal	258.1	290.1	333.0	372.2	405.3	439.9	472.8
Ancillary/Other	-	-	-	-	-	-	-
Total Working Cost	258.1	290.1	333.0	372.2	405.3	439.9	472.8
Depreciation	60.5	74.2	72.0	72.8	75.2	74.6	74.0
Total Operating Cost	318.6	364.3	405.0	445.0	480.5	514.5	546.8
Net Operating Income	29.5	5.5	15.9	41.2	81.0	95.0	100.9
Interest Charges	-	0.4	1.8	4.8	4.6	4.1	3.7
Exchange adjustment EBRD Loan				- 1.3	- 3.4	- 3.3	- 2.9
Net Income before Tax	29.5	5.2	14.2	37.7	79.9	94.2	100.1
Income Tax	9.7	1.7	4.7	12.4	26.4	31.1	33.0
Net Income After Tax	19.8	3.5	9.5	25.2	53.5	63.1	67.1
Memo only :	-	-	-	-	-	-	-
Distribution of net revenue:							
- Reserves	14.8	2.6	7.1	18.9	40.1	47.3	50.3
- Social benefits	4.0	0.7	1.9	5.0	10.7	12.6	13.4
- other	1.0	0.2	0.5	1.3	2.7	3.2	3.4
Performance Ratios							
Working Ratio (%)	74%	78%	79%	77%	72%	72%	73%
Operating Ratio (%)	92%	99%	96%	92%	86%	84%	84%

Azerbaijan Railways - Financial Plan
Table 2 : Cash Flow Statement 1998 -2003

(billion manats/current prices)

	1998	1999	2000	2001	2002	2003
RECEIPTS						
Freight Revenue	345.7	394.8	457.8	510.6	556.1	591.3
Passenger Revenue	24.1	26.2	28.4	30.8	33.5	36.3
Auxiliary Income/Other	-	-	-	-	-	-
Operating Subsidy	-	-	-	20.0	20.0	20.0
Decrease/(Increase) in Accounts Receivable	9.4	-0.7	-15.5	-13.0	-11.2	-8.7
(Decrease)/Increase in Accounts Payable	-0.9	-18.0	9.7	8.2	8.5	8.1
Capital Grant - Repayment of Loans						
Other Grants - TACIS		0	23.0	-	-	-
Loans received - EBRD	-	25.3	44.7	-	-	-
Loans received - Other Foreign	-	-	-	-	-	-
Loans received - Local Banks						
Total	378.3	427.5	548.1	556.6	606.9	647.1
PAYMENTS						
Working Expenses	290.1	333.0	372.2	405.3	439.9	472.8
Increase/(Decrease) in Inventory	6.9	3.6	1.6	- 0.6	- 1.3	- 1.3
Capital Investment	38.0	96.2	142.5	60.0	60.0	60.0
Own Use	0.9	2.4	6.3	13.4	15.8	16.8
Interest - EBRD Loan & Commitment Fee	0.4	1.8	4.8	4.6	4.1	3.7
Interest - Foreign Loans	-	-	-	-	-	-
Loan Repayments - EBRD		-	-	-	3.5	3.3
Loan Repayments - Foreign Loans	-	-	-	-	-	-
Interest - Bank Borrowings						
Profit Tax Paid	1.7	4.7	12.4	26.4	31.1	33.0
Total	337.9	441.5	539.8	509.0	553.1	588.3
Cash Increase / (Decrease)	40.4	- 14.0	8.3	47.6	53.8	58.8
Balance Previous Year	2	42.4	28.4	36.6	84.3	138.1
Cash at Year End	42.4	28.4	36.6	84.3	138.1	196.9
Debt Service Coverage (Times) (Available Cash/Interest Payments)	116.0	16.0	7.6	18.4	33.7	53.7

Azerbaijan Railways - Financial Plan
Table 3 : Consolidated Balance Sheet 1997 - 2003

	(billion manats/current prices)						
	1997	1998	1999	2000	2001	2002	2003
Assets							
Current Assets							
Cash	2.0	42.4	28.4	36.6	84.3	138.1	196.9
Receivables	106.0	96.6	97.3	112.9	125.9	137.1	145.8
Inventoties	101.0	107.9	111.5	113.0	112.4	111.1	109.8
Subtotal	209.0	246.9	237.2	262.5	322.6	386.3	452.5
Long term - receivables	230.0	230.0	230.0	230.0	230.0	230.0	230.0
Fixed Assets							
Book Values	2309.0	2347.0	2443.2	2585.7	2645.7	2705.7	2765.7
Less: Accumulated Depreciation		74.2	146.2	219.0	294.2	368.8	442.8
Net Book Value	2309.0	2272.8	2297.0	2366.7	2351.5	2336.9	2322.9
Other Assets	145.0	145.0	145.0	145.0	145.0	145.0	145.0
Total Assets	2,893.0	2,894.7	2,909.1	3,004.2	3,049.1	3,098.2	3,150.4
Current Liabilities							
Short term Debts	6	6	6	6	6	6	6
Accounts Payable	101	100.1	82.1	91.8	99.9	108.5	116.6
Other	336	336	336	336	336	336	336
Subtotal	443.0	442.1	424.1	433.8	441.9	450.5	458.6
Long term - payables	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Long Term Debts							
EBRD	0	0	25.3	68.8	65.3	58.6	52.3
Other	-	-	-	-	-	-	-
Equity & Reserves - opening	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0
Capital Grants Received				23.0	23.0	23.0	23.0
Profit/Loss - current		2.6	7.1	18.9	40.1	47.3	50.3
Profit/loss - cumulative		2.6	9.7	28.6	68.8	116.1	166.4
Total Liabilities	2893.0	2894.7	2909.1	3004.2	3049.1	3098.2	3150.4
Current Ratio	0.5	0.6	0.6	0.6	0.7	0.9	1.0
Acid Test Ratio	0.2	0.3	0.3	0.3	0.5	0.6	0.7
Debt/Equity Ratio	0%	0%	1%	3%	3%	2%	2%

Consolidated Income

Reconciliation

Passenger Business Unit							
Revenue	15	24	26	28	51	53	56
Costs	19	23	24	25	26	27	28
Depreciation	2	2	2	2	2	2	2
Result	- 5	- 1	0	1	23	25	27
Freight Business Unit							
Revenue	333	346	395	458	511	556	591
Costs	22	25	31	36	39	41	43
Depreciation	5	6	6	6	6	6	6
Result	306	315	358	416	466	509	542
Rolling Stock Business Unit							
Revenue (loco hire/demurrage)	-	-	-	-	-	-	-
Costs	118	134	158	180	197	215	232
Depreciation	30	37	37	37	37	38	38
Result	- 148	- 171	- 194	- 217	- 235	- 252	- 270
Infrastructure							
Revenue	0	0	0	0	0	0	0
Costs	82	88	99	110	122	135	149
Depreciation	23	29	27	27	29	28	27
Result	- 106	- 116	- 126	- 137	- 151	- 163	- 177
Administrative services							
Revenue	0	0	0	0	0	0	0
Costs	17	20	21	22	21	22	21
Depreciation	1	1	1	1	1	1	1
Result	- 18	- 21	- 22	- 22	- 22	- 22	- 22
Ancillary Services/other Costs							
Revenue	-	-	-	-	-	-	-
Costs	-	-	-	-	-	-	-
Result	-	-	-	-	-	-	-
Total Revenue	348	370	421	486	561	610	648
	-	-	-	-	-	-	-
Total Costs	258	290	333	372	405	440	473
	-	0.00	-	- -	0.00	0.00	0.00
Depreciation	61	74.2	72	73	75	75	74
	0	0	0	0	0	0	0
Operating Costs	318.6	364.3	405	445	480	514	547
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest Charges	-	0	2	4	1	1	1
	-	-	-	-	-	-	-
Net Income before tax	29.5	5.1	14.2	37.7	79.9	94.2	100.1
	-	0.0	0.0 -	0.0	0.0 -	0.0 -	0.0

Azerbaijan Railways
Table 4 : Working Capital Calculation

	1997	1998	1999	2000	2001	2002	2003
Receivables Days	116	102	90	90	90	90	90
Inventory Days	244	217	193	171	152	135	120
Payables days	176	126	90	90	90	90	90
	(billions manats)						
Receivables	106.0	96.6	97.3	112.9	125.9	137.1	145.8
Inventory	101.0	107.9	111.5	113.0	112.4	111.1	109.8
Payables	101.0	100.1	82.1	91.8	99.9	108.5	116.6
Working Capital	106.0	104.4	126.7	134.1	138.4	139.8	139.0
Change in working capital		- 1.6	22.3	7.4	4.2	1.4	- 0.8
Decrease/(Increase) in receivables		9.4	- 0.7	- 15.5	- 13.0	- 11.2	- 8.7
Increase/(Decrease) in Inventory		6.9	3.6	1.6	- 0.6	- 1.3	- 1.3
Decrease) / Increase in Payables		- 0.9	- 18.0	9.7	8.2	8.5	8.1

Azerbaijan Railways
Investment & Depreciation

	1998	1999	2000	2001	2002	2003	
Rolling Stock Fleet required							**Available**
Locomotives - passenger	40	38	35	33	31	30	**1998**
Locomotives - freight	80	83	80	76	70	66	
Total Locomotives	140	140	140	140	140	140	140
Carriages	350	350	350	350	350	350	200
EMU	120	120	120	120	120	120	100
Wagos (oil)	1400	1400	1400	1400	1400	1400	1400
Wagons (other)	4000	4000	4000	4000	4000	4000	4000
Rolling Stock Investment							
Locomotives - passenger		-2	-3	-2	-2	-1	
Locomotives - freight		3	-3	-4	-6	-4	
Total Locomotives		0	0	0	0	0	
Carriages		0	0	0	0	0	
EMU		0	0	0	0	0	
Wagos (oil)		0	0	0	0	0	
Wagons (other)		0	0	0	0	0	
		Cost (current manats billion)					**per unit (US$ 000)**	**% import**
Locomotives		0.0	0.0	0.0	0.0	0.0	1800	60%
Carriages		0	0	0	0	0	600	80%
EMU		0	0	0	0	0	800	80%
Wagos (oil)		0.0	0.0	0.0	0.0	0.0	60	50%
Wagons (other)		0	0	0	0	0	50	50%
Total (Machinery & Equipment)		0.0	0.0	0.0	0.0	0.0		

Azerbaijan Railways
Table 5 : Consolidated Depreciation Schedule 1998 - 2003

		1998	1999	2000	2001	2002	2003
Opening Value (billion manats)							
Buildings		300	289.3	279.2	269.4	260.0	250.9
Works		500	482.3	501.6	566.6	546.7	527.6
Rolling Stock		500	484.8	470.3	456.1	442.5	429.2
Equipment		609	590.5	572.8	555.6	539.0	522.8
Transport & other		400	425.9	473.1	518.9	563.4	606.5
Total		2309	2272.8	2297.0	2366.7	2351.5	2336.9
Additions (billions manats)							
Buildings		0.0	0.0	0.0	0.0	0.0	0.0
Works		0.0	36.2	82.5	0.0	0.0	0.0
Rolling Stock		0.0	0.0	0.0	0.0	0.0	0.0
Equipment		0.0	0.0	0.0	0.0	0.0	0.0
Transport & other		38.0	60.0	60.0	60.0	60.0	60.0
Total		38.0	96.2	142.5	60.0	60.0	60.0
	Rate						
Depreciation (billion manats)							
Buildings	**3.50%**	10.7	10.1	9.8	9.4	9.1	8.8
Works	**3.50%**	17.7	16.9	17.6	19.8	19.1	18.5
Rolling Stock	**3.00%**	15.2	14.5	14.1	13.7	13.3	12.9
Equipment	**3.00%**	18.5	17.7	17.2	16.7	16.2	15.7
Transport & other	**3.00%**	12.1	12.8	14.2	15.6	16.9	18.2
Total		74.2	72.0	72.8	75.2	74.6	74.0
Cumulative Annual		74.2	146.2	219.0	294.2	368.8	442.8

Azerbaijan Railways
Table 6 : Loan Schedule 1998 - 2003

		1997	1998	1999	2000	2001	2002	2003
EBRD Loan								
Facility (Us$ million)	20.2							
Term - years	21							
Grace period	3							
Loan Drawdown US$ (million)			-	7.0	13.0	-	-	-
Cumulative Drawdown			-	7.0	20.0	20.0	20.0	20.0
Loan Repayment -US$ (million)							1.1	1.1
Loan Balance - Us$ (million)				7.0	20.0	20.0	18.9	17.8
EBRD Loan (Local Currency Equivalent)								
Loan Drawdown (billion manats)				25.3	44.7	-	-	-
Cumulative Drawdown			-	25.3	70.0	70.0	70.0	70.0
Loan Repayment -(billion manats)				-	-	-	3.5	3.3
Loan Balance - (billion manats)				25.3	70.0	70.0	66.5	63.2
Restated loan balance at current exchange rates				25.3	68.8	65.3	58.6	52.3
Exchange adjustment on loan				- -	1.3 -	4.7 -	8.0 -	10.9
Annual exchange write-off required				-	1.3 -	3.4 -	3.3 -	2.9
	Rate							
Interest on EBRD Loan (billion manats)	7.00%			1.8	4.8	4.6	4.1	3.7
Commitment fee								
Commitment fee (EBRD) (million $)	0.50%	0	0.1	0.0	0.0	0.0	0.0	
Commitment fee (EBRD) (billion manats)		0.0	0.4	0.0	0.0	0.0	0.0	
Other Foreign Loans								
Facility (billion manats)	0							
Term - years	15							
Grace period	3							
Loan Drawdown (billion manats)		-	-	-	-	-	-	-
Cumulative Drawdown		-	-	-	-	-	-	-
Loan Repayment - (billion manats)		-	-	-	-	-	-	-
Loan Balance - (billion manats)		-	-	-	-	-	-	-
Interest on Foreign Loans	Rate		7.0%	9.9%	10.0%	9.9%	10.1%	10.0%
Interest on Foreign Loans - Paid (billion manats)			-	-	-	-	-	-
Total Interest payment (billions manats)		-	-	1.8	4.8	4.6	4.1	3.7
Exchange Rate adjustment		-	-	- -	1.3 -	3.4 -	3.3 -	2.9
Commitment Fee		0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Loan Interest & Chargres (to Infrastructure Unit)		-	0.4	1.8	3.5	1.1	0.8	0.7

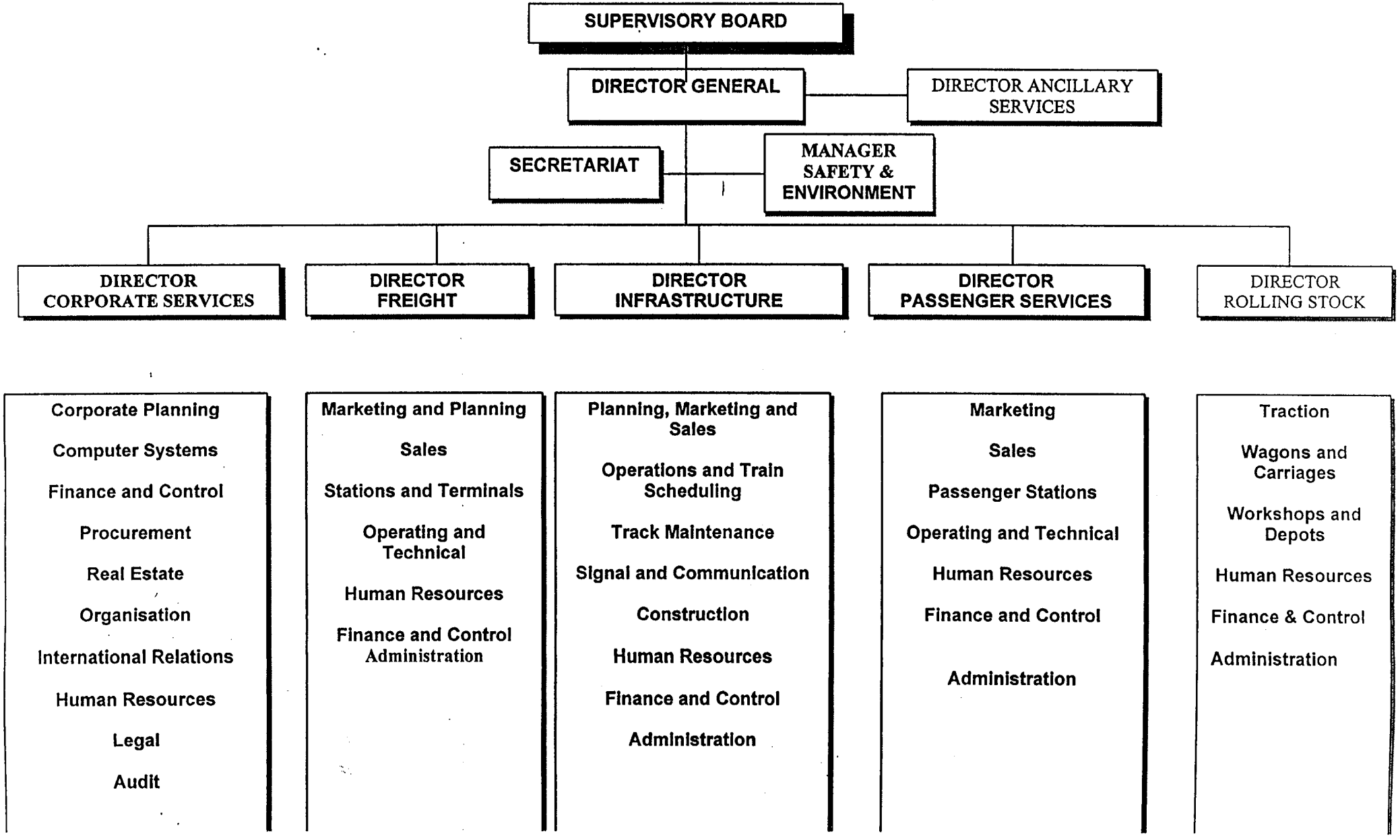
Azerbaijan Railways
Table 7 : Summary of Investment 1998 - 2003

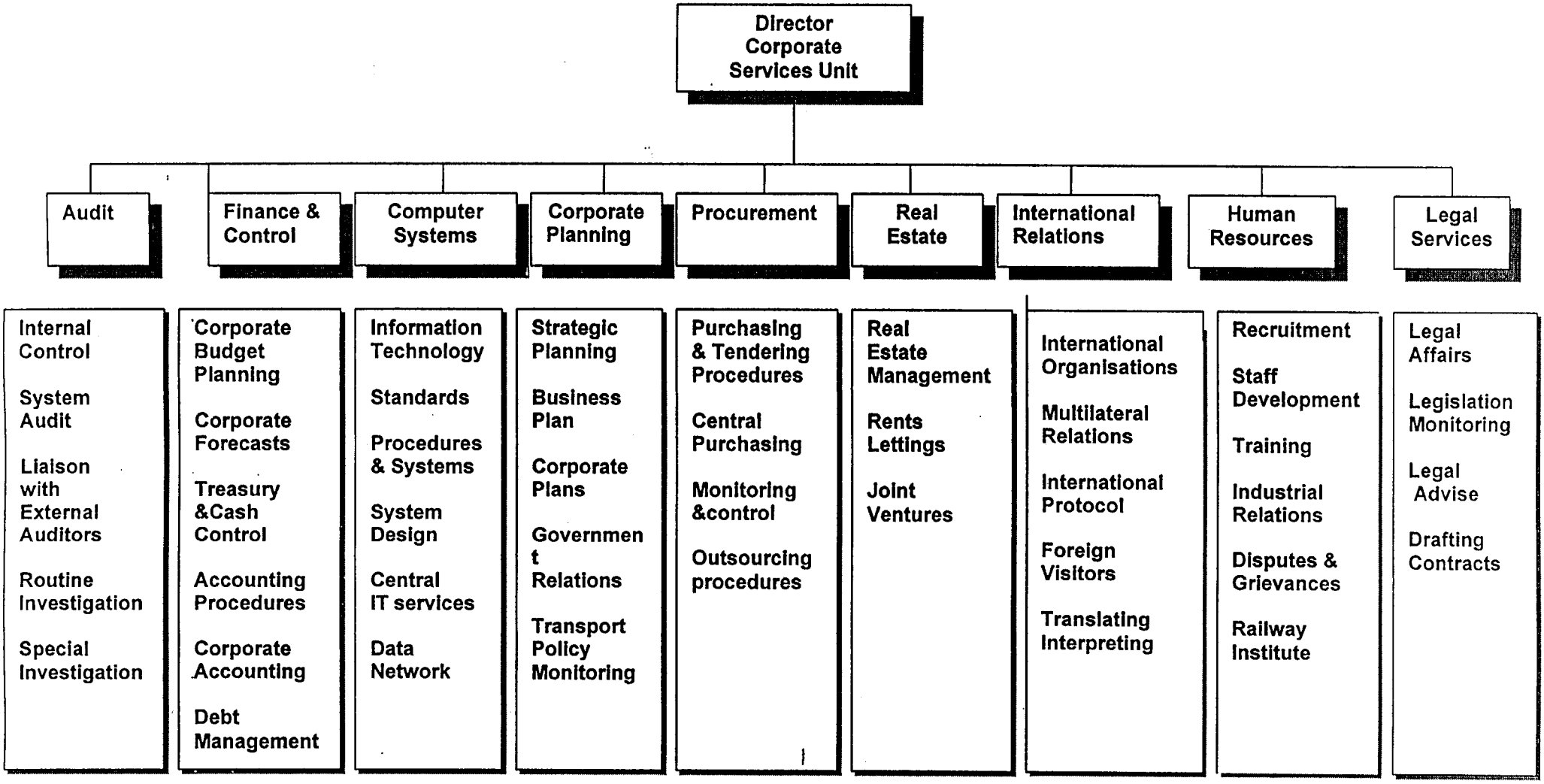
	Cost	1997 WDV	Investment 1998	1999	2000	2001	2002	2003
Project Investment ($ million)								
Buildings			0	0	0	0	0	0
Works			0	10	24	0	0	0
Rolling Stock			0	0	0	0	0	0
Equipment			0	0	0	0	0	0
Transport & other			0	0	0	0	0	0
Total ($m)			0	10	24	0	0	0
Project Investment (billion manats)								
Buildings			-	-	-	-	-	-
Works			-	36.2	82.5	-	-	-
Rolling Stock			-	-	-	-	-	-
Equipment			-	-	-	-	-	-
Transport & other			-	-	-	-	-	-
Total (billion manats)			-	36.2	82.5	-	-	-
Other Investments (billion manats)								
Buildings	3.50%	300	0.0	0.0	0.0	0.0	0.0	0.0
Works	3.50%	500	0.0	0.0	0.0	0.0	0.0	0.0
Rolling Stock	3.00%	500	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	3.00%	609	0.0	0.0	0.0	0.0	0.0	0.0
Transport & other	3.00%	400	38.0	60.0	60.0	60.0	60.0	60.0
Total		2309	38.0	60.0	60.0	60.0	60.0	60.0
Total Investment (1998 billion manats)								
Buildings			0.0	0.0	0.0	0.0	0.0	0.0
Works			0.0	36.2	82.5	0.0	0.0	0.0
Rolling Stock			0.0	0.0	0.0	0.0	0.0	0.0
Equipment			0.0	0.0	0.0	0.0	0.0	0.0
Transport & other			38.0	60.0	60.0	60.0	60.0	60.0
Total			38.0	96.2	142.5	60.0	60.0	60.0

Azerbaijan Railways
Table 8 : TRAFFIC FORECASTS

	1997	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
									Factor for Elasticity Effect				
Passengers (000's)													
International/long distance	1,382	1,372	1,406	1,441	1,477	1,514	1,551		0.995	0.995	0.995	0.995	0.995
Suburban	2,407	2,815	2,843	2,871	2,900	2,928	2,957		0.995	0.995	0.995	0.995	0.995
Total	3,789	4,187	4,249	4,312	4,376	4,442	4,509						
									Average haul				
Passenger -km (million)													
International/long distance	420	423	434	444	455	467	478	308	308	308	308	308	308
Suburban	70	139	140	142	143	145	146	49.4	49.4	49.4	49.4	49.4	49.4
Total	490	562	574	586	599	611	624						
									Average tariff (manat per passenger km)				
Passenger Revenue (billions manat)													
International/long distance	14.0	23.0	25.0	27.1	29.5	32.0	34.8	54.4	57.6	61.1	64.8	68.6	72.8
Suburban	1.0	1.1	1.2	1.3	1.3	1.4	1.5	7.9	8.4	8.9	9.4	10.0	10.6
Total	15.0	24.1	26.2	28.4	30.8	33.5	36.3	42.9	45.6	48.5	51.5	54.8	58.2
Freight													
Tonnes(000)									Factor for elasticity effect				
Export Oil	2,781	3,501	4,513	5,332	5,638	5,755	5,733		1.050	1.025	1.025	1.025	1.03
Other international	2,490	2,819	3,226	3,552	3,802	4,081	4,393		1.012	1.010	1.010	1.010	1.01
Other Domestic	6,000	6,188	6,446	6,714	6,994	7,286	7,591		1.00	1.00	1.00	1.00	1.00
Total	11,271	12,508	14,185	15,598	16,434	17,123	17,717						
									Average length of haul				
Tonne-km (millions)													
Export Oil	1,336	1,682	2,168	2,562	2,709	2,765	2,754		480	480	480	480	480
Other international	732	829	949	1,045	1,118	1,200	1,292		294	294	294	294	294
Other Domestic	1,453	1,499	1,561	1,626	1,694	1,765	1,839		242	242	242	242	242
Total	3,521	4,010	4,678	5,233	5,521	5,730	5,885						
									Average tariff in current manats per net tkm				
Freight Revenue (billion manats)													
Export Oil	72.4	91.1	111.6	131.8	139.4	142.3	141.7	54.2	51.5	51.5	51.5	51.5	51.5
Other international	106.7	120.8	136.9	150.7	161.3	173.1	186.4	145.7	144.3	144.3	144.3	144.3	144.3
Other Domestic	154.0	133.8	146.3	175.3	210.0	240.6	263.2	89.3	93.7	107.8	123.9	136.3	143.2
Total	333.1	345.7	394.8	457.8	510.6	556.1	591.3	86.2					
Other revenues (billion manats)													
Ancilliary services	-	-	0.0	0.0	0.0	0.0	0.0						
Other operating (Loco hire, demurrage)	-	-	0.0	0.0	0.0	0.0	0.0						
Other businesses	-	-	0.0	0.0	0.0	0.0	0.0						
Subtotal	-	-	-	-	-	-	-						
Public Service Obligation		0	0	0	20	20	20						
Total Revenue (billion manats current)	348.1	369.8	420.9	486.2	561.5	609.5	647.7						
inflation factor		100%	105%	110%	116%	122%	128%						
Unit labour factor		100%	105%	110%	116%	122%	124%						
Exchange rate		3850	3619.00	3438.05	3266.15	3102.84	2947.70						

AZERBAIJAN RAILWAYS ORGANISATION CHART

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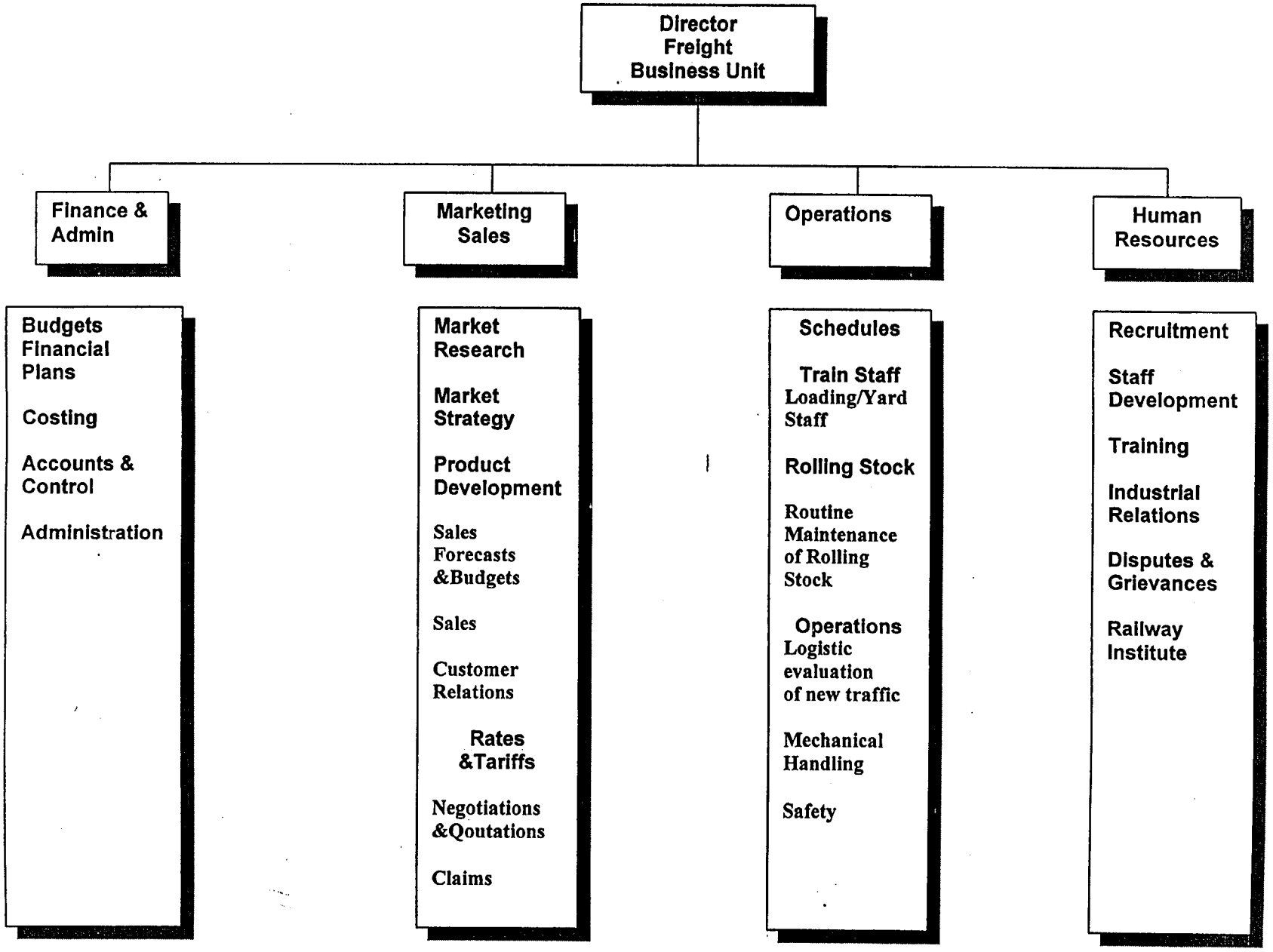
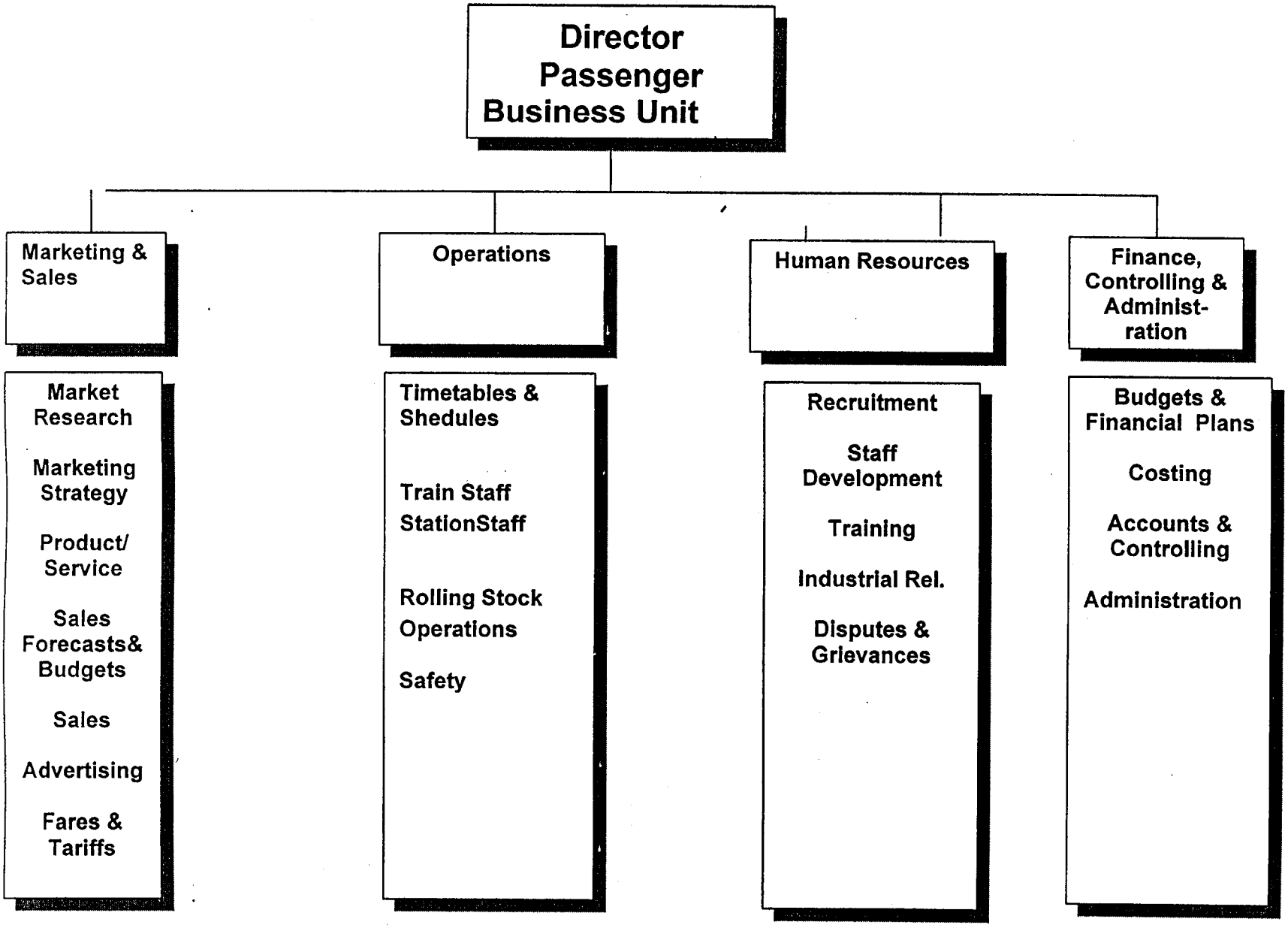
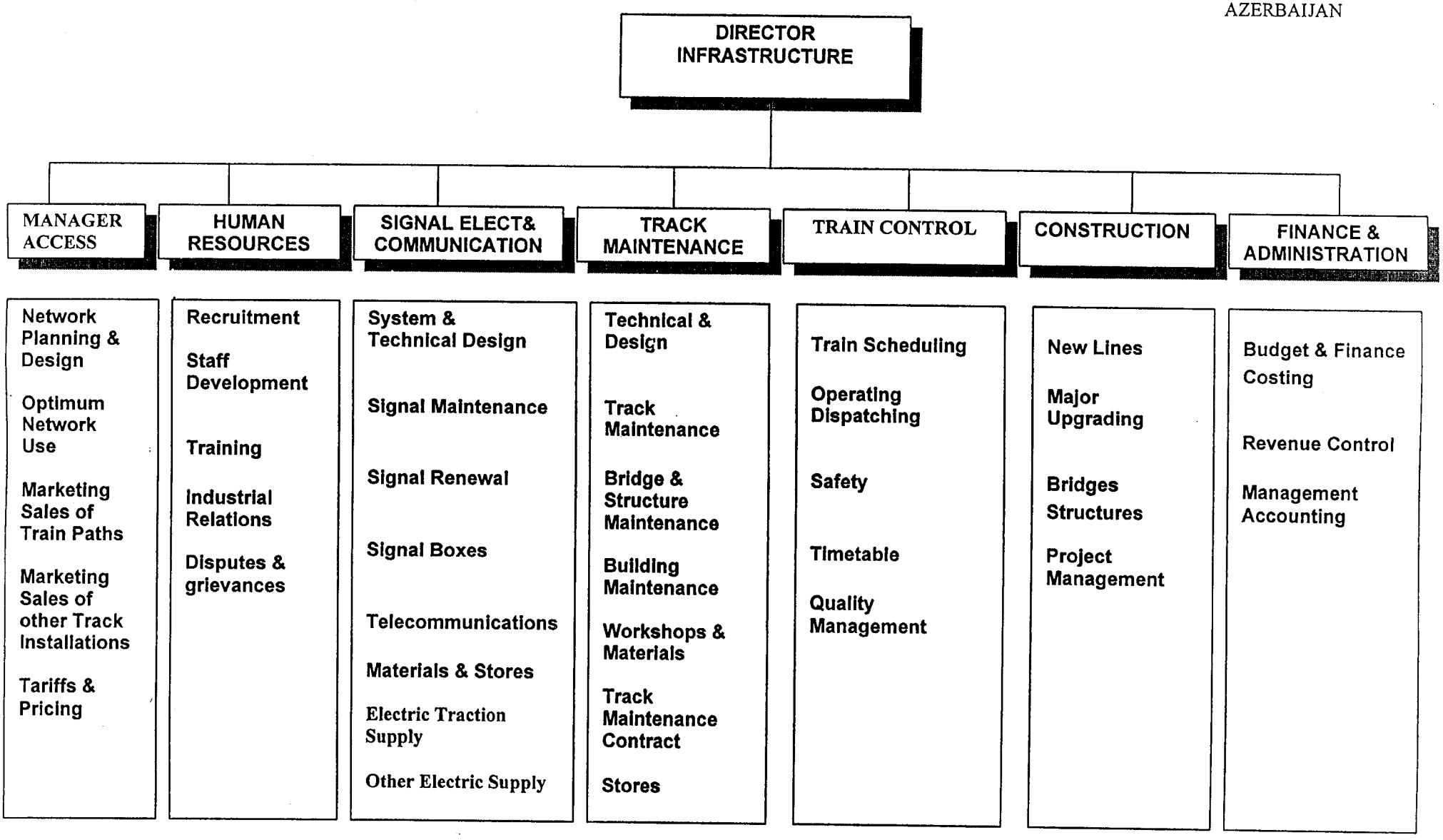
Audit
Finance & Control
Computer Systems
Corporate Planning
Procurement
Real Estate
International Relations
Human Resources
Legal Services
Internal Control
System Audit
Liaison with External Auditors
Routine Investigation
Special Investigation
Corporate Budget Planning
Corporate Forecasts
Treasury &Cash Control
Accounting Procedures
Corporate Accounting
Debt Management
Information Technology
Standards
Procedures & Systems
System Design
Central IT services
Data Network
Strategic Planning
Business Plan
Corporate Plans
Government Relations
Transport Policy Monitoring
Purchasing & Tendering Procedures
Central Purchasing
Monitoring &control
Outsourcing procedures
Real Estate Management
Rents Lettings
Joint Ventures
International Organisations
Multilateral Relations
International Protocol
Foreign Visitors
Translating Interpreting
Recruitment
Staff Development
Training
Industrial Relations
Disputes & Grievances
Railway Institute
Legal Affairs
Legislation Monitoring
Legal Advise
Drafting Contracts

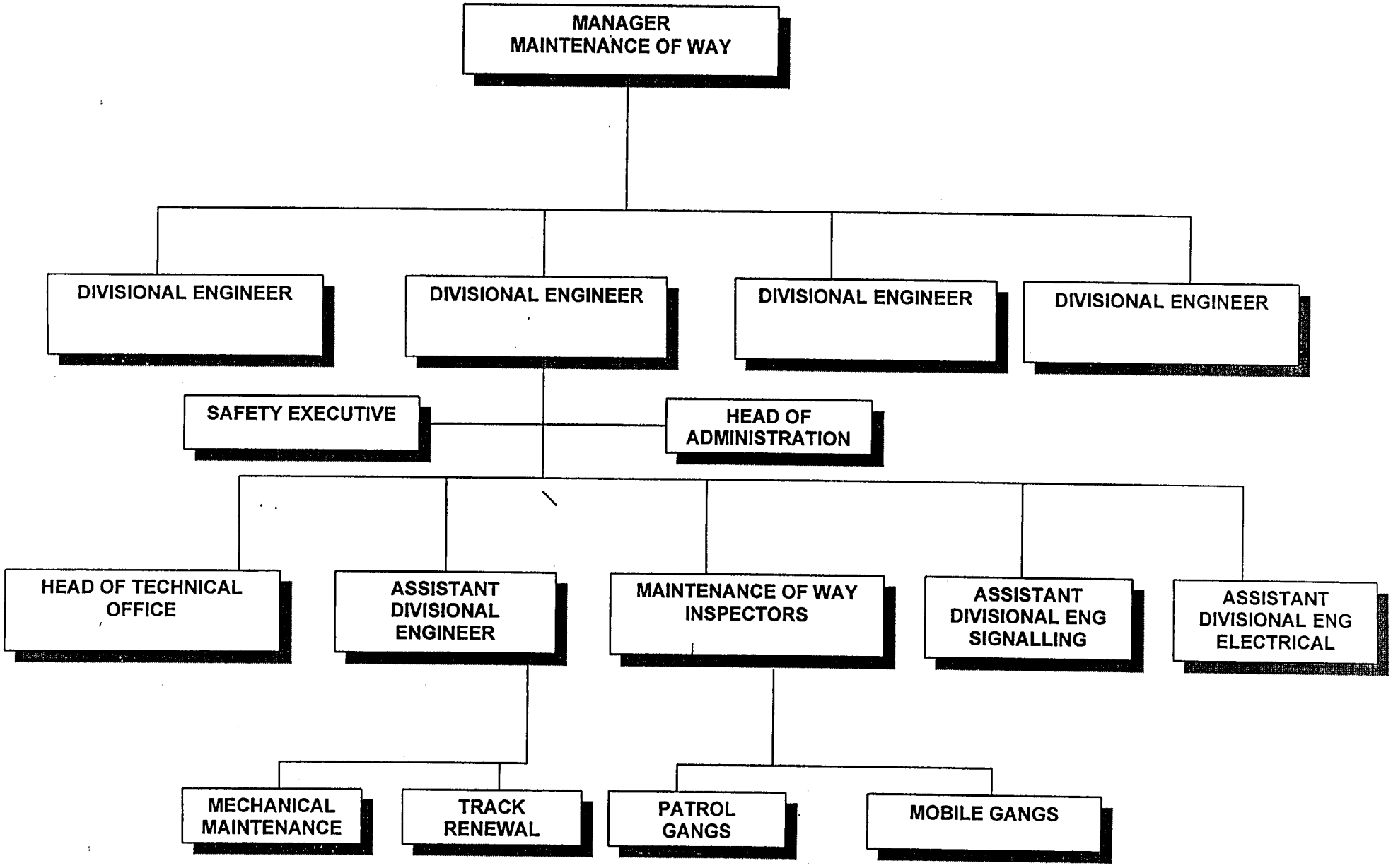

Director
Freight
Business Unit
Finance &
Admin
Marketing
Sales
Operations
Human
Resources
Budgets
Financial
Plans
Costing
Accounts &
Control
Administration
Market
Research
Market
Strategy
Product
Development
Sales
Forecasts
&Budgets
Sales
Customer
Relations
Rates
&Tariffs
Negotiations
&Qoutations
Claims
Schedules
Train Staff
Loading/Yard
Staff
Rolling Stock
Routine
Maintenance
of Rolling
Stock
Operations
Logistic
evaluation
of new traffic
Mechanical
Handling
Safety
Recruitment
Staff
Development
Training
Industrial
Relations
Disputes &
Grievances
Railway
Institute

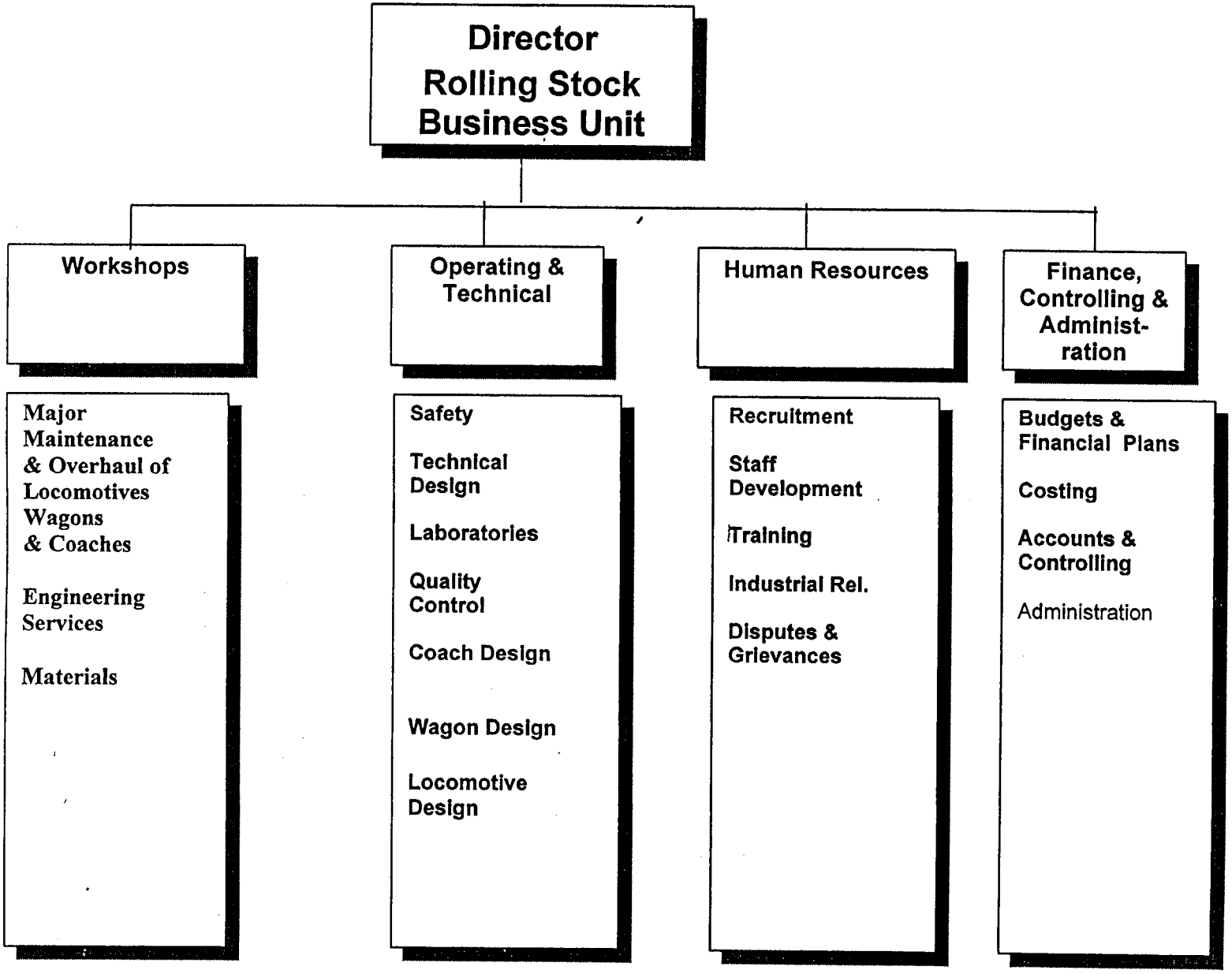
AZERBAIJAN

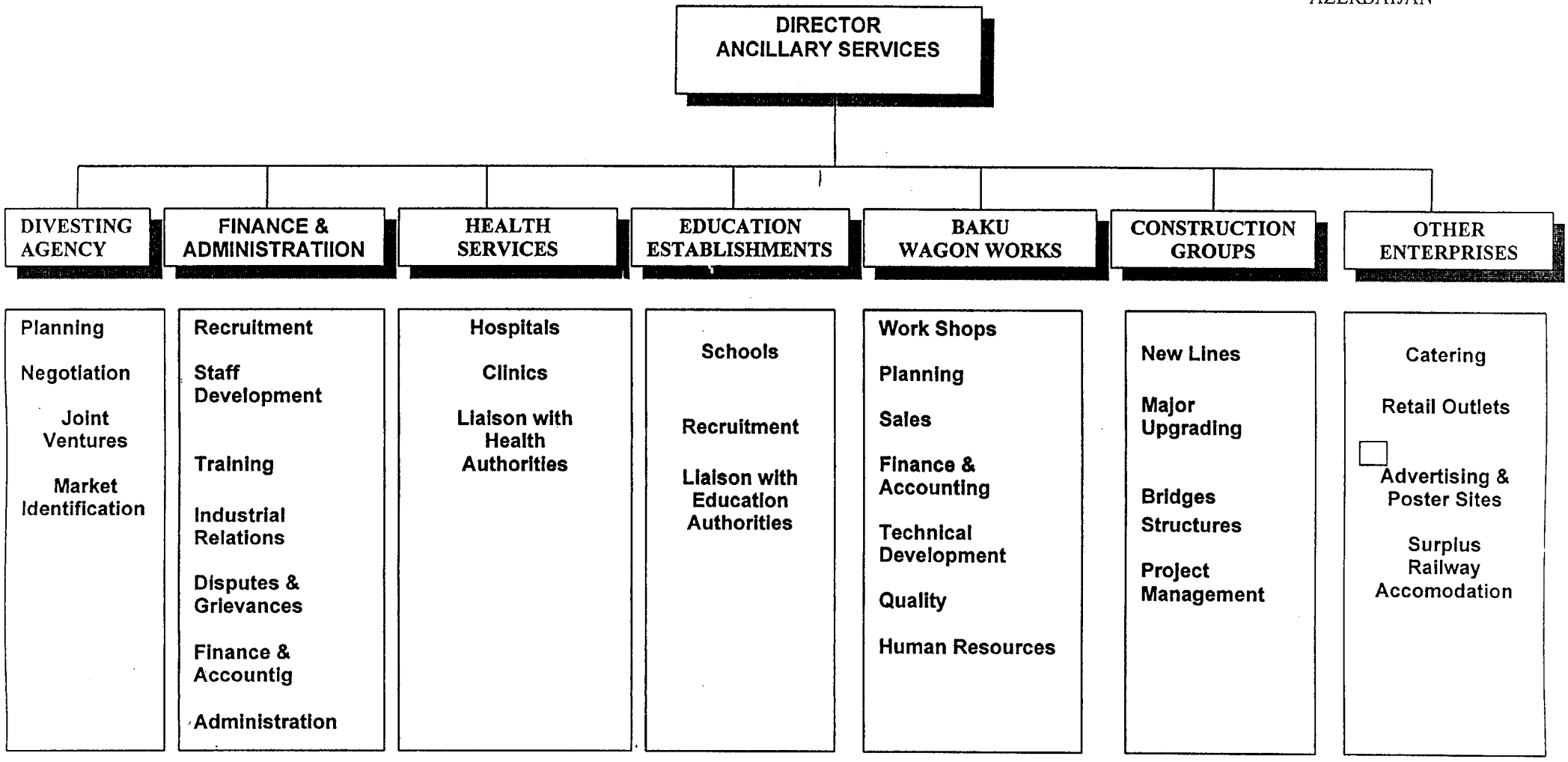

Director Passenger Business Unit
Marketing & Sales
Operations
Human Resources
Finance, Controlling & Administ-ration
Market Research
Marketing Strategy
Product/ Service
Sales Forecasts& Budgets
Sales
Advertising
Fares & Tariffs
Timetables & Shedules
Train Staff
StationStaff
Rolling Stock Operations
Safety
Recruitment
Staff Development
Training
Industrial Rel.
Disputes & Grievances
Budgets & Financial Plans
Costing
Accounts & Controlling
Administration


DIRECTOR INFRASTRUCTURE
MANAGER ACCESS
HUMAN RESOURCES
SIGNAL ELECT& COMMUNICATION
TRACK MAINTENANCE
TRAIN CONTROL
CONSTRUCTION
FINANCE & ADMINISTRATION
Network Planning & Design
Optimum Network Use
Marketing Sales of Train Paths
Marketing Sales of other Track Installations
Tariffs & Pricing
Recruitment
Staff Development
Training
Industrial Relations
Disputes & grievances
System & Technical Design
Signal Maintenance
Signal Renewal
Signal Boxes
Telecommunications
Materials & Stores
Electric Traction Supply
Other Electric Supply
Technical & Design
Track Maintenance
Bridge & Structure Maintenance
Building Maintenance
Workshops & Materials
Track Maintenance Contract
Stores
Train Scheduling
Operating Dispatching
Safety
Timetable
Quality Management
New Lines
Major Upgrading
Bridges Structures
Project Management
Budget & Finance Costing
Revenue Control
Management Accounting

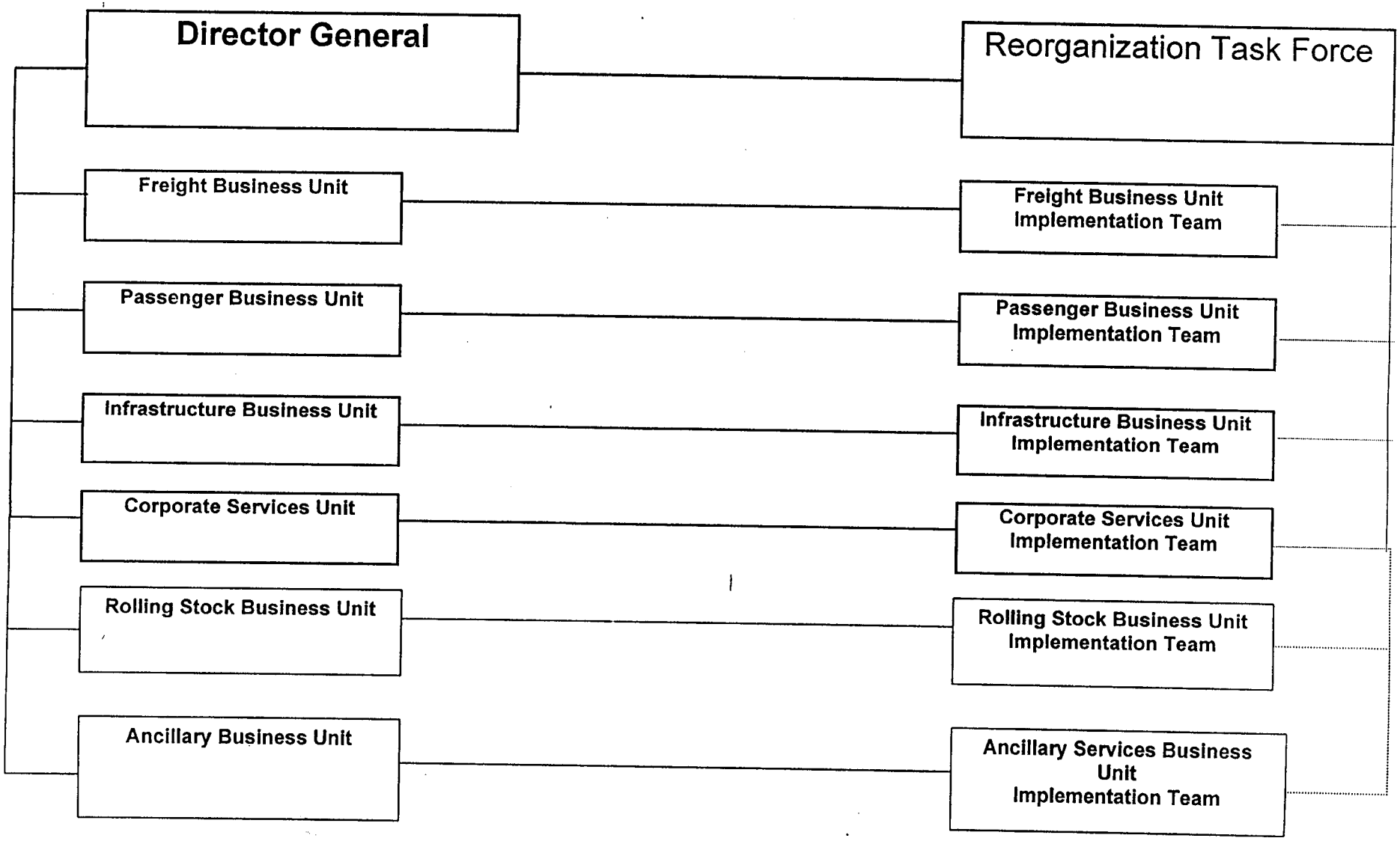
AZERBAIJAN


MANAGER
MAINTENANCE OF WAY
DIVISIONAL ENGINEER
DIVISIONAL ENGINEER
DIVISIONAL ENGINEER
DIVISIONAL ENGINEER
SAFETY EXECUTIVE
HEAD OF
ADMINISTRATION
HEAD OF TECHNICAL
OFFICE
ASSISTANT
DIVISIONAL
ENGINEER
MAINTENANCE OF WAY
INSPECTORS
ASSISTANT
DIVISIONAL ENG
SIGNALLING
ASSISTANT
DIVISIONAL ENG
ELECTRICAL
MECHANICAL
MAINTENANCE
TRACK
RENEWAL
PATROL
GANGS
MOBILE GANGS


Director
Rolling Stock
Business Unit
Workshops
Operating & Technical
Human Resources
Finance, Controlling & Administ-ration
Major Maintenance & Overhaul of Locomotives Wagons & Coaches
Engineering Services
Materials
Safety
Technical Design
Laboratories
Quality Control
Coach Design
Wagon Design
Locomotive Design
Recruitment
Staff Development
Training
Industrial Rel.
Disputes & Grievances
Budgets & Financial Plans
Costing
Accounts & Controlling
Administration


DIRECTOR
ANCILLARY SERVICES
DIVESTING AGENCY
FINANCE & ADMINISTRATIION
HEALTH SERVICES
EDUCATION ESTABLISHMENTS
BAKU WAGON WORKS
CONSTRUCTION GROUPS
OTHER ENTERPRISES
Planning
Negotiation
Joint Ventures
Market Identification
Recruitment
Staff Development
Training
Industrial Relations
Disputes & Grievances
Finance & Accountig
Administration
Hospitals
Clinics
Liaison with Health Authorities
Schools
Recruitment
Liaison with Education Authorities
Work Shops
Planning
Sales
Finance & Accounting
Technical Development
Quality
Human Resources
New Lines
Major Upgrading
Bridges
Structures
Project Management
Catering
Retail Outlets
Advertising & Poster Sites
Surplus Railway Accomodation

Re-Structuring Implementation Organisation



AZERBAIJAN RAILWAYS

CORPORATE FINANCIAL MODEL

AZERBAIJAN RAILWAYS

CORPORATE FINANCIAL MODEL

CONTENTS

Financial Tables : Azerbaijan Railways

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1 INTRODUCTION

1.1 The Corporate Planning Process

The development of a Corporate Business Plan is a vitally important part of the process of transforming the railway into a commercially focused organisation. The Business Plan should reflect how the management of the railway intend to develop the business over a predefined period of time, usually five years. The starting point for the Business Plan will be a Mission Statement which will set out the aspirations of the management team. The Mission Statement will be accompanied by a set of strategic objectives which will focus attention on key business issues and areas where improvements are required.

Business Plans have four essential components and these are as follows :

A Marketing Plan, which specifies the target market of the business, the desired market share, the potential for growth, and the possible impact of competitor action. It also sets out the pricing policy of the organisation and the extent to which specific market segments are influenced by price.

An Operations Plan, which sets out how the organisation plans to meet the needs of its existing customers and how it plans to attract new business. The operations plan will contain the details of the resources required by the operating departments if they are to meet the targets set down in the Marketing Plan.

An Investment Plan, which specifies the additional resources required by the organisation if it is to deliver the quantity and quality of service required by the customers.

A Financial Plan, which sets out the revenues and expenditures of the organisation for the duration of the plan, the level of capital investment that is required and the sources of finance that will be used to fund the investment programme.

The preparation of the Business Plan is a vitally important management task which requires the active participation of all of the senior and middle management team. All managers are expected to contribute to the planning process and they must communicate effectively with each other . Modern commercial organisations engaged in the development of Strategic Business Plan use a technique known as "top down planning". This technique allows the senior management team to set targets for the Strategic Business Units in terms of revenue growth required, expenditure limits, and desired profitability. Detailed Action Plans or Implementation Plans are then developed by middle management to show how they will achieve the objectives set out in the Strategic Business Plan and they are provided with the opportunity to suggest modifications to the Plan as required.

Modern commercial organisations use corporate financial computer models to assist them in the development of the Business Plan. These computer models are designed to provide management with an assessment of the impact of the changes in the business that are proposed in the Marketing Plan, the Operations Plan, the Investment Plan and the Financial Plan. The corporate financial computer model also provides management with an opportunity perform sensitivity analysis whereby they can assess the impact of changes in key variables such as traffic volumes, wage rates, exchanges rates etc., on the financial results of the organisation.

The corporate financial computer model is essentially a communications tool which allows management to draw together the various strands of the business plan into a simple set of financial statements. In most organisations the first year of the corporate business plan forms

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the basis for the preparation of corporate budget. The Business Plan is revised annually in the light of changes in the business environment.

1.2 Preparation of the Corporate Financial Computer Model

The consultants have developed a corporate financial computer model in order to achieve two objectives : To demonstrate the impact of specific recommended measures on the financial performance of the railway; To make the economics/accounting personnel of the railway familiar with the techniques of financial modelling in order that they may develop their own financial projections in future.

The key assumptions used in the preparation of the financial forecasts are set out in a separate section of this document. The draft financial projections that are presented in this report will form the basis of future discussions with the railway at which time the consultants will seek to involve railway managers in the preparation of a revised financial projections. This process of communication is an essential part of gaining local management acceptance of the changes proposed and also provides an opportunity for the railway to become actively involved in the preparation of the plan.

The corporate financial model also draws on the knowledge of the railway's economics and accounting departments to present a set of integrated financial statements. The economics department has confined itself to projections of revenues and expenditure, and the necessity to prepare projected cashflow statements and balance sheets is a significant development which will expose railway personnel to modern financial management techniques and highlight the need for improved cash management and improved management of working capital.

1.3 The Structure of the Corporate Financial Computer Model

During the two day management seminar conducted in the railway, the consultants introduced the participants to the concept of financial computer models. The structure of a generic model was illustrated using the diagram below.

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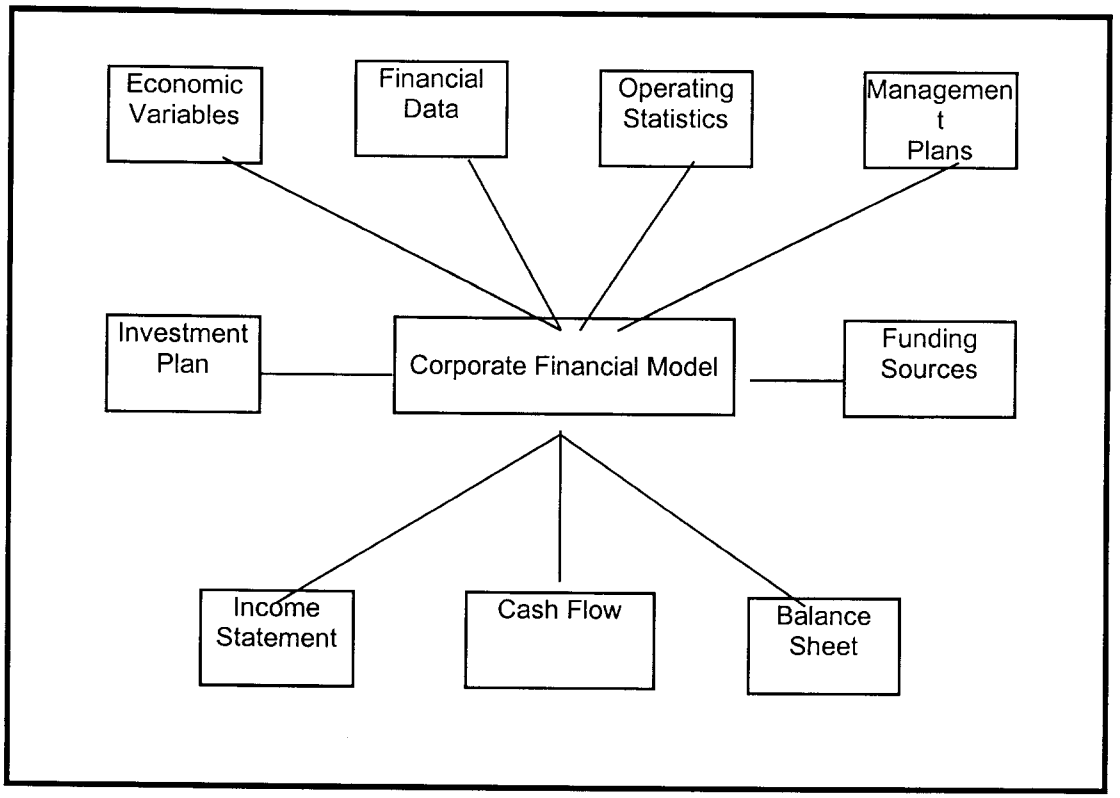
Corporate Financial Model



Inputs to the Corporate Financial Model

Economic Variables

- ***Projected inflation rates*** : The model provides the facility to produce financial forecasts in current prices by allowing the user to enter projected inflation rates. If projections are required in constant prices then the Inflation rate can be set to zero.

- ***Projected exchange rates*** : The local currency exchange rate to the US$ must be entered for the period covered by the financial projections. Although the majority of the model inputs are in local currency the US$ exchange rate is important in calculating the local currency equivalent of projected capital investments and the local currency value of foreign currency loans.

Financial Data

The model uses existing railway financial data in a format that is recognisable to the management of the railway. This basically consists of revenue data for freight and passenger traffic, department expenditure data extracted from the railway's accounts, and the current railway consolidated balance sheet. One of the challenges facing the railway is the initial separation of its existing revenue and costs into separate streams to reflect the activities of the new Strategic Business Units. It addition the railway will have to allocate the assets and liabilities to the new business units. This is a major task which will require a more fundamental review of the accounting information in the railway as part of the ongoing restructuring process.

- ***Revenue data***: The model contains traffic forecasts for the freight and passengers business units. Freight traffic is expressed in terms of tonnes and net tonne kilometres and revenue is calculated at the average tariff per tonne kilometre for the major traffic

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types. Passenger traffic is expressed in terms of passenger numbers and passenger kilometres and revenue is calculated using the average tariff per passenger kilometre for international, local and suburban traffic.

- ***Expenditure data***: The model uses the departmental costs splits that are produced by the existing accounting systems. Expenditure is therefore shown according to the existing departmental structure but an initial reallocation of costs to the new business units has been prepared by the consultants. These expenditure splits are tentative and will need to be reviewed by the management of the railway and modified as required. It must be stressed that the preparation of meaningful costs projections for the new business units is heavily dependent upon the introduction of a new management accounting system which uses a coding structure designed to separate the costs of the business units into different streams at the time the transactions are being recorded in the books of accounts.

- ***Consolidated balance sheet***: The existing consolidated balance sheet of the railway is used as the basis for the projection of the future financial position of the railway. Individual balance sheets for the Strategic Business Units do not exist at this time and will only become available when the railway has completed the task of assigning assets and liabilities to the new units as part of the restructuring process.

Operating Statistics

The model provides the facility for the input of essential operating statistics for the freight and passenger business. These statistics are non-financial in nature and represent the basic operating parameters for the freight and passenger business units.

- ***Freight Operating Statistics*** : The operating requirements of the freight business unit are determined by the freight traffic forecasts. It is anticipated that in future the freight business unit will contract with the rolling stock business unit for the supply of traction units, wagons and associated services. It is therefore essential that the corporate financial computer model provides the facility for the freight business unit to assess it requirements based on the projected volume of traffic. The model provides the management of the railway with an operating profile based on number of locomotives required, assumed locomotive utilisation, average train size, and wagon fleet required.

- ***Passenger Operating Statistics*** : The operating requirements of the passenger business unit will also be determined by traffic forecasts. It is anticipated that the passenger business unit will contract with the rolling stock business unit for the supply of traction units, passenger coaches, and EMU's. The corporate financial model therefore provides management with the facility to assess its operating requirements based on projected passenger traffic volumes. The model provides the management of the railway with an operating profile based on number of locomotives required, EMU's required, assumed utilisation, average train size, and passenger coach fleet required.

Management Plans

The Business Plan is essentially a means of presenting the strategy that management has developed for running the business. The financial model provides management with the facility to establish the impact of specific measures on the financial performance of the business. Here for example management can view the impact of staff reduction on overall profitability. Equally management can determine the impact of increased expenditure on the maintenance of rolling stock and infrastructure which is required because of the backlog of work caused by recent cash shortages. The corporate model provides the railway with the ability to establish how much it can afford to spend to regenerate the railway and restore it to the level of operating efficiency that is required to provide customers with a high quality service.

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The "top-down" approach to business planning is very useful in setting targets but this must be supplemented with much detailed planning. If the objectives set out in the business plan are to be achieved then operating managers must be actively involved in the preparation of detailed implementation plans and these must be reflected in the organisations annual budget.

Investment Plan

The corporate financial model contains summary details of the railways investment plan. This investment plan should include all of the capital investment proposals planned by the railway as part of the redevelopment of the business. The investment plan is therefore not limited to items covered by funding provided by international financing institutions such as the European Bank for Reconstruction and Development (EBRD) but should include additional investment priorities identified by the railway which need to be funded from its own resources or by State funds.

Prior to inclusion in the Business Plan the investment proposals should have been subjected to rigorous economic and financial analysis to determine the internal rate of return associated with each investment proposal.

Funding Sources

The corporate model contains details of the finance that is available to pay for the investment programme. The basic input to the model will include the size of the loan finance available, the term of the loan, the grace period before repayment of the principle commences, and the rate of interest charged. The model calculates the annual interest payments for incorporation into the projected income statement, the capital repayments for inclusion in the cashflow statement and the outstanding loan balance for inclusion in the corporate balance sheet as an outstanding liability.

Where appropriate the model will also take account of any local financing that has been identified either in the form of a capital grant from State funds or in the form of an additional equity contribution.

Output from the Corporate Financial Model

Income Statements

- ***Projected Business Unit Income Statements*** : Projected income statements are produced for the Freight and Passenger Business Units, and projections of costs for the Rolling Stock Business Unit, the Infrastructure Business Unit, and Administrative Services Unit. The costs of the Rolling Stock Business Unit, the Infrastructure Business Unit and the Administrative Services Unit have been charged to the Freight and Passenger Business Unit. These costs have been charged out in the cost projections in order to establish the principle that the freight and passenger units will pay for the services they receive. The exact size of the charges will have to be determined through a process of negotiation between the business units.

- ***Projected Consolidated Income Statements***: The model also produces a consolidated income statement for the total railway. Even after the restructuring of the railway into separate business units it will still be necessary to produce consolidated or "group accounts" for the railway which summarises the overall financial results for all of the business units.

Cash Flow Statements

The model produces projected cashflow statements for the total railway. To produce meaningful cashflow statements for the new Business Units it would be necessary to have opening balance sheets for each unit and these are not currently available. The cashflow statement reflects the impact of the investment programme and the repayment of the EBRD

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loan which at this time is deemed to be the responsibility of "the railway" and not of individual Business Units.

Consolidated Balance Sheets

The model produces projected balance sheets based on the opening balance sheet position as at 01.01.1998. The balance sheets are completely automated and any changes made to the corporate model will be carried through to the balance sheet.

When the railway has had an opportunity to determine the split of assets and liabilities between the business units and produce individual balance sheets for them, then the model should be updated to project these business unit balance sheets.

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2 FINANCIAL PLAN

2.1 Key Assumptions

Assumptions used in Corporate Financial Computer Model	
Planning Parameter	**Modelling Assumption**
General economic parameters	
- Inflation	- inflation of 5.0% per annum from 1999 to 2003
- Exchange rate	- base 3,850 to US$ in 1998, strengthening to 3,266 in 2001 and to 2,947 in 2003
Freight Traffic and Revenue	
Freight Volumes	
- Export oil	(1999 +22.8%),(2000 +15.3%), (2001 +3.2%), (2002 - 0.4%), (2003 -2.8%) (Tariff elasticity -0.5)
- other international freight	(1999 +13.1%),(2000 +9.0%), (2001 +6.0%), (2002 +6.3%), (2003 +6.6%) (Tariff elasticity -0.2)
- local freight	(1999 +4.2%),(2000 +4.2%), (2001 +4.2%), (2002 +4.2%), (2003 +4.2%) (Tariff elasticity 0.0)
Freight Tariffs	
- Export oil	reducing by 10% in 1999, and by 5% per annum in real terms thereafter
- other international freight	reducing by 6% in 1999, and by 5% per annum in real terms thereafter
- local freight	stable in 1999 and increasing by 10% in 2000 and 2001, and by 5% in 2002 in real terms
Passenger Traffic and Revenue	
Passenger Volumes	
- international/long distance	3% per annum (tariff elasticity -0.5)
- suburban services	1.5% per annum (tariff elasticity -0.5)
Passenger Tariffs	
- international/long distance	increasing at 1% per annum in real terms
- suburban services	increasing at 1% per annum in real terms
Freight Operating Resources	
- loco fleet	Requirement for 160 loco's declining to 113 by 2003
- loco's per train	1.32 loco's on average per freight train
- wagon fleet	2000 wagons increasing to 2448 wagons in 2003
- wagons per train	34.4 wagon per train increasing to 35 in 2003
Passenger Operating Resources	
- loco fleet	requirement for 44 loco's declining to 37 by 2003
- loco per train	average of 1 loco per train
- EMU's	24 EMU sets declining to 22 by 2003
- passenger coach fleet	350 declining to 237 by the year 2003
- passenger coaches per train	average of 4.0 remaining constant
Operating Costs	
Passenger Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum

Tacis

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Freight Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Traffic Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Locomotive Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- fuel (diesel & electric traction)	constant in real terms
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Wagon Department	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	5% increase per annum
- other costs (excluding depreciation)	5% increase per annum
Track Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Signalling	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Electricity Supply	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum

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Buildings	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	10% increase per annum
- other costs (excluding depreciation)	10% increase per annum
Administrative Services	
- labour productivity	Staff reduction (1999 -3%), (2000 -7%), (2001 -8%) (2002 -8%), (2003 -8%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001, 5% in 2002 and 2% in 2003
- materials	2% increase per annum
- other costs (excluding depreciation)	2% increase per annum
Ancillary	
- labour productivity	Staff reduction (1999 -0%), (2000 -4%), (2001 -100%)
- unit wages	Real wages increase by 5% in 1999, 5% in 2000, 5% in 2001,
- materials	
- other costs (excluding depreciation)	
Working Capital	
- accounts receivable	90 days in 1999 remaining constant to 2003
- accounts payable	90 days in 1999 remaining constant to 2003
- inventory	193 days stock in 1999 reducing to 120 days by 2003
Investment	
- project investment (US$ 1998)	$10 million in 1999, $24.0 million in 2000
- other investment (billions manats)	38 billion manats in 1998, 60 billion manats per annum from 1999 to 2003
- rolling stock refurbishment	refurbishment as required by freight and passenger business units
Funding	
- Sources of Funds	EBRD $20 2million (1999-2000) No other foreign loans
- Borrowing Terms	EBRD 7% for 21 years (3 years grace)
- Government Contribution	None
Public Service Payments	20 billion manats in 2001, 2002, 2003

2.2 Financial Statements

Consolidated Income Statement

The financial statements produced as part of the draft business plan for ADDY must be regarded as a starting point for further discussions with management on the future of the railway. They are baseline projections which will be modified once senior management have had the opportunity to review the document and comment of the changes that have been proposed by the consultants.

The traffic and revenue projections are consistent with data prepared for the EBRD by CIE Consult and presented as part of the Trans-Caucasian Rail Link Project report. The projections used are those contained in the Base Case scenario of that document.

This project is financed by the European Union's Tacis Programme, which provides grant finance for know-how to foster the development of market economies and democratic societies in the New Independent States and Mongolia.

The financial projections for ADDY are based on estimates of departmental expenditure data provided to the consultants for the full year 1998.

Passenger Revenue: Growth in passenger traffic up to 2003 of 11.0% is modest and the increase in passenger revenue is largely a reflection of the application of a real increase in passenger fares of 1% per annum throughout the period of the plan. Cost recovery on passenger services in very low and the financial data that is available indicates that passenger services do not even cover the costs of the passenger service unit. Cross subsidisation of passenger services from profitable freight services must be phased out. Support from the State will be required for essential social services and based on the preliminary allocations of costs to the Passenger Business Unit a figure of 20 billion manats per annum has been included from the year 2001. Rationalisation of services is essential if ADDY is to eliminate any residual losses in the passenger business that remain after the payment of the PSO.

Freight Revenue : Growth in freight traffic between 1998 and 2003 is set at 46.7%. Tariffs for export oil and other international freight are set in US$ or Swiss Francs and so to compensate for the projected strengthening of the manat a reduction in tariff levels has been incorporated into the Business Plan. Domestic tariff as assumed to remain stable in 1999 but to increase by 10% in 2000 (real terms) and by 5% per annum up to 2002.

- ***Domestic traffic*** is forecast to increase by approx 4% per annum over the period of the plan in line with forecast growth in GDP. This category represents about half the current tonnage carried by ADDY and is dominated by the transportation of refined oil products from SOCAR's Baku refinery. Construction traffic, mainly consisting of sand and gravel, is the other major domestic traffic, and it is mostly hauled from the north west of Azerbaijan to the Baku region.

- ***Exports Oil*** traffic is increasing and a major factor in the growth in this traffic is the quantity of Tengiz oil carried for Chevron to Batumi on the Black Sea. Growth in this traffic is expected to be strong in 1999 and 2000 and it will begin to taper off in 2001 and it will decline slightly in 2003 and 2003.

- ***Other International traffic*** This category includes import traffic which is dominated by general freight and the main commodities include grain, flour and sugar from the Black Sea ports and Russia, cement from Turkmenistan and steel from Russia. It also includes transit traffic which mainly consists of cotton westbound from Uzbekistan to Poti and refined oil products from Turkmenistan. Eastbound transit traffic consists of grain for Uzbekistan, together with general manufactured goods and food products. Growth in other international traffic is set to be 22% between 1999 and 2000 and average out at 6% per annum for the period 2001 to 2003.

Azerbaijan Railways operating costs, expressed in current prices, grow by 50% between 1998 and 2003.

Staff numbers are projected to decline by 30% over the period of the plan spread across all of the Business Units but the financial impact of this is eroded by the projected increases in real wages. Salaries are assumed to increase in by 5% per annum for the entire period of the plan. These increases are in addition to inflationary adjustments. and are broadly in line with the level of increases contained in the financial projection produced for the EBRD and presented as part of the Trans-Caucasian Rail Link Project report.

Expenditure on materials and capital repair grow by 112% during the period of the plan. The increase in due to a combination of local inflation, growth in the level of traffic which results in higher levels of activity and assumed increases in expenditure. It has been assumed that the Rolling Stock Business Unit will increase it expenditure on materials by 10% per annum in the Locomotive Department and by 5% per annum in the Wagon Maintenance department. It has been assumed that the Infrastructure Business Unit will increase expenditure by 10% across

all its departments during the period of the plan. The backlog of maintenance activity has resulted in artificially low unit costs and these need to be adjusted upwards.

The locomotive fleet and the rolling stock fleet are much larger than required and therefore the costs of operations are based on operating requirements rather than existing levels of vehicle ownership. Scrapping or disposal of surplus vehicles needs to be addressed by ADDY during the period covered by the business plan.

Fuel costs rise by 49% during the period of the plan however it has been assumed that fuel prices remain constant in real terms. The increase in expenditure is due to a combination of inflationary increases and higher levels of activity.

Depreciation is shown in the Business Plan based on asset values shown in the ADDY balance sheet and the projected levels are consistent with the figures contained in the EBRD financial projections. The increased charges for depreciation compared to 1997 reflect the impact of the proposed investment.

The projected net income shown in the Business Plan is positive through the period 1999 to 2003 however it is assumed that the Government is contributing to the support of socially necessary passenger services from 2001 onwards.

Consolidated Cash Flow

Operating cashflow is positive from 2001 onwards which will allow ADDY to fund a significant amount of maintenance activity to clear the backlog that has arisen in recent years. This rehabilitation work will supplement the investment programme that is being funded by the proposed EBRD loan. The growth in freight traffic provides the funds to support the projected increases in wage rates and higher levels of expenditure on materials and capital repairs. The assumed funding of passenger services by the State contributes 60 billion manats cumulatively to the cash flow and overall cashflow would remain positive at a significantly reduced level of contribution.

Consolidated Balance Sheets

Current assets increase from 246.9 billion manats in 1998 to 452.5 billion manats in 2003 mainly due to the accumulation of a large cash surplus. The cash position is contingent upon the payment of the PSO and in the event that ADDY does receive a substantial contribution from the State it is likely that the additional cash would be used to fund additional investment. It has been assumed that there will be a reduction in the level of accounts receivable with receivable days reducing to 102 days in 1998 and to 90 days therafter for the period of the plan. The value of inventory increases due to inflationary prices increases and the assumed increase in the level of expenditure on materials. Improved inventory management practices, however, are assumed to reduce the number of inventory days to 193 days in 1999 and to as low as 120 days in 2003.

The increase in the value of fixed assets reflects the investment programme funded by the EBRD and ADDY's own rehabilitation/investment programme.

Current liabilities increase from 442.1 billion manats in 1998 to 458.6 billion manats in 2003 largely as a result of the increasing quantity and cost of materials purchased. It has been assumed that the payables days figure is reduced during the period of the plan from an initial figure of 126 in 1998 to 90 days outstanding in 2003.

Long term debt increases from an initial balance of zero to 25.3 billion manats in 1999 and to 52.3 billion manats in 2003 and the equity and reserves balances grows mainly as a result of accumulated operating surpluses. The debt to equity ratio increases from 1% in 1999 to 3% in 2000 and then declines to 2% from 2002 onwards.

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3 INVESTMENT

The investment plan of ADDY has been the subject of extensive study and evaluation as part of the Trans-Caucasian Rail Link Project. The figures set out in the table below represent the investment proposals as at the end of December 1998.

Investment Plan & Sources of Finance				
Project	**Cost in US$ Millions**			
	EBRD	**TACIS**	**Local**	**Total**
Track renewal	11.50		3.03	14.53
Track rehabilitation	1.50		2.15	3.65
Track Equipment	4.00			4.00
Telecommunications		6.14	1.01	7.15
Balajari Washplant	3.20	0.56	0.74	4.51
Technical Cooperation		1.20		1.20
Total	20.20	7.90	6.94	35.04

The project will be financed by an EBRD Loan of $20.20 million. and EU grant of US $7.90 million for the telecommunications component, Balajari Washplant and Technical cooperation, and US $6.94 million of local funds.

Project FIRR by Component (% p.a.)		
Project Component	**Cost (US$ million)**	**FIRR (%)**
Track renewal	14.53	8%
Track rehabilitation	3.65	23%
Track equipment	4.00	20%
Telecommunications	7.15	13%
Balajari Washplant	4.28	N/A
Total	33.84	16%

The main benefits identified for the proposed investment include:

- reduced transit times through increased lines speeds arising from improved track condition and increased traffic capacity and improved rolling stock productivity.
- reduced track and rolling stock maintenance costs and fuel consumption through improved track condition;
- improved rolling stock utilisation and operating efficiency through the provision of an upgraded communications system.

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4 FINANCIAL PLANS OF THE BUSINESS UNITS

4.1 Separation of ADDY departmental costs according to Business Unit

The consolidated financial results provide an overview of the performance of the railways as a total entity. There will be a requirement to produce result in the consolidated format even after restructuring has been completed. In addition to the consolidated figures, however, it will be necessary for ADDY to produce financial data for each of the Business Units. The structures of these Business Units are currently being prepared and the task of assigning staff and resources to the new units will require a great deal of effort on the part of ADDY.

For the purpose of preparing a draft business plan the consultants have prepared a tentative split of the current operating department costs using a number of broad assumptions as follows :

Department	Initial cost assignment	Costs charged to
Passenger Services	• 100 % Passenger Business Unit	Charged entirely to Passenger Business Unit
Freight Services	• 100% Freight Business Unit	Charged entirely to Freight Business Unit
Traffic Department	• 80% Freight based on station and terminal staff levels • 20% Passenger based on station and terminal staff levels	Charged to Passenger Business Unit and Freight Business Unit based on predetermined split of costs.
Locomotive Department	• Passenger Drivers assigned to Passenger Business Unit • Freight Drivers assigned to Freight Business Unit • Balance of Locomotive Department costs assigned to Rolling Stock Business Unit	Locomotive Department costs charged out to Passenger and Freight based on Traction Unit Kms (i.e Locomotive Kms for Freight and Locomotive Kms plus EMU Km's for Passenger)
Wagon Department	• 100% to Rolling Stock Business Unit	100% of costs charged out to Freight Business Unit
Track department	• 100% to Infrastructure Business Unit	Charged out to Passenger and Freight based on gross tonne kilometres
Buildings	• 100% to Infrastructure Business Unit	Charged out to Passenger and Freight based on gross tonne kilometres
Signalling	• 100% to Infrastructure Business Unit	Charged out to Passenger and Freight based on gross tonne kilometres
Electrical	• 100% to Infrastructure Business Unit	Charged out to Passenger and Freight based on gross tonne kilometres
Administration	• Administrative Services Unit	50% to Freight and 50% to Passenger

Tacis

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4.2 Business Unit Cost Drivers

The Business Unit costs have been projected for the period of the plan using a number of specific cost drivers. For strategic planning purposes it is assumed that these ***cost drivers*** are reliable indicators of the level of activity in the operating departments that make up the business units. The impact of changes in the cost drivers is in addition to the impact of price inflation, changes in real input prices and any cost reduction plans identified for the business.

The main cost drivers that were used in the projection of Business Unit expenditure were are follows :

Passenger Business Unit : Cost Drivers

Department Name	Main Cost Driver
Passenger Services	Passenger Car kilometres
Traffic Department - Passenger	Train kilometres
Driver and Assistant salary costs	Passenger Train kilometres

Freight Business Unit : Cost Drivers

Department Name	Main Cost Driver
Freight Services	Net tonne kilometres
Traffic Department - Freight	Train kilometres
Drivers and assistants salary costs	Freight train kilometres

Rolling Stock Business Unit

Department Name	Main Cost Driver
Locomotive Department - Traction Fuel	Gross tonne kilometres
Locomotive Department - Other costs	Locomotive kilometres
Wagon Maintenance	Wagon kilometres

Infrastructure Business Unit

Department Name	Main Cost Driver
Track department	80% variable with track Kilometres, 20% variable with gross tonne kilometres
Buildings	Track kilometres
Signalling	Track kilometres
Electrical Supply	Track Kilometres

Administrative Services Unit

Department Name	Main Cost Driver
Administration	Number of staff employed

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4.3 Passenger Business Unit projected income statement

Passenger Revenue: Growth in passenger traffic up to 2003 of 11% is modest and the increase in passenger revenue is largely a reflection of the application of a real increase in passenger fares of 1% per annum throughout the period of the plan. Cost recovery on passenger services in very low and the financial data that is available indicates that passenger services do not even cover the costs of the passenger service unit. Cross subsidisation of passenger services from profitable freight services must be phased out. Support from the State will be required for essential social services and based on the preliminary allocations of costs to the Passenger Business Unit a figure of 20 billion manats per annum has been included from the year 2001. Rationalisation of services is essential if ADDY is to eliminate any residual losses in the passenger business that remain after the payment of the PSO.

Direct expenditure on passenger services, including the costs of the passenger service department, a share of the traffic department costs and the salary costs of passenger drivers and assistants, grows by only 21% during the period of the plan. This reflects increases in real wages, and increased expenditure on materials used in the repair of passenger rolling stock, however the projected staff reductions limit the effect of these increases. The repair of passenger rolling stock is currently the responsibility of the passenger services department although this function should be performed by the rolling stock business unit which would then recharge the costs to the Passenger Business Unit.

Historical depreciation costs are constant throughout the period of the plan.

The Passenger Business Unit must bear a charge for the use of infrastructure which is tentatively estimated at 20.8 billion manats for 1998 and this grows to 21.1 billion manats by 2003 in line with increases in costs of the Infrastructure Business Unit. The charge out is based on passenger train gross tonne kilometres.

Rolling stock charges are estimated at 49.3 billion manats for 1998 growing to 60.6 billion manats by 2003. These charges are for the use of locomotives and EMU's and the charges are based on the number of traction unit kilometres (locomotive kilometres and EMU kilometres) operated by the passenger business unit.

The Passenger Business unit must also bear a proportion of the costs of the Administration and this charge has initially been set at 50%.

The projected net result for the Passenger Business Unit in 1999 is a loss of 82.2 billion manats which rises to 82.9 billion manats in 2000. The payment of PSO of 20.0 billion manats per annum from 2001 onwards reduces the size of the reported loss to 63.8 billion manats in 2001, to 65.1 billion manats in 2002 and to 65.9 billion manats in 2003.

4.4 Freight Business Unit projected income statement

Freight Revenue : Growth in freight traffic between 1998 and 2003 is set at 46.7%. Tariffs for export oil and other international freight are set in US$ or Swiss Francs and so to compensate for the projected strengthening of the manat a reduction in tariff levels ahs been incorporated into the Business Plan. Domestic tariff as assumed to remain stable in 1999 but to increase by 10% in 2000 (real terms) and by 5% per annum up to 2002.

- ***Domestic traffic*** is forecast to increase by approx 4% per annum over the period of the plan in line with forecast growth in GDP. This category represents about half the current tonnage carried by ADDY and is dominated by the transportation of refined oil products from SOCAR's Baku refinery. Construction traffic, mainly consisting of sand

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and gravel, is the other major domestic traffic, and it is mostly hauled from the north west of Azerbaijan to the Baku region.

- ***Exports Oil*** traffic is increasing and a major factor in the growth in this traffic is the quantity of Tengiz oil carried for Chevron to Batumi on the Black Sea. Growth in this traffic is expected to be strong in 1999 and 2000 and it will begin to taper off in 2001 and it will decline slightly in 2003 and 2003.

- ***Other International traffic*** This category includes import traffic which is dominated by general freight and the main commodities include grain, flour and sugar from the Black Sea ports and Russia, cement from Turkmenistan and steel from Russia. It also includes transit traffic which mainly consists of cotton westbound from Uzbekistan to Poti and refined oil products from Turkmenistan. Eastbound transit traffic consists of grain for Uzbekistan, together with general manufactured goods and food products. Growth in other international traffic is set to be 22% between 1999 and 2000 and average out at 6% per annum for the period 2001 to 2003.

Direct expenditure on freight services, including the costs of the freight service department, a share of the traffic department costs and the salary costs of freight drivers and assistants, grows by 71% during the period of the plan. This reflects increases in real wages and a growth in expenditure in line with the projected increases in the volume of traffic.

Historical depreciation costs are constant throughout the period of the plan.

The Freight Business Unit must bear a charge for the use of infrastructure which is tentatively estimated at 95.7 billion manats for 1998 and this grows to 156.3 billion manats by 2003 in line with increases in costs of the Infrastructure Business Unit. The charge out is based on freight train gross tonne kilometres.

Rolling stock charges are estimated at 122.0 billion lari for 1998 growing to 208.9 billion manats by 2003. These charges are made up of the cost of supplying and maintaining wagons used by the freight business unit and for the use of locomotives. The wagon maintenance costs are separately identified in the ADDY accounts and can be charged directly to the freight business unit. The charge of locomotive use is based on the number of locomotive kilometres operated in freight service.

The Freight Business Unit must also bear a proportion of the costs of the Administration and this charge has initially been set at 50%.

The projected net result for the Freight Business Unit in 1999 is a profit of 96.4 billion manats which increases to 166.0 billion manats in 2003. The growth in freight traffic and revenue is the determining factor in the improved performance. The increased freight traffic will result in higher charges from both of the Infrastructure Unit and the Rolling Stock Business Unit. The Infrastructure and Rolling Stock Units will be embarking on rehabilitation programmes which will see their cost bases rising throughout the plan period and this will result in higher charges for track access and rolling stock use.

4.5 Rolling Stock Business Unit projected income statement

Expenditure is projected to increase by 57% during the period of the plan. The increase is predominantly due higher expenditure on materials and capital repair due to a combination of local inflation, growth in the level of traffic which results in higher levels of activity. The backlog of maintenance activity has resulted in artificially low unit costs and these need to be adjusted upwards. The planned reductions in staff offset the projected increases in wages so that salaries and social insurance costs only increase by 47% during the period of the plan.

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Passenger coach maintenance costs are not reflected in the income statement as these are currently included in the costs of the passenger service department by ADDY.

The locomotive fleet and the rolling stock fleet are much larger than required and therefore the costs of operations are based on operating requirements rather than existing levels of vehicle ownership. Scrapping or disposal of surplus vehicles needs to be addressed by ADDY during the period covered by the business plan.

Traction fuel costs rise by 55% during the period of the plan however it has been assumed that fuel prices remain constant in real terms. The increase in expenditure is due to a combination of inflationary increases and higher levels of activity.

The expenditure of the rolling stock business unit is charged out to the Passenger and Freight Business Unit without any mark-up and therefore there is no reported net surplus.

4.6 Infrastructure Business Unit projected income statement

The Infrastructure Business Unit expenditure is projected to increase by 52% during the course of the plan. The bulk of the increase in costs is in the track department reflecting rehabilitation work on track and bridges. The main cost increase is in capital repair work which rises from 29.0 billion manats in 1998 to 62.9 billion manats in 2003.

Historical depreciation charges declines from 28.6 billion manats in 1998 to 27.2 billion manats in 2003 .

The Infrastructure Business Unit must bear the costs of the interest charges associated with the EBRD loan which is targeted at Infrastructural improvements.

The entire costs of the Infrastructure Unit is charged out to the Passenger and Freight Business Units based on the gross tonne kilometres calculated for each of those units. The charge out to the Freight Business increases more rapidly due to the increased traffic levels.

4.7 Administrative Services Unit projected income statement

The Administrative Services Unit will be responsible for providing support to the other Business Units. It will be responsible for a wide range of activities including the provision of management information systems, centralised accounting and statutory reporting, treasury management, pensions management and legal affairs.

The projected costs of the Administrative Services Unit increase by 5% during the course of the plan. Inflationary costs increases are offset by a general reduction in staffing and expenditure following the restructuring of the railways activities into business units.

The costs of Administration Services have been charged out to the Passenger and Freight Business Units with each of those units bearing an equal proportion of the costs.

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Azerbaijan Railways : Financial Plan

	Total Cost (millions manats current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Business Unit Total							
Salaries & Social Insurance	8.8	14.5	15.2	15.2	15.1	15.0	14.4
Materials	1.7	1.7	1.9	2.1	2.4	2.7	3.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.1	1.3	1.3	1.4	1.4	1.4	1.5
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	1.3	1.3	1.3	1.4	1.4	1.4	1.5
Depreciation	1.5	1.8	1.8	1.8	1.8	1.8	1.8
Capital Repairs	4.1	3.0	3.4	3.8	4.3	4.8	5.5
Other	1.9	1.1	1.2	1.3	1.5	1.7	1.8
Total	20.4	24.7	26.1	27.0	27.9	28.8	29.5
Freight Business Unit Total							
Salaries & Social Insurance	11.1	16.9	20.9	23.7	25.3	26.6	26.9
Materials	0.9	1.0	1.2	1.5	1.7	1.8	2.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.6	0.6	0.7	0.9	0.9	1.0	1.1
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	2.8	2.9	3.5	4.1	4.5	4.9	5.3
Depreciation	4.9	6.0	5.9	6.0	6.0	6.1	6.2
Capital Repairs	0.5	0.6	0.7	0.9	1.0	1.1	1.2
Other	6.3	3.1	3.9	4.6	5.2	5.8	6.3
Total	27.1	31.1	36.9	41.7	44.6	47.4	49.1
Rolling Stock Business Unit Total							
Salaries & Social Insurance	18.4	31.2	37.2	41.4	43.7	45.6	46.0
Materials	11.3	11.8	14.8	18.0	21.1	24.4	28.1
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	2.7	4.0	4.7	5.3	5.8	6.3	6.8
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	3.0	5.4	6.1	6.9	7.4	7.9	8.4
Depreciation	30.1	37.0	36.5	36.9	37.3	37.6	37.9
Capital Repairs	10.5	14.1	17.7	21.6	25.3	29.2	33.5
Other	13.4	8.6	10.9	13.3	15.5	17.8	20.3
Total	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Infrastructure Business Unit Total							
Salaries & Social Insurance	20.9	34.4	36.5	37.8	38.5	39.2	38.8
Materials	13.0	13.3	15.6	18.2	21.2	24.6	28.5
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.5	1.8	1.9	2.0	2.2	2.3	2.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	4.1	3.3	3.5	3.6	3.8	4.0	4.2
Depreciation	23.4	28.6	27.0	27.3	29.3	28.2	27.2
Capital Repairs	39.0	29.0	34.2	40.2	46.7	54.3	62.9
Other	3.9	5.8	6.8	8.0	9.4	10.9	12.6
Total	105.8	116.2	125.6	137.3	151.1	163.5	176.6
Corporate Services Total							
Salaries & Social Insurance	7.3	11.6	12.4	12.7	12.8	13.1	12.9
Materials	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Depreciation	0.6	0.8	0.8	0.8	0.8	0.8	0.8
Capital Repairs	7.0	5.8	6.0	6.0	5.9	5.8	5.7
Other	1.1	1.2	1.2	1.2	1.2	1.2	1.2
Total	17.5	21.0	22.1	22.4	22.3	22.4	22.1
Railway Expenditure Total							
Salaries & Social Insurance	66.5	108.6	122.1	130.9	135.4	139.5	139.0
Materials	27.2	28.1	33.9	40.2	46.7	53.8	61.9
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	6.2	8.1	9.1	10.0	10.7	11.4	12.1
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	12.1	13.8	15.4	16.9	18.0	19.1	20.2
Depreciation	60.5	74.2	72.0	72.8	75.2	74.6	74.0
Capital Repairs	61.1	52.5	62.1	72.5	83.2	95.2	108.9
Other	26.6	19.8	24.0	28.5	32.8	37.3	42.3
Total	318.6	364.3	405.0	445.0	480.5	514.5	546.8

Azerbaijan Railways : Financial Plan
Table 1 : Consolidate Income Statement

	(billion manats/current prices)						
	1997	1998	1999	2000	2001	2002	2003
Volume (million)							
Passenger (pass-km)	490	562	574	586	599	611	624
Freight (tonne -km)	3,521	4,010	4,678	5,233	5,521	5,730	5,885
Total Traffic Units	4,011	4,572	5,252	5,819	6,119	6,342	6,509
Traffic Units/core employees (000's)	134	153	181	215	246	277	309
Revenue							
Transport							
- Passenger	15.0	24.1	26.2	28.4	30.8	33.5	36.3
- Freight	333.1	345.7	394.8	457.8	510.6	556.1	591.3
- PSO Compensation	-	-	-	-	20.0	20.0	20.0
- Subtotal	348.1	369.8	420.9	486.2	561.5	609.5	647.7
Ancillary/other	-	-	-	-	-	-	-
Total Revenue	348.1	369.8	420.9	486.2	561.5	609.5	647.7
Expenditure							
Transport							
- Salaries	66.5	108.6	122.1	130.9	135.4	139.5	139.0
- Materials/other	114.9	100.4	120.0	141.2	162.6	186.3	213.0
- Fuel & Energy	76.7	81.1	90.8	100.1	107.3	114.1	120.8
- Subtotal	258.1	290.1	333.0	372.2	405.3	439.9	472.8
Ancillary/Other	-	-	-	-	-	-	-
Total Working Cost	258.1	290.1	333.0	372.2	405.3	439.9	472.8
Depreciation	60.5	74.2	72.0	72.8	75.2	74.6	74.0
Total Operating Cost	318.6	364.3	405.0	445.0	480.5	514.5	546.8
Net Operating Income	29.5	5.5	15.9	41.2	81.0	95.0	100.9
Interest Charges	-	0.4	1.8	4.8	4.6	4.1	3.7
Exchange adjustment EBRD Loan				- 1.3	- 3.4	- 3.3	- 2.9
Net Income before Tax	29.5	5.2	14.2	37.7	79.9	94.2	100.1
Income Tax	9.7	1.7	4.7	12.4	26.4	31.1	33.0
Net Income After Tax	19.8	3.5	9.5	25.2	53.5	63.1	67.1
Memo only :	-	-	-	-	-	-	-
Distribution of net revenue:							
- Reserves	14.8	2.6	7.1	18.9	40.1	47.3	50.3
- Social benefits	4.0	0.7	1.9	5.0	10.7	12.6	13.4
- other	1.0	0.2	0.5	1.3	2.7	3.2	3.4
Performance Ratios							
Working Ratio (%)	74%	78%	79%	77%	72%	72%	73%
Operating Ratio (%)	92%	99%	96%	92%	86%	84%	84%

Azerbaijan Railways - Financial Plan
Table 2 : Cash Flow Statement 1998 -2003

(billion manats/current prices)

	1998	1999	2000	2001	2002	2003
RECEIPTS						
Freight Revenue	345.7	394.8	457.8	510.6	556.1	591.3
Passenger Revenue	24.1	26.2	28.4	30.8	33.5	36.3
Auxiliary Income/Other	-	-	-	-	-	-
Operating Subsidy	-	-	-	20.0	20.0	20.0
Decrease/(Increase) in Accounts Receivable	9.4	-0.7	-15.5	-13.0	-11.2	-8.7
(Decrease)/Increase in Accounts Payable	-0.9	-18.0	9.7	8.2	8.5	8.1
Capital Grant - Repayment of Loans						
Other Grants - TACIS		0	23.0	-	-	-
Loans received - EBRD	-	25.3	44.7	-	-	-
Loans received - Other Foreign	-	-	-	-	-	-
Loans received - Local Banks						
Total	378.3	427.5	548.1	556.6	606.9	647.1
PAYMENTS						
Working Expenses	290.1	333.0	372.2	405.3	439.9	472.8
Increase/(Decrease) in Inventory	6.9	3.6	1.6	- 0.6	- 1.3	- 1.3
Capital Investment	38.0	96.2	142.5	60.0	60.0	60.0
Own Use	0.9	2.4	6.3	13.4	15.8	16.8
Interest - EBRD Loan & Commitment Fee	0.4	1.8	4.8	4.6	4.1	3.7
Interest - Foreign Loans	-	-	-	-	-	-
Loan Repayments - EBRD		-	-	-	3.5	3.3
Loan Repayments - Foreign Loans	-	-	-	-	-	-
Interest - Bank Borrowings						
Profit Tax Paid	1.7	4.7	12.4	26.4	31.1	33.0
Total	337.9	441.5	539.8	509.0	553.1	588.3
Cash Increase / (Decrease)	40.4	- 14.0	8.3	47.6	53.8	58.8
Balance Previous Year	2	42.4	28.4	36.6	84.3	138.1
Cash at Year End	42.4	28.4	36.6	84.3	138.1	196.9
Debt Service Coverage (Times) (Available Cash/Interest Payments)	116.0	16.0	7.6	18.4	33.7	53.7

Azerbaijan Railways - Financial Plan
Table 3 : Consolidated Balance Sheet 1997 - 2003

	(billion manats/current prices)						
	1997	1998	1999	2000	2001	2002	2003
Assets							
Current Assets							
Cash	2.0	42.4	28.4	36.6	84.3	138.1	196.9
Receivables	106.0	96.6	97.3	112.9	125.9	137.1	145.8
Inventoties	101.0	107.9	111.5	113.0	112.4	111.1	109.8
Subtotal	209.0	246.9	237.2	262.5	322.6	386.3	452.5
Long term - receivables	230.0	230.0	230.0	230.0	230.0	230.0	230.0
Fixed Assets							
Book Values	2309.0	2347.0	2443.2	2585.7	2645.7	2705.7	2765.7
Less: Accumulated Depreciation		74.2	146.2	219.0	294.2	368.8	442.8
Net Book Value	2309.0	2272.8	2297.0	2366.7	2351.5	2336.9	2322.9
Other Assets	145.0	145.0	145.0	145.0	145.0	145.0	145.0
Total Assets	2,893.0	2,894.7	2,909.1	3,004.2	3,049.1	3,098.2	3,150.4
Current Liabilities							
Short term Debts	6	6	6	6	6	6	6
Accounts Payable	101	100.1	82.1	91.8	99.9	108.5	116.6
Other	336	336	336	336	336	336	336
Subtotal	443.0	442.1	424.1	433.8	441.9	450.5	458.6
Long term - payables	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Long Term Debts							
EBRD	0	0	25.3	68.8	65.3	58.6	52.3
Other	-	-	-	-	-	-	-
Equity & Reserves - opening	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0	2,390.0
Capital Grants Received				23.0	23.0	23.0	23.0
Profit/Loss - current		2.6	7.1	18.9	40.1	47.3	50.3
Profit/loss - cumulative		2.6	9.7	28.6	68.8	116.1	166.4
Total Liabilities	2893.0	2894.7	2909.1	3004.2	3049.1	3098.2	3150.4
Current Ratio	0.5	0.6	0.6	0.6	0.7	0.9	1.0
Acid Test Ratio	0.2	0.3	0.3	0.3	0.5	0.6	0.7
Debt/Equity Ratio	0%	0%	1%	3%	3%	2%	2%

Consolidated Income

Reconciliation

Passenger Business Unit							
Revenue	15	24	26	28	51	53	56
Costs	19	23	24	25	26	27	28
Depreciation	2	2	2	2	2	2	2
Result	- 5	- 1	0	1	23	25	27
Freight Business Unit							
Revenue	333	346	395	458	511	556	591
Costs	22	25	31	36	39	41	43
Depreciation	5	6	6	6	6	6	6
Result	306	315	358	416	466	509	542
Rolling Stock Business Unit							
Revenue (loco hire/demurrage)	-	-	-	-	-	-	-
Costs	118	134	158	180	197	215	232
Depreciation	30	37	37	37	37	38	38
Result	- 148	- 171	- 194	- 217	- 235	- 252	- 270
Infrastructure							
Revenue	0	0	0	0	0	0	0
Costs	82	88	99	110	122	135	149
Depreciation	23	29	27	27	29	28	27
Result	- 106	- 116	- 126	- 137	- 151	- 163	- 177
Administrative services							
Revenue	0	0	0	0	0	0	0
Costs	17	20	21	22	21	22	21
Depreciation	1	1	1	1	1	1	1
Result	- 18	- 21	- 22	- 22	- 22	- 22	- 22
Ancillary Services/other Costs							
Revenue	-	-	-	-	-	-	-
Costs	-	-	-	-	-	-	-
Result	-	-	-	-	-	-	-
Total Revenue	348	370	421	486	561	610	648
	-	-	-	-	-	-	-
Total Costs	258	290	333	372	405	440	473
	-	0.00	-	- -	0.00	0.00	0.00
Depreciation	61	74.2	72	73	75	75	74
	0	0	0	0	0	0	0
Operating Costs	318.6	364.3	405	445	480	514	547
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest Charges	-	0	2	4	1	1	1
	-	-	-	-	-	-	-
Net Income before tax	29.5	5.1	14.2	37.7	79.9	94.2	100.1
	-	0.0	0.0 -	0.0	0.0 -	0.0 -	0.0

Azerbaijan Railways
Table 4 : Working Capital Calculation

	1997	1998	1999	2000	2001	2002	2003
Receivables Days	116	102	90	90	90	90	90
Inventory Days	244	217	193	171	152	135	120
Payables days	176	126	90	90	90	90	90
	(billions manats)						
Receivables	106.0	96.6	97.3	112.9	125.9	137.1	145.8
Inventory	101.0	107.9	111.5	113.0	112.4	111.1	109.8
Payables	101.0	100.1	82.1	91.8	99.9	108.5	116.6
Working Capital	106.0	104.4	126.7	134.1	138.4	139.8	139.0
Change in working capital		- 1.6	22.3	7.4	4.2	1.4	- 0.8
Decrease/(Increase) in receivables		9.4	- 0.7	- 15.5	- 13.0	- 11.2	- 8.7
Increase/(Decrease) in Inventory		6.9	3.6	1.6	- 0.6	- 1.3	- 1.3
Decrease) / Increase in Payables		- 0.9	- 18.0	9.7	8.2	8.5	8.1

Azerbaijan Railways
Investment & Depreciation

	1998	1999	2000	2001	2002	2003	
Rolling Stock Fleet required							**Available**
Locomotives - passenger	40	38	35	33	31	30	**1998**
Locomotives - freight	80	83	80	76	70	66	
Total Locomotives	140	140	140	140	140	140	140
Carriages	350	350	350	350	350	350	200
EMU	120	120	120	120	120	120	100
Wagos (oil)	1400	1400	1400	1400	1400	1400	1400
Wagons (other)	4000	4000	4000	4000	4000	4000	4000
Rolling Stock Investment							
Locomotives - passenger		-2	-3	-2	-2	-1	
Locomotives - freight		3	-3	-4	-6	-4	
Total Locomotives		0	0	0	0	0	
Carriages		0	0	0	0	0	
EMU		0	0	0	0	0	
Wagos (oil)		0	0	0	0	0	
Wagons (other)		0	0	0	0	0	
		Cost (current manats billion)					**per unit (US$ 000)**	**% import**
Locomotives		0.0	0.0	0.0	0.0	0.0	1800	**60%**
Carriages		0	0	0	0	0	600	**80%**
EMU		0	0	0	0	0	800	**80%**
Wagos (oil)		0.0	0.0	0.0	0.0	0.0	60	**50%**
Wagons (other)		0	0	0	0	0	50	**50%**
Total (Machinery & Equipment)		0.0	0.0	0.0	0.0	0.0		

Azerbaijan Railways
Table 5 : Consolidated Depreciation Schedule 1998 - 2003

		1998	1999	2000	2001	2002	2003
Opening Value (billion manats)							
Buildings		300	289.3	279.2	269.4	260.0	250.9
Works		500	482.3	501.6	566.6	546.7	527.6
Rolling Stock		500	484.8	470.3	456.1	442.5	429.2
Equipment		609	590.5	572.8	555.6	539.0	522.8
Transport & other		400	425.9	473.1	518.9	563.4	606.5
Total		2309	2272.8	2297.0	2366.7	2351.5	2336.9
Additions (billions manats)							
Buildings		0.0	0.0	0.0	0.0	0.0	0.0
Works		0.0	36.2	82.5	0.0	0.0	0.0
Rolling Stock		0.0	0.0	0.0	0.0	0.0	0.0
Equipment		0.0	0.0	0.0	0.0	0.0	0.0
Transport & other		38.0	60.0	60.0	60.0	60.0	60.0
Total		38.0	96.2	142.5	60.0	60.0	60.0
	Rate						
Depreciation (billion manats)							
Buildings	**3.50%**	10.7	10.1	9.8	9.4	9.1	8.8
Works	**3.50%**	17.7	16.9	17.6	19.8	19.1	18.5
Rolling Stock	**3.00%**	15.2	14.5	14.1	13.7	13.3	12.9
Equipment	**3.00%**	18.5	17.7	17.2	16.7	16.2	15.7
Transport & other	**3.00%**	12.1	12.8	14.2	15.6	16.9	18.2
Total		74.2	72.0	72.8	75.2	74.6	74.0
Cumulative Annual		74.2	146.2	219.0	294.2	368.8	442.8

Azerbaijan Railways
Table 6 : Loan Schedule 1998 - 2003

		1997	1998	1999	2000	2001	2002	2003
EBRD Loan								
Facility (Us$ million)	20.2							
Term - years	21							
Grace period	3							
Loan Drawdown US$ (million)			-	7.0	13.0	-	-	-
Cumulative Drawdown			-	7.0	20.0	20.0	20.0	20.0
Loan Repayment -US$ (million)							1.1	1.1
Loan Balance - Us$ (million)				7.0	20.0	20.0	18.9	17.8
EBRD Loan (Local Currency Equivalent)								
Loan Drawdown (billion manats)				25.3	44.7	-	-	-
Cumulative Drawdown			-	25.3	70.0	70.0	70.0	70.0
Loan Repayment -(billion manats)				-	-	-	3.5	3.3
Loan Balance - (billion manats)				25.3	70.0	70.0	66.5	63.2
Restated loan balance at current exchange rates				25.3	68.8	65.3	58.6	52.3
Exchange adjustment on loan				- -	1.3 -	4.7 -	8.0 -	10.9
Annual exchange write-off required				-	1.3 -	3.4 -	3.3 -	2.9
	Rate							
Interest on EBRD Loan (billion manats)	7.00%			1.8	4.8	4.6	4.1	3.7
Commitment fee								
Commitment fee (EBRD) (million $)	0.50%	0	0.1	0.0	0.0	0.0	0.0	
Commitment fee (EBRD) (billion manats)		0.0	0.4	0.0	0.0	0.0	0.0	
Other Foreign Loans								
Facility (billion manats)	0							
Term - years	15							
Grace period	3							
Loan Drawdown (billion manats)		-	-	-	-	-	-	-
Cumulative Drawdown		-	-	-	-	-	-	-
Loan Repayment - (billion manats)		-	-	-	-	-	-	-
Loan Balance - (billion manats)		-	-	-	-	-	-	-
Interest on Foreign Loans	Rate		7.0%	9.9%	10.0%	9.9%	10.1%	10.0%
Interest on Foreign Loans - Paid (billion manats)			-	-	-	-	-	-
Total Interest payment (billions manats)		-	-	1.8	4.8	4.6	4.1	3.7
Exchange Rate adjustment		-	-	- -	1.3 -	3.4 -	3.3 -	2.9
Commitment Fee		0.0	0.4	0.0	0.0	0.0	0.0	0.0
Total Loan Interest & Chargres (to Infrastructure Unit)		-	0.4	1.8	3.5	1.1	0.8	0.7

Azerbaijan Railways
Table 7 : Summary of Investment 1998 - 2003

	Cost	1997 WDV	Investment 1998	1999	2000	2001	2002	2003
Project Investment ($ million)								
Buildings			0	0	0	0	0	0
Works			0	10	24	0	0	0
Rolling Stock			0	0	0	0	0	0
Equipment			0	0	0	0	0	0
Transport & other			0	0	0	0	0	0
Total ($m)			0	10	24	0	0	0
Project Investment (billion manats)								
Buildings			-	-	-	-	-	-
Works			-	36.2	82.5	-	-	-
Rolling Stock			-	-	-	-	-	-
Equipment			-	-	-	-	-	-
Transport & other			-	-	-	-	-	-
Total (billion manats)			-	36.2	82.5	-	-	-
Other Investments (billion manats)								
Buildings	3.50%	300	0.0	0.0	0.0	0.0	0.0	0.0
Works	3.50%	500	0.0	0.0	0.0	0.0	0.0	0.0
Rolling Stock	3.00%	500	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	3.00%	609	0.0	0.0	0.0	0.0	0.0	0.0
Transport & other	3.00%	400	38.0	60.0	60.0	60.0	60.0	60.0
Total		2309	38.0	60.0	60.0	60.0	60.0	60.0
Total Investment (1998 billion manats)								
Buildings			0.0	0.0	0.0	0.0	0.0	0.0
Works			0.0	36.2	82.5	0.0	0.0	0.0
Rolling Stock			0.0	0.0	0.0	0.0	0.0	0.0
Equipment			0.0	0.0	0.0	0.0	0.0	0.0
Transport & other			38.0	60.0	60.0	60.0	60.0	60.0
Total			38.0	96.2	142.5	60.0	60.0	60.0

Azerbaijan Railways
Table 8 : TRAFFIC FORECASTS

	1997	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
									Factor for Elasticity Effect				
Passengers (000's)													
International/long distance	1,382	1,372	1,406	1,441	1,477	1,514	1,551		0.995	0.995	0.995	0.995	0.995
Suburban	2,407	2,815	2,843	2,871	2,900	2,928	2,957		0.995	0.995	0.995	0.995	0.995
Total	3,789	4,187	4,249	4,312	4,376	4,442	4,509						
									Average haul				
Passenger -km (million)													
International/long distance	420	423	434	444	455	467	478	308	308	308	308	308	308
Suburban	70	139	140	142	143	145	146	49.4	49.4	49.4	49.4	49.4	49.4
Total	490	562	574	586	599	611	624						
									Average tariff (manat per passenger km)				
Passenger Revenue (billions manat)													
International/long distance	14.0	23.0	25.0	27.1	29.5	32.0	34.8	54.4	57.6	61.1	64.8	68.6	72.8
Suburban	1.0	1.1	1.2	1.3	1.3	1.4	1.5	7.9	8.4	8.9	9.4	10.0	10.6
Total	15.0	24.1	26.2	28.4	30.8	33.5	36.3	42.9	45.6	48.5	51.5	54.8	58.2
Freight													
Tonnes(000)									Factor for elasticity effect				
Export Oil	2,781	3,501	4,513	5,332	5,638	5,755	5,733		1.050	1.025	1.025	1.025	1.03
Other international	2,490	2,819	3,226	3,552	3,802	4,081	4,393		1.012	1.010	1.010	1.010	1.01
Other Domestic	6,000	6,188	6,446	6,714	6,994	7,286	7,591		1.00	1.00	1.00	1.00	1.00
Total	11,271	12,508	14,185	15,598	16,434	17,123	17,717						
									Average length of haul				
Tonne-km (millions)													
Export Oil	1,336	1,682	2,168	2,562	2,709	2,765	2,754		480	480	480	480	480
Other international	732	829	949	1,045	1,118	1,200	1,292		294	294	294	294	294
Other Domestic	1,453	1,499	1,561	1,626	1,694	1,765	1,839		242	242	242	242	242
Total	3,521	4,010	4,678	5,233	5,521	5,730	5,885						
									Average tariff in current manats per net tkm				
Freight Revenue (billion manats)													
Export Oil	72.4	91.1	111.6	131.8	139.4	142.3	141.7	54.2	51.5	51.5	51.5	51.5	51.5
Other international	106.7	120.8	136.9	150.7	161.3	173.1	186.4	145.7	144.3	144.3	144.3	144.3	144.3
Other Domestic	154.0	133.8	146.3	175.3	210.0	240.6	263.2	89.3	93.7	107.8	123.9	136.3	143.2
Total	333.1	345.7	394.8	457.8	510.6	556.1	591.3	86.2					
Other revenues (billion manats)													
Ancillary services	-	-	0.0	0.0	0.0	0.0	0.0						
Other operating (Loco hire, demurrage)	-	-	0.0	0.0	0.0	0.0	0.0						
Other businesses	-	-	0.0	0.0	0.0	0.0	0.0						
Subtotal	-	-	-	-	-	-	-						
Public Service Obligation		0	0	0	20	20	20						
Total Revenue (billion manats current)	348.1	369.8	420.9	486.2	561.5	609.5	647.7						
inflation factor		100%	105%	110%	116%	122%	128%						
Unit labour factor		100%	105%	110%	116%	122%	124%						
Exchange rate		3850	3619.00	3438.05	3266.15	3102.84	2947.70						

Azerbaijan Railways
Table 9 : Passenger Business Unit : Financial Plan

	Total Cost (billions manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Services Revenue	15.0	24.1	26.2	28.4	30.8	33.5	36.3
Public Service Obligation	-	-	-	-	20.0	20.0	20.0
Total Passenger Revenue	15.0	24.1	26.2	28.4	50.8	53.5	56.3
Salaries & Social Insurance	8.8	14.5	15.2	15.2	15.1	15.0	14.4
Materials	1.7	1.7	1.9	2.1	2.4	2.7	3.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.1	1.3	1.3	1.4	1.4	1.4	1.5
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	1.3	1.3	1.3	1.4	1.4	1.4	1.5
Capital Repairs	4.1	3.0	3.4	3.8	4.3	4.8	5.5
Other	1.9	1.1	1.2	1.3	1.5	1.7	1.8
Subtotal Passenger Expenditure	18.9	22.9	24.3	25.2	26.0	27.0	27.7
Operating Surplus/Deficit	- 3.9	1.2	1.9	3.2	24.8	26.5	28.7
Depreciation	1.5	1.8	1.8	1.8	1.8	1.8	1.8
Infrastructure Charges	20.9	20.8	19.8	19.6	19.9	20.4	21.1
Rolling Stock Charges	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Administrative Services Charge	8.8	10.5	11.1	11.2	11.1	11.2	11.1
Net Income/Loss	- 80.3	- 81.2	- 82.2	- 82.9	- 63.8	- 65.1	- 65.9

Azerbaijan Railways
Table 10 : Passenger Business Unit : Financial Plan

	Total Cost (Billions manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Passenger Services							
Salaries & Social Insurance	6.2	10.1	10.6	10.6	10.5	10.4	10.1
Materials	1.5	1.5	1.7	1.9	2.2	2.4	2.8
Diesel - Other	1.0	1.2	1.2	1.3	1.3	1.3	1.4
Electricity - Other	0.8	0.8	0.8	0.8	0.9	0.9	0.9
Depreciation	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Capital Repairs	4.0	2.9	3.3	3.7	4.2	4.7	5.3
Other	0.7	0.8	0.9	1.0	1.2	1.3	1.5
Total	14.5	17.6	18.8	19.6	20.5	21.4	22.2
Traffic Department - Passenger							
Salaries & Social Insurance	1.2	2.2	2.3	2.3	2.2	2.2	2.1
Materials	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Diesel - Other	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Electricity - Other	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Depreciation	1.2	1.5	1.5	1.5	1.5	1.5	1.5
Capital Repairs	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other	1.2	0.3	0.3	0.3	0.3	0.3	0.4
Total	4.5	4.9	5.0	5.0	5.0	5.1	5.0
Drivers & Assistants - Passenger							
Salaries & Social Insurance	1.4	2.2	2.3	2.3	2.4	2.4	2.3

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Table 11 : Freight Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Freight Revenue	333.1	345.7	394.8	457.8	510.6	556.1	591.3
Salaries & Social Insurance	11.1	16.9	20.9	23.7	25.3	26.6	26.9
Materials	0.9	1.0	1.2	1.5	1.7	1.8	2.0
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	0.6	0.6	0.7	0.9	0.9	1.0	1.1
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	2.8	2.9	3.5	4.1	4.5	4.9	5.3
Capital Repairs	0.5	0.6	0.7	0.9	1.0	1.1	1.2
Other	6.3	3.1	3.9	4.6	5.2	5.8	6.3
Total	22.2	25.1	31.0	35.7	38.6	41.3	42.9
Operating Surplus/Deficit	310.9	320.6	363.8	422.1	472.0	514.8	548.4
Depreciation	4.9	6.0	5.9	6.0	6.0	6.1	6.2
Infrastructure Charges	84.9	95.7	107.6	121.2	132.4	143.9	156.3
Rolling Stock Charges	102.6	122.0	142.9	163.1	178.9	194.2	208.9
Administrative Services Charge	8.8	10.5	11.1	11.2	11.1	11.2	11.1
Net Income/Loss	109.8	86.4	96.4	120.6	143.7	159.4	166.0

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Table 12 : Freight Business Unit : Financial Plan

	Total Cost (Billion Manats current)						
	1997	1998	1999	2000	2001	2002	2003
Freight Services							
Salaries & Social Insurance	2.4	1.7	2.1	2.4	2.6	2.7	2.8
Materials	0.3	0.4	0.5	0.6	0.7	0.8	0.8
Diesel - Other	0.2	0.2	0.2	0.3	0.3	0.3	0.4
Electricity - Other	0.7	0.8	1.0	1.2	1.3	1.4	1.5
Depreciation	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Capital Repairs	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Other	1.7	1.9	2.4	2.8	3.2	3.6	3.9
Total	5.5	5.3	6.5	7.7	8.5	9.2	9.8
Traffic Department - Freight							
Salaries & Social Insurance	4.9	8.6	10.6	12.1	12.8	13.5	13.7
Materials	0.6	0.6	0.7	0.9	1.0	1.1	1.2
Diesel - Other	0.4	0.4	0.5	0.6	0.6	0.7	0.7
Electricity - Other	2.1	2.1	2.5	3.0	3.3	3.5	3.8
Depreciation	4.8	5.8	5.7	5.8	5.8	5.9	5.9
Capital Repairs	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Other	4.6	1.2	1.5	1.8	2.0	2.2	2.4
Total	17.8	19.2	22.2	24.7	26.3	27.8	28.8
Drivers & Assistants - Freight							
Salaries & Social Insurance	3.8	6.6	8.1	9.3	9.8	10.4	10.5

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Table 13 : Rolling Stock Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Rolling Stock Revenue							
External Loco hire/demurrage etc	-	-	-	-	-	-	-
Salaries & Social Insurance	18.4	31.2	37.2	41.4	43.7	45.6	46.0
Materials	11.3	11.8	14.8	18.0	21.1	24.4	28.1
Diesel - Traction	9.6	10.8	12.1	13.4	14.3	15.2	16.1
Diesel - Other	2.7	4.0	4.7	5.3	5.8	6.3	6.8
Electricity - Traction	48.8	48.4	54.2	59.8	64.2	68.3	72.3
Electricity - Other	3.0	5.4	6.1	6.9	7.4	7.9	8.4
Depreciation	30.1	37.0	36.5	36.9	37.3	37.6	37.9
Capital Repairs	10.5	14.1	17.7	21.6	25.3	29.2	33.5
Other	13.4	8.6	10.9	13.3	15.5	17.8	20.3
Total Expenditure	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Passenger Business Unit Charges	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Freight Business Unit Charges	102.6	122.0	142.9	163.1	178.9	194.2	208.9
Total Charges	147.8	171.3	194.4	216.7	234.7	252.4	269.5
Net Surplus/Deficit	- 0.0	0.0	-	-	-	-	-

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Table 14 : Rolling Stock Business Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Locomotives Department - Passenger							
(excl Drivers & Assistants)							
Salaries & Social Insurance	4.1	7.0	7.4	7.5	7.5	7.5	7.3
Materials	2.6	2.7	3.1	3.5	4.0	4.6	5.2
Diesel - Traction	4.9	5.5	5.7	5.8	6.0	6.1	6.3
Diesel - Other	0.4	0.9	0.9	1.0	1.0	1.0	1.1
Electricity - Traction	24.9	24.7	25.4	26.1	26.8	27.6	28.4
Electricity - Other	1.0	2.2	2.3	2.4	2.4	2.5	2.6
Depreciation	2.2	2.7	2.7	2.7	2.7	2.7	2.8
Capital Repairs	1.8	2.8	3.2	3.6	4.1	4.7	5.4
Other	3.3	0.8	0.9	1.0	1.2	1.3	1.5
Total	45.2	49.3	51.5	53.6	55.8	58.2	60.6
Locomotives Department - Freight							
(excl Drivers & Assistants)							
Salaries & Social Insurance	4.0	6.7	8.2	9.3	9.9	10.4	10.5
Materials	2.5	2.6	3.5	4.4	5.3	6.3	7.5
Diesel - Traction	4.7	5.3	6.5	7.5	8.3	9.1	9.8
Diesel - Other	0.4	0.9	1.1	1.3	1.4	1.5	1.6
Electricity - Traction	23.9	23.7	28.8	33.7	37.3	40.7	43.9
Electricity - Other	0.9	2.1	2.5	2.9	3.2	3.5	3.8
Depreciation	2.1	2.6	2.6	2.6	2.6	2.6	2.7
Capital Repairs	1.7	2.7	3.6	4.6	5.5	6.6	7.8
Other	3.1	0.7	0.9	1.2	1.4	1.7	2.0
Total	43.3	47.3	57.7	67.6	75.2	82.4	89.6
Wagons Service							
Salaries & Social Insurance	10.3	17.5	21.6	24.6	26.3	27.8	28.2
Materials	6.2	6.5	8.3	10.1	11.8	13.5	15.4
Diesel - Other	1.9	2.2	2.7	3.1	3.4	3.8	4.1
Electricity - Other	1.1	1.1	1.3	1.6	1.7	1.9	2.0
Depreciation	25.8	31.7	31.3	31.6	31.9	32.2	32.5
Capital Repairs	7.0	8.6	10.9	13.4	15.6	17.9	20.3
Other	7.0	7.1	9.0	11.1	12.9	14.8	16.8
Total	59.3	74.7	85.2	95.5	103.7	111.8	119.3

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Table 15 : Infrastructure Business Unit : Financial Plan

	Total Cost (billions manats current)						
	1997	1998	1999	2000	2001	2002	2003
Infrastructure Business Unit Total							
Salaries & Social Insurance	20.9	34.4	36.5	37.8	38.5	39.2	38.8
Materials	13.0	13.3	15.6	18.2	21.2	24.6	28.5
Diesel - Traction	-	-	-	-	-	-	-
Diesel - Other	1.5	1.8	1.9	2.0	2.2	2.3	2.4
Electricity - Traction	-	-	-	-	-	-	-
Electricity - Other	4.1	3.3	3.5	3.6	3.8	4.0	4.2
Depreciation	23.4	28.6	27.0	27.3	29.3	28.2	27.2
Capital Repairs	39.0	29.0	34.2	40.2	46.7	54.3	62.9
Other	3.9	5.8	6.8	8.0	9.4	10.9	12.6
Infrastructure Expenses	105.8	116.2	125.6	137.3	151.1	163.5	176.6
Loan Interest & Charges	-	0.4	1.8	3.5	1.1	0.8	0.7
Total Expenditure	105.8	116.6	127.3	140.8	152.2	164.3	177.4
Passenger Business Unit (Gtkm)	1,944.5	1,944.5	1,903.1	1,863.5	1,825.2	1,788.0	1,752.1
Freight Business Unit (Gtkm)	7,887.9	8,939.2	10,363.5	11,541.0	12,165.6	12,621.7	12,981.1
Total (Gross Tkms)	9,832.4	10,883.7	12,266.6	13,404.5	13,990.8	14,409.6	14,733.2
% Passenger Business Unit	20%	18%	16%	14%	13%	12%	12%
% Freight Business Unit	80%	82%	84%	86%	87%	88%	88%
Passenger Business Unit Charge	20.9	20.8	19.8	19.6	19.9	20.4	21.1
Freight Business Unit Charge	84.9	95.7	107.6	121.2	132.4	143.9	156.3
Total Charge out	105.8	116.6	127.3	140.8	152.2	164.3	177.4
Net Result	-	0.0	0.0	-	-	-	-

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Table 16 : Infrastructure Business Unit : Financial Plan

	Total Cost (billion manats current)						
	1997	1998	1999	2000	2001	2002	2003
Track							
Salaries & Social Insurance	10.0	16.4	17.2	18.1	18.5	18.9	18.8
Materials	6.5	6.7	8.0	9.4	11.0	12.8	14.9
Diesel - Other	0.8	1.0	1.1	1.2	1.2	1.3	1.4
Electricity - Other	0.7	0.1	0.1	0.1	0.1	0.1	0.1
Depreciation	17.8	21.7	20.5	20.7	22.2	21.4	20.7
Capital Repairs	30.4	20.0	23.8	28.2	32.9	38.3	44.4
Other	0.8	4.1	4.9	5.8	6.7	7.8	9.1
Total	67.0	70.0	75.6	83.4	92.7	100.7	109.4
Buildings							
Salaries & Social Insurance	1.5	2.5	2.7	2.7	2.8	2.8	2.8
Materials	2.4	2.5	2.9	3.3	3.9	4.4	5.1
Diesel - Other	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Electricity - Other	0.3	-	-	-	-	-	-
Depreciation	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Capital Repairs	3.8	6.7	7.7	8.9	10.3	11.9	13.8
Other	0.3	0.7	0.8	0.9	1.1	1.2	1.4
Total	8.9	13.1	14.8	16.6	18.8	21.2	23.9
Signalling							
Salaries & Social Insurance	5.6	9.2	9.8	10.1	10.2	10.4	10.2
Materials	2.1	2.1	2.4	2.8	3.2	3.7	4.3
Diesel - Other	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Electricity - Other	2.1	2.2	2.3	2.4	2.5	2.7	2.8
Depreciation	2.4	3.0	2.8	2.9	3.1	3.0	2.9
Capital Repairs	3.3	1.6	1.8	2.1	2.5	2.8	3.3
Other	1.4	0.9	1.0	1.2	1.4	1.6	1.8
Total	17.1	19.2	20.5	21.7	23.2	24.4	25.6
Electricity							
Salaries & Social Insurance	3.8	6.3	6.7	6.9	7.0	7.1	7.0
Materials	2.0	2.0	2.3	2.7	3.1	3.6	4.1
Diesel - Other	0.3	0.4	0.4	0.4	0.5	0.5	0.5
Electricity - Other	1.0	1.0	1.1	1.1	1.2	1.2	1.3
Depreciation	2.8	3.4	3.2	3.2	3.5	3.4	3.2
Capital Repairs	1.5	0.7	0.8	0.9	1.1	1.2	1.4
Other	1.4	0.1	0.1	0.1	0.2	0.2	0.2
Total	12.8	13.9	14.7	15.4	16.4	17.1	17.8

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Table 17 : Administrative Services Unit : Financial Plan

	Total Cost (billion manats Current)						
	1997	1998	1999	2000	2001	2002	2003
Administration							
Salaries & Social Insurance	7.3	11.6	12.4	12.7	12.8	13.1	12.9
Materials	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diesel - Other	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Electricity - Other	0.9	0.9	0.9	0.9	0.9	0.8	0.8
Depreciation	0.6	0.8	0.8	0.8	0.8	0.8	0.8
Capital Repairs	7	5.8	6.0	6.0	5.9	5.8	5.7
Other	1.1	1.2	1.2	1.2	1.2	1.2	1.2
Total Expenditure	17.5	21.0	22.1	22.4	22.3	22.4	22.1
Passenger Business Unit Charge 50	8.75	10.50	11.05	11.18	11.13	11.22	11.05
Freight Business Unit Charge (50%)	8.75	10.50	11.05	11.18	11.13	11.22	11.05

Ancillary Services : Financial Plan							
Total Cost (billions manats current)							
	1997	1998	1999	2000	2001	2002	2003
Ancillary Services							
Revenue							
- Ancilliary	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-
Costs	-	-	-	-	-	-	-
Surplus/(Deficit)	-	-	-	-	-	-	-
Other Costs	-	-	-	-	-	-	-

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Table 18 : TRAFFIC AND REVENUE

	Actual			Forecast Growth (% pa)					Fare
	1997	1998		1999	2000	2001	2002	2003	Elasticity
ECONOMIC DATA									
Inflation				5.0%	5.0%	5.0%	5.0%	5.0%	
Cumulative inflation			100%	105.0%	110.3%	115.8%	121.6%	127.6%	
Increase in wages (real)				5%	5%	5%	5%	2%	
Exchange rate		3850		-6.0%	-5.0%	-5.0%	-5.0%	-5.0%	
Exchange Rate projected				3,619	3,438	3,266	3,103	2,948	
TRAFFIC DATA									
Passengers (000's)				Growth in base volume (% pa) (before tariff effects)					
International/long distance	1382	1372		3%	3%	3%	3%	3%	-0.5
Suburban	2407	2815		1.5%	1.5%	1.5%	1.5%	1.5%	-0.5
Total	3789	4187							
Passenger -km (million)				Growth in average trip length (% pa)					
International/long distance	420	423		0%	0%	0%	0%	0%	
Suburban	70	139		0%	0%	0%	0%	0%	
Total	490	562							
Passenger Revenue (billion manat)				Real price increase (%pa)					
International/long distance	14	23		1.0%	1.0%	1.0%	1.0%	1.0%	
Suburban	1.0	1.1		1.0%	1.0%	1.0%	1.0%	1.0%	
Total	15	24.1							
Freight									
Tonnes(000)				Base volume growth (%pa) (before tariff effects)					
Export Oil	2,781	3,501		22.8%	15.3%	3.2%	-0.4%	-2.8%	-0.5
Other international	2,490	2,819		13.1%	9.0%	6.0%	6.3%	6.6%	-0.2
Other Domestic	6,000	6,188		4.2%	4.2%	4.2%	4.2%	4.2%	0.0
Total	11,271	12,508							
Tonne-km (millions)				Growth in average haul (%pa)					
Export Oil	1,336	1,682		0%	0%	0%	0%	0%	
Other international	732	829		0%	0%	0%	0%	0%	
Other Domestic	1,453	1,499		0%	0%	0%	0%	0%	
Total	3,521	4,010							
Freight Revenue (billion manat)				Real price increase (%pa)					
Export Oil	72	91		-10.0%	-5.0%	-5.0%	-5.0%	-5.0%	
Other international	107	121		-6.0%	-5.0%	-5.0%	-5.0%	-5.0%	
Other Domestic	154	134		0.0%	10.0%	10.0%	5.0%	0.0%	
Total	333	346							
Other revenues (million manats)				Growth in other income (real % pa)					
Ancilliary services	0	0		3%	3%	3%	3%	3%	
Other operating (Loco hire, demurrage)	0	0		3%	3%	3%	3%	3%	
Other	0	0		3%	3%	3%	3%	3%	
Subtotal	0	0							
TOTAL REVENUES (million)	348.1	369.8							

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Table 19 : Input Data : Operating resources

	1997	1998	1999	2000	2001	2002	2003
PASSENGER OPERATIONS							
Electric Loco's- in service	40	40	38	37	35	34	33
Diesel Loco's - in service	4	4	4	4	4	4	4
Train Km. Electric (000) 87%	2,997	2,997	2,957	2,918	2,880	2,841	2,804
Train Km. Diesel (000) 13%	448	448	442	436	430	425	419
Total	3,445	3,445	3,399	3,354	3,310	3,266	3,223
Locomotives per train - Electric	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Locomotives per train - Diesel	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Passenger coaches per Loco hauled train	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Passenger Coach Vehicle tare	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Locomotive tare	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Passenger Coach Fleet	350	272	262	254	257	245	237
EMU sets in service	24	24	24	24	23	23	22
EMU Train Km (000)	2772	2772	2622	2481	2347	2220	2100
Passenger cars per EMU	4.0	4.0	4.0	4.0	4.0	4.0	4.0
EMU Passenger Car Km (million)	11.1	11.1	10.5	9.9	9.4	8.9	8.4
EMU vehicle tare	34	34	34	34	34	34	34
FREIGHT OPERATIONS							
Electric Loco's- in service	144	144	134	126	115	108	102
Diesel Loco's - in service	16	16	15	14	13	12	11
Wagons per Train	34.4	34.4	34.5	34.6	34.8	34.9	35.0
Locomotives per train - Electric	1.32	1.32	1.32	1.31	1.31	1.30	1.30
Locomotives per train - Diesel	1.32	1.32	1.32	1.31	1.31	1.30	1.30
Wagon Fleet							
Oil Tanks	500	800	941	933	915	804	734
Other wagons	1500	1600	1638	1655	1673	1694	1714
Total	2000	2400	2579	2588	2588	2498	2448
Loaded Tonnes per wagon							
Oil Wagons	58	58	58	58	58	58	58
Other wagons	41.0	41.0	41.0	41.0	41.0	41.0	41.0
Empty Wagon Return %							
Oil Wagons	100%	100%	100%	100%	100%	100%	100%
Other wagons	80%	80%	80%	80%	80%	80%	80%
Locomotive tare - Electric Locos	196	196	196	196	196	196	196
Locomotive tare - Diesel Locos	196	196	196	196	196	196	196
Wagon tare	23	23	23	23	23	23	23
INFRASTRUCTURE							
Track Kms	2957	2957	2957	2957	2957	2957	2957
Stations	176	176	176	176	176	176	176
STAFF NUMBERS - core	29980	29980	29080	27050	24884	22900	21070

Azerbaijan Railways
Table 20-1 : INPUT DATA - FINANCIAL

FINANCIAL INPUTS (Billions Manats)	1997	1998	Cost reduction / increase % 1999	2000	2001	2002	2003	Cost Driver
Passenger Services								
Salaries & Social Insurance	6.2	10.1	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Car Km.
Materials	1.5	1.5	10%	10%	10%	10%	10%	Car Km.
Diesel - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Diesel - Other	1	1.2	0%	0%	0%	0%	0%	Car Km.
Electricity - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Electricity - Other	0.8	0.8	0%	0%	0%	0%	0%	Car Km.
Depreciation	0.3	0.3	0%	0%	0%	0%	0%	calculated
Capital Repairs	4	2.9	10%	10%	10%	10%	10%	Car Km.
Other	0.7	0.8	10%	10%	10%	10%	10%	Car Km.
Total	14.5	17.6						
Freight Department								
Salaries & Social Insurance	2.4	1.7	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Ntkm.
Materials	0.3	0.4	2%	2%	2%	2%	2%	Ntkm.
Diesel - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Diesel - Other	0.2	0.2	0%	0%	0%	0%	0%	Ntkm.
Electricity - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Electricity - Other	0.7	0.8	0%	0%	0%	0%	0%	Ntkm.
Depreciation	0.1	0.2	0%	0%	0%	0%	0%	calculated
Capital Repairs	0.1	0.1	2%	2%	2%	2%	2%	Ntkm.
Other	1.7	1.9	2%	2%	2%	2%	2%	Ntkm.
Total	5.5	5.3						
Passenger Traffic Department								
Salaries & Social Insurance	1.2	2.2	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Train Km.
Materials	0.2	0.2	2%	2%	2%	2%	2%	Train Km.
Diesel - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Diesel - Other	0.1	0.1	0%	0%	0%	0%	0%	Train Km.
Electricity - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Electricity - Other	0.5	0.5	0%	0%	0%	0%	0%	Train Km.
Depreciation	1.2	1.5	0%	0%	0%	0%	0%	calculated
Capital Repairs	0.1	0.1	2%	2%	2%	2%	2%	Train Km.
Other	1.2	0.3	2%	2%	2%	2%	2%	Train Km.
Total	4.5	4.9						
Freight Traffic Department								
Salaries & Social Insurance	4.9	8.6	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Train Km.
Materials	0.6	0.6	2%	2%	2%	2%	2%	Train Km.
Diesel - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Diesel - Other	0.4	0.4	0%	0%	0%	0%	0%	Train Km.
Electricity - Traction	0	0	0%	0%	0%	0%	0%	Gross tonne Km.
Electricity - Other	2.1	2.1	0%	0%	0%	0%	0%	Train Km.
Depreciation	4.8	5.8	0%	0%	0%	0%	0%	calculated
Capital Repairs	0.4	0.5	2%	2%	2%	2%	2%	Train Km.
Other	4.6	1.2	2%	2%	2%	2%	2%	Train Km.
Total	17.8	19.2						

Azerbaijan Railways
Table 20-2 : INPUT DATA - FINANCIAL

FINANCIAL INPUTS (Billions Manats)	1997	1998	Cost reduction / increase % 1999	2000	2001	2002	2003	Cost Driver
Locomotive Department - Passenger (excl. Drivers & Assistants)								
Salaries & Social Insurance	4.1	7	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Loco. Km
Materials	2.6	2.7	10%	10%	10%	10%	10%	Loco. Km
Diesel - Traction	4.9	5.5	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.4	0.9	0.0%	0.0%	0.0%	0.0%	0.0%	Loco. Km
Electricity - Traction	24.9	24.7	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	1	2.2	0.0%	0.0%	0.0%	0.0%	0.0%	Loco. Km
Depreciation	2.2	2.7	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	1.8	2.8	10%	10%	10%	10%	10%	Loco. Km
Other	3.3	0.8	10%	10%	10%	10%	10%	Loco. Km
Total	45.2	49.3						
Locomotive Department - Freight (excl. Drivers & Assistants)								
Salaries & Social Insurance	4	6.7	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Loco. Km
Materials	2.5	2.6	10%	10%	10%	10%	10%	Loco. Km
Diesel - Traction	4.7	5.3	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.4	0.9	0.0%	0.0%	0.0%	0.0%	0.0%	Loco. Km
Electricity - Traction	23.9	23.7	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	0.9	2.1	0.0%	0.0%	0.0%	0.0%	0.0%	Loco. Km
Depreciation	2.1	2.6	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	1.7	2.7	10%	10%	10%	10%	10%	Loco. Km
Other	3.1	0.7	10%	10%	10%	10%	10%	Loco. Km
Total	43.3	47.3						
Drivers & Assistants								
Passenger Business	1.4	2.2	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Passenger Train Km
Freight Business	3.8	6.6	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Freight Train Km.
Total	5.2	8.8						
Wagons Maintenance								
Salaries & Social Insurance	10.3	17.5	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Wagon Km.
Materials	6.2	6.5	5%	5%	5%	5%	5%	Wagon Km.
Diesel - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	1.9	2.2	0.0%	0.0%	0.0%	0.0%	0.0%	Wagon Km.
Electricity - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	1.1	1.1	0.0%	0.0%	0.0%	0.0%	0.0%	Wagon Km.
Depreciation	25.8	31.7	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	7	8.6	5%	5%	5%	5%	5%	Wagon Km.
Other	7	7.1	5%	5%	5%	5%	5%	Wagon Km.
Total	59.3	74.7						

Azerbaijan Railways
Table 20-3 : INPUT DATA - FINANCIAL

FINANCIAL INPUTS (Billions Manats)	1997	1998	Cost reduction / increase % 1999	2000	2001	2002	2003	Cost Driver
Track Department								
Salaries & Social Insurance	10	16.4	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Track Km 80% GTkm. 20
Materials	6.5	6.7	10%	10%	10%	10%	10%	Track Km 80% GTkm. 20
Diesel - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.8	1	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km 80% GTkm. 20
Electricity - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	0.7	0.1	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km 80% GTkm. 20
Depreciation	17.8	21.7	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	30.4	20	10%	10%	10%	10%	10%	Track Km 80% GTkm. 20
Other	0.8	4.1	10%	10%	10%	10%	10%	Track Km 80% GTkm. 20
Total	67	70						
Buildings								
Salaries & Social Insurance	1.5	2.5	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Track Km
Materials	2.4	2.5	10%	10%	10%	10%	10%	Track Km
Diesel - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.2	0.2	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Electricity - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	0.3	0	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Depreciation	0.4	0.5	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	3.8	6.7	10%	10%	10%	10%	10%	Track Km
Other	0.3	0.7	10%	10%	10%	10%	10%	Track Km
Total	8.9	13.1						
Signals								
Salaries & Social Insurance	5.6	9.2	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Track Km
Materials	2.1	2.1	10%	10%	10%	10%	10%	Track Km
Diesel - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.2	0.2	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Electricity - Traction	0		0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	2.1	2.2	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Depreciation	2.4	3	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	3.3	1.6	10%	10%	10%	10%	10%	Track Km
Other	1.4	0.9	10%	10%	10%	10%	10%	Track Km
Total	17.1	19.2						
Electrical								
Salaries & Social Insurance	3.8	6.3	-3.0%	-7.0%	-8.0%	-8.0%	-8.0%	Track Km
Materials	2	2	10%	10%	10%	10%	10%	Track Km
Diesel - Traction	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Diesel - Other	0.3	0.4	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Electricity - Traction	0	0	0.0%	0.0%	0.0%	0.0%	0.0%	Gross tonne Km.
Electricity - Other	1	1	0.0%	0.0%	0.0%	0.0%	0.0%	Track Km
Depreciation	2.8	3.4	0.0%	0.0%	0.0%	0.0%	0.0%	calculated
Capital Repairs	1.5	0.7	10%	10%	10%	10%	10%	Track Km
Other	1.4	0.1	10%	10%	10%	10%	10%	Track Km
Total	12.8	13.9						

Azerbaijan Railways
Table 20-4 : INPUT DATA - FINANCIAL

FINANCIAL INPUTS (Billions Manats)	1997	1998	Cost reduction / increase % 1999	2000	2001	2002	2003	Cost Driver
Administration								
Salaries & Social Insurance	7.3	11.6	-3.0%	-7.0%	-9.0%	-7.0%	-8.0%	Staff Numbers
Materials	0.3	0.3	2%	2%	2%	2%	2%	Staff Numbers
Diesel - Traction	0	0	0	0	0	0	0	
Diesel - Other	0.3	0.4	0	0	0	0	0	Staff Numbers
Electricity - Traction	0	0	0	0	0	0	0	
Electricity - Other	0.9	0.9	0	0	0	0	0	Staff Numbers
Depreciation	0.6	0.8	0	0	0	0	0	calculated
Capital Repairs	7	5.8	2%	2%	2%	2%	2%	Staff Numbers
Other	1.1	1.2	2%	2%	2%	2%	2%	Staff Numbers
Total	17.5	21.0						
Ancillary								
Salaries & Social Insurance			0.0%	-4.0%	-100.0%	0.0%	0.0%	
Materials			0	0	0	0	0	
Diesel - Traction			0	0	0	0	0	
Diesel - Other			0	0	0	0	0	
Electricity - Traction			0	0	0	0	0	
Electricity - Other			0	0	0	0	0	
Depreciation			0	0	0	0	0	
Capital Repairs			0	0	0	0	0	
Other			0	0	0	0	0	
Total								
Total	318.6	364.3						

Azerbaijan Railways
Table 21 : Passenger Services : Operating resources

	1997	1998	1999	2000	2001	2002	2003
Locomotive Services							
Electric Loco's- in service	*40*	*40*	*38*	*37*	*35*	*34*	*33*
Diesel Loco's - in service	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Train Km. Electric (000)	*2,997*	*2,997*	*2,957*	*2,918*	*2,880*	*2,841*	*2,804*
Train Km. Diesel (000)	*448*	*448*	*442*	*436*	*430*	*425*	*419*
Total Train Km (000)	3,445	3,445	3,399	3,354	3,310	3,266	3,223
Locomotives per train - Electric	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Locomotives per train - Diesel	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Locomotive Km (000) - Electric	2,997	2,997	2,957	2,918	2,880	2,841	2,804
Locomotive Km (000) - Diesel	448	448	442	436	430	425	419
Total Locomotive Km (000)	3,445	3,445	3,399	3,354	3,310	3,266	3,223
Locomotive Km. per unit in service - Electric	75	75	78	79	82	84	85
Locomotive Km. per unit in service - Diesel	112	112	110	109	108	106	105
Passenger coaches per Loco hauled train	*11.0*	*11.0*	*11.0*	*11.0*	*11.0*	*11.0*	*11.0*
Passenger coach kilometres (million)	38	38	37	37	36	36	35
Passengers per car (loco hauled)	11.1	11.2	11.6	12.0	12.5	13.0	13.5
Passenger Coach Vehicle tare	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*	*25.0*
Locomotive tare	*180.0*	*180.0*	*180.0*	*180.0*	*180.0*	*180.0*	*180.0*
Trailing Tonne Kms (million) - Loco hauled	947	947	935	922	910	898	886
Gross Tonne Kilometres - Loco Hauled	1567	1567	1547	1526	1506	1486	1466
Passenger Coach Fleet	*350*	*272*	*262*	*254*	*257*	*245*	*237*
EMU's							
EMU's in service	*24*	*24*	*24*	*24*	*23*	*23*	*22*
EMU Train Km (000)	*2772*	*2772*	*2622*	*2481*	*2347*	*2220*	*2100*
Passenger cars per EMU	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*	*4.0*
EMU Passenger Car Km (million)	*11.1*	*11.1*	*10.5*	*9.9*	*9.4*	*8.9*	*8.4*
Passengers per car (EMU hauled)	6.3	12.5	13.4	14.3	15.3	16.3	17.4
EMU vehicle tare	*34*	*34*	*34*	*34*	*34*	*34*	*34*
Trailing Tonne Kilometres (million)	377	377	357	337	319	302	286
Gross Tonne Kilometres (million)	377	377	357	337	319	302	286
Combined Operating Statistics							
Car Kms (millions)							
Loco Hauled carriages	37.9	37.9	37.4	36.9	36.4	35.9	35.5
EMU Passenger Car Km (million)	11.1	11.1	10.5	9.9	9.4	8.9	8.4
Total	49.0	49.0	47.9	46.8	45.8	44.8	43.9
Train Km (000)							
Locomotive Train Kms	3,445	3,445	3,399	3,354	3,310	3,266	3,223
EMU Train Km	2,772	2,772	2,622	2,481	2,347	2,220	2,100
Total	6,217	6,217	6,021	5,835	5,657	5,486	5,323
Locomotive Kilometers (000)	3,445	3,445	3,399	3,354	3,310	3,266	3,223
Gross Tonne Kilometers (million)							
Locomotive Train GTKms	1567	1567	1547	1526	1506	1486	1466
EMU Train GTKm	377	377	357	337	319	302	286
Total	1944	1944	1903	1863	1825	1788	1752

Azerbaijan Railways
Table 22 : Freight Services : Operating resources

	1997	1998	1999	2000	2001	2002	2003
Locomotive Services							
Electric Loco's- in service	*144*	*144*	*134*	*126*	*115*	*108*	*102*
Diesel Loco's - in service	*16*	*16*	*15*	*14*	*13*	*12*	*11*
Total	160	160	149	140	128	120	113
Net Tonne Kilometres - Electric (90%) (million)	3,169	3,609	4,211	4,709	4,969	5,157	5,297
Net Tonne Kilometres - Diesel (10%) (million)	352	401	468	523	552	573	589
Total	3,521	4,010	4,678	5,233	5,521	5,730	5,885
Wagons per Train	*34.4*	*34.4*	*34.5*	*34.6*	*34.8*	*34.9*	*35.0*
Average tonnes per wagon - loaded & empty	24.1	24.2	24.4	24.6	24.6	24.5	24.5
Average Tonnes per train - Electric	827.4	833.6	843.4	850.5	855.7	856.7	856.7
Average Tonnes per train - Diesel	827.4	833.6	843.4	850.5	855.7	856.7	856.7
Train Km. Electric (000)	3,830	4,329	4,992	5,537	5,807	6,020	6,182
Train Km. Diesel (000)	426	481	555	615	645	669	687
Total Train Km (000)	4,256	4,810	5,547	6,152	6,452	6,689	6,869
Locomotives per train - Electric	*1.32*	*1.32*	*1.32*	*1.31*	*1.31*	*1.30*	*1.30*
Locomotives per train - Diesel	*1.32*	*1.32*	*1.32*	*1.31*	*1.31*	*1.30*	*1.30*
Locomotive Km (000) - Electric	5,056	5,715	6,570	7,254	7,607	7,826	8,037
Locomotive Km (000) - Diesel	562	635	730	806	845	870	893
Total Locomotive Km (000)	5,618	6,350	7,300	8,060	8,453	8,695	8,930
Locomotive Km. per unit in service - Electric (000)	35	40	49	58	66	72	79
Locomotive Km. per unit in service - Diesel (000)	35	40	49	58	65	72	81
Average Locomotive Km per unit in service	35	40	49	58	66	72	79
Wagon Fleet							
Oil Tanks	*500*	*800*	*941*	*933*	*915*	*804*	*734*
Other wagons	*1500*	*1600*	*1638*	*1655*	*1673*	*1694*	*1714*
Total	2000	2400	2579	2588	2588	2498	2448
Loaded Tonnes per wagon							
Oil Wagons	*58.0*	*58.0*	*58.0*	*58.0*	*58.0*	*58.0*	*58.0*
Other wagons	*41.0*	*41.0*	*41.0*	*41.0*	*41.0*	*41.0*	*41.0*
Wagon trips - Full Loads							
Oil Wagons (000)	47.9	60.4	77.8	91.9	97.2	99.2	98.8
Other wagons (000)	207.1	219.7	235.9	250.4	263.3	277.3	292.3
Total Wagon Loads (000)	255.0	280.0	313.7	342.3	360.5	376.5	391.1
Wagon trips - Empty Loads							
Oil Wagons (000)	47.9	60.4	77.8	91.9	97.2	99.2	98.8
Other wagons (000)	165.7	175.7	188.7	200.3	210.6	221.8	233.8
Total Wagon Loads (000)	213.6	236.1	266.5	292.2	307.9	321.0	332.7
Average Wagon Load - Full Load	44.2	44.7	45.2	45.6	45.6	45.5	45.3
Average Wagon Load - Full & Empty Wagons	24.1	24.2	24.4	24.6	24.6	24.5	24.5
Loaded Wagon Kilometers (million)							
Oil Wagons	23.0	29.0	37.4	44.2	46.7	47.7	47.5
Other wagons	53.3	56.8	61.2	65.1	68.6	72.3	76.4
Total	76.3	85.8	98.6	109.3	115.3	120.0	123.8
Empty Wagon Return %							
Oil Wagons	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Other wagons	*80%*	*80%*	*80%*	*80%*	*80%*	*80%*	*80%*
Empty Wagon Kilometres (million)							
Oil Wagons	23.0	29.0	37.4	44.2	46.7	47.7	47.5
Other wagons	42.6	45.4	49.0	52.1	54.9	57.9	61.1
Total	65.7	74.4	86.4	96.3	101.6	105.5	108.6
Total Wagon Kilometers (million)							
Oil Wagons	46.1	58.0	74.8	88.3	93.4	95.3	95.0
Other wagons	95.9	102.2	110.2	117.3	123.5	130.2	137.4
Total	142.0	160.2	185.0	205.6	216.9	225.5	232.4
Locomotive tare - Electric Locos	*196*	*196*	*196*	*196*	*196*	*196*	*196*
Locomotive tare - Diesel Locos	*196*	*196*	*196*	*196*	*196*	*196*	*196*
Wagon tare	*23*	*23*	*23*	*23*	*23*	*23*	*23*
Trailing Tonne Kilometres (million)	6,787	7,695	8,933	9,961	10,509	10,917	11,231
Gross Tonne Kilometres (million)	7,888	8,939	10,363	11,541	12,166	12,622	12,981

Azerbaijan Railways							
Total : Operating resources - for Departmental Splits							
	1997	1998	1999	2000	2001	2002	2003
Traffic department cost split							
Freight %	80%	80%	80%	80%	80%	80%	80%
Passenger %	20%	20%	20%	20%	20%	20%	20%
Total	100%	100%	100%	100%	100%	100%	100%
Locomotive Department cost split							
Freight Locomotive Kilometres	5,618	6,350	7,300	8,060	8,453	8,695	8,930
Passenger Locomotive Kilometres	3,445	3,445	3,399	3,354	3,310	3,266	3,223
EMU Train Kilometres	2,772	2,772	2,622	2,481	2,347	2,220	2,100
Total Passenger	6,217	6,217	6,021	5,835	5,657	5,486	5,323
Total Units	11,835	12,567	13,321	13,895	14,110	14,181	14,253
Freight %	47%	51%	55%	58%	60%	61%	63%
Passenger %	53%	49%	45%	42%	40%	39%	37%
Locomotive Department staff							
Freight Drivers and Assistants	1337	29%					
Passenger Drivers and Assistants	486	10%					
Other staff	2868	61%					
Total	4691	100%					
Depreciation Split							
	Est 1998	1998	1999	2000	2001	2002	2003
Model Calculations							
Buildings		10.70	10.13	9.77	9.43	9.10	8.78
Works		17.70	16.88	17.56	19.83	19.14	18.47
Rolling Stock		15.20	14.54	14.11	13.68	13.27	12.88
Equipment		18.47	17.72	17.18	16.67	16.17	15.68
Transport & other		12.10	12.78	14.19	15.57	16.90	18.19
Total Depreciation		74.17	72.04	72.81	75.18	74.58	74.00
Total Depreciation - excl Land & Improvements		45.77	45.04	45.49	45.92	46.34	46.75
Business Unit Depreciation							
Passenger Services	0.3	0.30	0.30	0.30	0.30	0.30	0.31

Assumed Cost Splits

Traffic Department	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Total Passenger Department	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Freight Services	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Traffic Department	5.8	5.8	5.7	5.8	5.8	5.9	5.9
Total Freight Department	6.0	6.0	5.9	6.0	6.0	6.1	6.2
Locomotives - Passenger	2.7	2.7	2.7	2.7	2.7	2.7	2.8
Locomotives - Freight	2.6	2.6	2.6	2.6	2.6	2.6	2.7
Wagons	31.7	31.8	31.3	31.6	31.9	32.2	32.5
Total Rolling Stock Business Uni	37.0	37.1	36.5	36.9	37.3	37.6	37.9
Track	21.7	21.5	20.5	20.7	22.2	21.4	20.7
Buildings	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Signalling	3.0	3.0	2.8	2.9	3.1	3.0	2.9
Electricity	3.4	3.4	3.2	3.2	3.5	3.4	3.2
Total Infrastructure Business Uni	28.6	28.4	27.0	27.3	29.3	28.2	27.2
Corporate Services	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total Depreciation	74.2	74.2	72.0	72.8	75.2	74.6	74.0
Total Depreciation - less infrastruct	45.6	45.8	45.0	45.5	45.9	46.3	46.8
		- 0.0	-	-	-	-	- 0.0

Azerbaijan Railways - Department costs 1997												
Billions Manats												
Department	Full Year	Salaries	Social Insurance	Materials	Diesel Traction	Diesel Other	Electricity Traction	Electricity Other	Depreciation	Capital repairs	Other	Total
Passenger	14.4	4.5	1.7	1.5	-	1.0	-	0.8	0.3	4.0	0.7	14.4
Freight	5.6	1.8	0.6	0.3	-	0.2	-	0.7	0.1	0.1	1.7	5.6
Traffic	22.1	4.4	1.6	0.8	-	0.5	-	2.6	6.0	0.5	5.8	22.1
Locomotive	93.9	9.7	3.6	5.0	9.7	0.9	48.8	1.9	4.4	3.5	6.4	93.9
Wagons	59.3	7.5	2.8	6.2	-	1.9	-	1.1	25.8	7.0	7.0	59.3
Track	67.0	7.3	2.7	6.5	-	0.8	-	0.7	17.8	30.4	0.8	67.0
Buildings	8.9	1.1	0.4	2.4	-	0.2	-	0.3	0.4	3.8	0.3	8.9
Signalling	17.1	4.1	1.5	2.1	-	0.2	-	2.1	2.4	3.3	1.4	17.1
Electricity	12.8	2.8	1.0	2.0	-	0.3	-	1.0	2.8	1.5	1.4	12.8
Admin	17.4	5.2	2.1	0.3	-	0.3	-	0.9	0.6	7.0	1.1	17.4
Subtotal	318.4	48.4	18.1	27.0	9.7	6.1	48.8	12.1	60.6	61.1	26.5	318.4
Basis of splits												
1. Traffic	80%	Freight										
	20%	Passenger										
2. Locomotive												
Salary Costs												
Freight Drivers & Assistants	29%		Staff Numbers									
Passenger Drivers & Assistants	10%											
Other Locomotive Department Costs												
Freight	49%		Loco. Km.									
Passenger	51%											

Azerbaijan Railways - Department costs 1997												
Cost Allocation estimate for 1997												
Department	Full Year	Salaries	Social Insurance	Materials	Diesel		Electricity		Depreciation	Capital repairs	Other	Total
					Traction	Other	Traction	Other				
PASSENGER												
Passenger	14.4	4.5	1.7	1.5	-	1.0	-	0.8	0.3	4.0	0.7	14.4
Traffic	4.4	0.9	0.3	0.2	-	0.1	-	0.5	1.2	0.1	1.2	4.4
Locomotive - Drivers & Assistants	1.3	1.0	0.4									1.3
Total	20.1	6.4	2.4	1.6	-	1.1	-	1.3	1.5	4.1	1.8	20.1
FREIGHT												
Freight	5.6	1.8	0.6	0.3	-	0.2	-	0.7	0.1	0.1	1.7	5.6
Traffic	17.7	3.6	1.3	0.6	-	0.4	-	2.1	4.8	0.4	4.6	17.7
Locomotive - Drivers & Assistants	3.9	2.8	1.0									3.9
Total	27.1	8.1	3.0	1.0	-	0.5	-	2.8	4.9	0.4	6.4	27.1
ROLLING STOCK												
Locomotive - Passenger Other Costs	45.2	3.0	1.1	2.6	4.9	0.4	24.9	1.0	2.2	1.8	3.3	45.2
Locomotive - Freight Other Costs	43.4	2.9	1.1	2.5	4.7	0.4	23.9	0.9	2.1	1.7	3.1	43.4
Wagons	59.3	7.5	2.8	6.2	-	1.9	-	1.1	25.8	7.0	7.0	59.3
Total	147.9	13.4	5.0	11.3	9.7	2.7	48.8	3.0	30.2	10.5	13.4	147.9
INFRASTRUCTURE												
Track	67.0	7.3	2.7	6.5	-	0.8	-	0.7	17.8	30.4	0.8	67.0
Buildings	8.9	1.1	0.4	2.4	-	0.2	-	0.3	0.4	3.8	0.3	8.9
Signalling	17.1	4.1	1.5	2.1	-	0.2	-	2.1	2.4	3.3	1.4	17.1
Electricity	12.8	2.8	1.0	2.0	-	0.3	-	1.0	2.8	1.5	1.4	12.8
Total	105.8	15.3	5.7	12.9	-	1.5	-	4.1	23.4	39.1	3.9	105.8
ADMINISTRATIVE												
Administration etc.	17.4	5.2	2.1	0.3	-	0.3	-	0.9	0.6	7.0	1.1	17.4
Total excl. Ancilliary	318.4	48.4	18.1	27.0	9.7	6.1	48.8	12.1	60.6	61.1	26.5	318.4

Azerbaijan Railways - Forecast Department Costs 1998												
Billions Manats												
Department	Full	Salaries	Social	Materials	Diesel		Electricity		Depreciation	Capital	Other	Total
	Year		Insurance		Traction	Other	Traction	Other		repairs		
Passenger	17.8	7.4	2.7	1.5	-	1.2	-	0.8	0.3	2.9	0.8	17.8
Freight	5.2	1.2	0.5	0.4	-	0.2	-	0.8	0.2	0.1	1.9	5.2
Traffic	24.2	7.8	2.9	0.8	-	0.5	-	2.7	7.3	0.6	1.5	24.2
Locomotive	105.4	16.5	6.1	5.2	10.8	1.8	48.4	4.2	5.4	5.5	1.5	105.4
Wagons	74.7	12.8	4.7	6.5	-	2.2	-	1.1	31.7	8.6	7.1	74.7
Track	70.1	12.0	4.4	6.7	-	1.0	-	0.1	21.8	20.0	4.1	70.1
Buildings	13.2	1.8	0.7	2.5	-	0.2	-	0.0	0.5	6.7	0.7	13.2
Signalling	19.2	6.7	2.5	2.1	-	0.2	-	2.2	3.0	1.6	0.9	19.2
Electricity	14.0	4.6	1.7	2.0	-	0.4	-	1.0	3.4	0.7	0.1	14.0
Admin	20.9	8.5	3.1	0.3	-	0.4	-	0.9	0.8	5.8	1.2	20.9
Subtotal	364.6	79.3	29.4	28.0	10.8	8.2	48.4	13.7	74.2	52.5	20.0	364.6
Note : Estimate supplied by Economics Department - Azerbaijan Railways												
Basis of splits												
1. Traffic	80%	Freight										
	20%	Passenger										
2. Locomotive												
Salary Costs												
Freight Drivers & Assistants	29%		Staff Numbers									
Passenger Drivers & Assistants	10%											
Other Locomotive Department Costs												
Freight	49%		Loco. Km.									
Passenger	51%											

Azerbaijan Railways - Forecast Department Costs 1998												
Billions Manats												
Cost Allocation estimate of 1998												
Department	Full Year	Salaries	Social Insurance	Materials	Diesel Traction	Diesel Other	Electricity Traction	Electricity Other	Depreciation	Capital repairs	Other	Total
PASSENGER												
Passenger	17.8	7.4	2.7	1.5	-	1.2	-	0.8	0.3	2.9	0.8	17.8
Traffic	4.8	1.6	0.6	0.2	-	0.1	-	0.5	1.5	0.1	0.3	4.8
Locomotive - Drivers & Assistants	2.3	1.6	0.6									2.3
Total	24.8	10.6	3.9	1.7	-	1.3	-	1.3	1.8	3.0	1.1	24.8
FREIGHT												
Freight	5.2	1.2	0.5	0.4	-	0.2	-	0.8	0.2	0.1	1.9	5.2
Traffic	19.3	6.3	2.3	0.6	-	0.4	-	2.1	5.8	0.5	1.2	19.3
Locomotive - Drivers & Assistants	6.5	4.8	1.8									6.5
Total	31.0	12.3	4.5	1.0	-	0.6	-	2.9	6.0	0.5	3.1	31.0
ROLLING STOCK												
Locomotive - Passenger Other Costs	49.3	5.1	1.9	2.7	5.5	0.9	24.7	2.2	2.7	2.8	0.8	49.3
Locomotive - Freight Other Costs	47.4	4.9	1.8	2.6	5.3	0.9	23.7	2.1	2.6	2.7	0.7	47.4
Wagons	74.7	12.8	4.7	6.5	-	2.2	-	1.1	31.7	8.6	7.1	74.7
Total	171.4	22.8	8.4	11.7	10.8	4.1	48.4	5.3	37.0	14.1	8.6	171.4
INFRASTRUCTURE												
Track	70.1	12.0	4.4	6.7	-	1.0	-	0.1	21.8	20.0	4.1	70.1
Buildings	13.2	1.8	0.7	2.5	-	0.2	-	0.0	0.5	6.7	0.7	13.2
Signalling	19.2	6.7	2.5	2.1	-	0.2	-	2.2	3.0	1.6	0.9	19.2
Electricity	14.0	4.6	1.7	2.0	-	0.4	-	1.0	3.4	0.7	0.1	14.0
Total	116.4	25.1	9.3	13.4	-	1.8	-	3.3	28.6	29.0	5.9	116.4
CORPORATE												
Admin	20.9	8.5	3.1	0.3	-	0.4	-	0.9	0.8	5.8	1.2	20.9
Total excl. Ancilliary	364.6	79.3	29.4	28.0	10.8	8.2	48.4	13.7	74.2	52.5	20.0	364.6

Azerbaijan Railways						
Staff Plan 1998 - 2003						
	1998	1999	2000	2001	2002	2003
Senior management group	20	20	20	20	20	20
Senior Task Group	10	10	10	10	10	10
Safety and Environment	5	5	5	5	5	5
Corporate Services	552	535	500	455	421	388
Freight	3021	2930	2725	2507	2307	2122
Infrastructure	10387	10075	9370	8621	7931	7296
Passenger Services	3473	3369	3133	2882	2652	2440
Rolling Stock	6658	6458	6006	5526	5084	4677
Nakichevan Division	5854	5678	5281	4858	4470	4112
Total Operations	29980	29080	27050	24884	22900	21070
Anciliary Services	9080	9080	8691	0	0	0
- Management	50	50	50	0	0	0
- Railway Enterprises	1389	1389	1389	0	0	0
- Social Activities	7641	7641	7641	0	0	0

Azerbaijan Railways						
Staff Plan percentage decrease 1998 - 2003						
	1998	1999	2000	2001	2002	2003
Senior management group	100%	0%	0%	0%	0%	0%
Senior Task Group	100%	0%	0%	0%	0%	0%
Safety and Environment	100%	0%	0%	0%	0%	0%
Corporate Services	100%	-3%	-7%	-9%	-7%	-8%
Freight	100%	-3%	-7%	-8%	-8%	-8%
Infrastructure	100%	-3%	-7%	-8%	-8%	-8%
Passenger Services	100%	-3%	-7%	-8%	-8%	-8%
Rolling Stock	100%	-3%	-7%	-8%	-8%	-8%
Nakichevan Division	100%	-3%	-7%	-8%	-8%	-8%
Total Operations	100%	-3%	-7%	-8%	-8%	-8%
Anciliary Services	100%	0%	-4%	-100%	0%	0%
- Management	100%	0%	0%	-100%	0%	0%
- Railway Enterprises	100%	0%	0%	-100%	0%	0%
- Social Activities	100%	0%	0%	-100%	0%	0%