

EUROPEAN UNION - TACIS

Technical Assistance to the Southern Republics of the
CIS and Georgia - TRACECA

TRADE AND TRANSPORT SECTORS

Terms of Reference

for

CENTRAL ASIAN RAILWAYS RESTRUCTURING

Final Recipients:
TRACECA Region Ministries of Transport

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PREFACE

1) EBRD

Modules A, B, C, and D of this project have been developed jointly by the TACIS TRACECA programme and the EBRD. The essential contents of the Modules were produced by the EBRD. The project will be financed and managed by TACIS TRACECA in close collaboration with the EBRD.

2) UIC

All work in Module E will be subcontracted, by the consultant awarded this contract ("the main consultant"), to the Union International des Chemins de Fer (UIC), who are headquartered in Paris. The contents of Module E were produced by the UIC. The UIC will be fully responsible for the satisfactory completion all the tasks in it. The main consultant will be responsible for payments to the UIC from TACIS, and for the performance bond. The main consultant may allocate time or other allowances in his proposal for the administrative work and costs involved. Technical co-ordination is the joint responsibility of both the main consultant and the UIC. Technical collaboration is in any case required between all consultants carrying out TRACECA projects.

3) Budget

The relative allocation of budget is foreseen as follows. However, for Modules A, B, C, and D consultants may consider this as a this is a guideline only:

	%
Module A	35
Module B	20
Module C	20
Module D	10
Module E	15
Total	100

The overall project budget availables is ECU 2 000 000.

For present purposes the amount of Module E is thus fixed at ECU 300 000. This amount should appear in Consultants' tenders as a separate item.

4) Beneficiaries

The beneficiaries of this project are:

Kazakhstan	:	Ministry of Transport
Uzbekistan	:	National Railway Company
Turkmenistan	:	National Railway Company
Kyrgyzstan	:	Ministry of Transport
Tadjikistan	:	National Railway Company

MODULE A - KAZAKHSTAN RAILWAY RESTRUCTURING STUDY

1. Background

1.1 Needs of Beneficiaries

Kazakhstan's railways are the backbone of transport in the country. Prior to the break-up of the Soviet Union, Kazakhstan's railways were a part of the Soviet Ministry of Railways (MPS). The three railways in Kazakhstan (Almatinskaja, Tselinnaja and Zapadno-Kazakhskaja) consist of 13,528 route-km of rail network, including 5500 km of double track. Nearly 3500 km of route are electrified. Kazakhstan's railways, as in other member states of the former Soviet Union, have suffered a severe drop in traffic. Since 1990 tonne-kms carried by Kazakh railways have reduced by about two-thirds. However Kazakhstan Railway tariffs increased much more slowly than the rapid general price inflation in the country. Huge accumulated arrears aggravate the financial situation. Therefore railway finances have sharply deteriorated, despite strong restraint on expenditures, including routine maintenance as well as on capital replacements and new investments.

The downward trend of traffic levels appears not yet to have stabilised. Despite the expectation of economic recovery, it is unlikely that rail traffic volumes will ever again reach the levels of 1989. Large scale adjustments in the economic structure of Kazakhstan and its neighbouring countries will restrain long-distance haulage of quantities of low value bulk materials. Kazakh exports will have to compete on world markets, including the cost of transport, and there will be increasing substitution of nearer geographic sources and other types of products (e.g., gas in place of coal).

The Tselinnaja Railway in the north of Kazakhstan which carries 80% of the freight traffic faces very serious financial difficulties. On the other hand the Zapadno-Kazakhskaja Railway in West Kazakhstan operates substantial freight transit traffic. As a result it gains some foreign currency revenues and is financially in a better position. For most of the employees payments are six months behind schedule. In summary the financial situation is such that rapid decisions are required to prevent operation being seriously affected.

1.2 Problems to be Addressed

PAST RESTRUCTURING EFFORTS

The Ministry of Transport and Communication has faced difficulties since its formation in co-ordinating the three regional railways. This and the fundamental changes in the market for railway services led the Government of Kazakhstan (the 'Government') to the conclusion that equally fundamental adjustments are required in the railway sector. These adjustments include the railway's relationship to the Government, its institutional and management structure, its physical assets and labour force, its operating and maintenance practices and its tariffs and debt collection abilities. The intention is to develop an effective, financially self-sustaining industry. This new role of the railway is regarded as vital for the future development of the Kazakh economy.

The Government started the restructuring process in late 1994. Several organisational units of the railways have already become joint stock companies such as Temir Railway Bank, Railway Insurance Bank, Aralsk Car Repair Shop (90% state owned, 10% private), Borovoe Locomotive Repair Shop (100% state owned) and a number of forwarding companies.

A restructuring pre-feasibility study which was financed by OECF and administered by the World Bank, was carried out by Mercer Management Consulting and reported in September 1996. The Government disagreed with its core recommendations concerning the future railways reorganisation particularly the proposal to retain the present three independent railway companies (Almaty, Tselinnaya, West Kazakh). It intends to merge the three existing railways into a single joint stock enterprise, wholly state owned, but in principle free to act autonomously without interference from Government in day-to-day affairs. The Government is concerned to curb the potential monopoly power of such a centralised railway by eliciting competition between the common carrier railway(s) and own-account haulage (industrial railways). The emergence of the latter is plausible in

Kazakhstan, both because of the nature of most of the shippers (large industrial combines) and the tradition that these large combines own and operate short-line and terminal railways serving their own industrial complexes, with exchange sidings connecting to the main railway operation.

The currently envisaged central railway would remain state-owned but a number of ancillary services such as schools, hospitals and stores for food supply as well as sleeper plants, welding plants, construction departments and repair workshops would be devolved to other ministries or privatised. The Ministry of Transport and Communication presented this concept to the Government in mid 1996 in order to prepare a decree for the President of State. In October 1996 the Kazakhstan Railways were transferred under a financial management contract to Kazkommertzbank and a high ranking management team has been formed.

Given the fact that the railway's financial situation is critical, the Government's prime target is now to have its restructuring option rapidly planned and implemented.

1.3 Realities to Past and Present TACIS Projects

See Annex "Past And Present Projects Of Direct Interest To The Study".

1.4 Co-ordination With Other Donors

See Preface following Table of Contents on page 2.

2. Rationale and Objectives

GOVERNMENT REQUEST

The Government has requested technical and financial support from TRACECA who co-operates closely with the European Bank for Reconstruction and Development ('EBRD') to assist in the detailed design and implementation of the railway restructuring programme. TRACECA has agreed to provide technical assistance to support the Railway in further developing its plans for comprehensive restructuring and to define a priority programme of investments as well as other measures needed to support implementation of the restructuring, which would then provide the basis for appraisal of loans from EBRD and other financing institutions. These Terms of Reference (TOR) define this technical assistance programme entitled Kazakhstan Railway Restructuring Implementation Study (the 'Study').

OBJECTIVES

2.1 The Study will support the Kazakhstan Government, Kazkommertzbank and the recently appointed Restructuring Management Team to develop further the restructuring strategy to transform the railway sector to a commercially driven, financially self-sustaining industry. The Study will assist in elaborating a detailed restructuring plan. This includes the future relationship between Railway and Government, the organisation, operational improvements, investment priorities and adjustments of assets and staff to future traffic demand which will also include the possibility of contracting out non core railway activities.

2.2 The Study will also support implementation by establishing an implementation plan in close co-operation with the Ministry of Transport and Communication. This plan, which is expected to cover the period 1998-2002, will describe the detailed organisation of a project implementation unit and its co-operation with the existing railways as well as the required planning and implementation instruments. These legislative, regulatory and planning instruments normally comprise a new railway law (see Annex Past and Present Projects - Legal Framework), a contract plan between the Government and the future railway consisting of detailed regulations with respect to their future co-operation, an agreement about restructuring targets, action plans listing all restructuring measures, social plans if required and training. Particular attention will be given to provide a smooth transition from the existing to the future organisation of the railway sector so that on-going railway operation will not be adversely affected.

2.3 The current rapid financial deterioration calls for a Study which allows phased planning and implementation. It should identify emergency measures and overall requirements for the period 1998-2002.

2.4 The Study should provide commercial and financial orientation for future investment planning. The Railway's investment absorption capacity will therefore be estimated and its main investment targets assessed. This should provide a framework to prioritise the existing and future projects and provide the basis for later project financing.

2.5 Particular consideration should be given to international freight traffic. Key areas for harmonisation with neighbouring railways should be identified in the field of operation, traffic, tariff and customs procedures to promote this important traffic.-

2.6 The principles of future co-operation with neighbouring railways should be outlined: these principles may impact on the restructuring concept for instance in the maintenance and repair sector, management information systems etc.

2.7 Existing studies should be taken into consideration. The Study would provide a framework and show interfaces for those areas where studies from other financing sources are ongoing or expected.

2.8 The environmental obligations and regulations of TR should be established and assessed taking account of relevant national laws. Any major environmental deficiencies in railway operations or maintenance should be identified and addressed in the 5-year restructuring plan.

3. Risks and Assumptions

The assumption is that the railways concerned do fully understand the need for and the importance of the restructuring plan, and its linkage to the follow-up investment which is expected. The risks are that the slow programme for external finance, will allow the railways concerned to continue to suffer irreversible institutional as well as technical declines. In this environment the intervention of external consultants may seem as belated, irrelevant, and lacking in credibility.

4. Main Components

4.1 Tasks

The Study will include the following tasks in order to support the Government, the Kazkommertzbank and the Restructuring Management Team in establishing the detailed planning and the implementation plan for the restructuring option decided by the Government:

4.1.1 Brief Overall Review

a brief overall review of all major facets of the Railway's present and anticipated future traffic, operations, facilities, equipment, finances, organisation, management, human resources, environmental impacts, and legal situation;

4.1.2 Legal Framework, Organisation Structure, Management Information System

examination of the legal framework and status of the Railway, its respective powers, obligations and responsibilities, and its relationships to the Ministry of Transport and Communications and other Governmental agencies, including price control and anti-monopoly authorities;

detailed design of the proposed internal Railway organisation and management structures (including reporting and decision hierarchies, information systems, corporate and individual incentives structures);

assessment of the present management information systems (operations, finance, accounting, billing, marketing, corporate planning, project evaluation and capital budgeting, personnel and administration) relative to the needs of a modern commercial organisation, and identification of future development requirements;

4.1.3 Traffic and Financial Situation

analysis of present traffic patterns and recent trends for key traffics by commodity type (for instance dry bulks, liquid bulks, containerised general cargo, non-containerised general cargo in full car loads (FCL) and less than car loads (LCL), temperature controlled) and passenger type (inter-city, local, commuter), by line, and by direction. Export, import and transit freight traffic should be given special attention and forecasts of future traffic should

take into account recent trends, but should be based more fundamentally on anticipated future changes in the industrial and agricultural structure, economic organisation, and trade patterns in Central Asia, and the prospects for inter-modal competition (including pipeline, road, and air); more detailed projections should be provided for 1998-2002 with indicative projections to the year 2007.

analysis of current level and structure of railway costs for the most important traffics, comparison with the level and structure of tariffs, and recommendations concerning any changes in tariffs which may be desirable in light of both the costs of handling the traffic and the apparent sensitivity of the shippers to changes in tariff;

identification of any traffics which may not be financially profitable, and which cannot through management action be made profitable, but which the Government may deem socially necessary; and definition of the basic elements of a contract between the Government and the Railway which would both provide incentives to handle such traffic in the most efficient way (possibly by other modes) and also provide compensation to the Railway for financial losses associated with such traffic;

assessment of the present and prospective future financial condition (profit and loss, assets and liabilities, cash flows) of the Railway and associated debt servicing capacity under optimistic and pessimistic scenarios;

examination of the railway's debt and arrears situation as well as barter payments to the Railway;

4.1.4 Operation and Resources

analysis of the Railway's operational efficiency and identification of low cost investment improvements;

assessment of facilities and equipment of network infrastructure (taking account of current condition) relative to expected future requirements, identification of surplus assets, and definition of a programme for management or disposition of surplus assets; assessment of maintenance and repair management, procedures, facilities and locations sector;

comparative assessment of present and future human resource requirements of the Railway (including support units which may be privatised), and definition of an adjustment programme, including retraining, attrition, and buyouts;

4.1.5 Environmental Aspects

survey of the environmental impacts of Railway construction, maintenance, and operations, identification of any problem areas, and recommendations for any needed measures; and

4.1.6 Immediate Priority Capital Requirements

identification and preliminary assessment of immediate priority capital requirements:

- (a) to support the restructuring programme, e.g. development of legislation, management information systems (systems assessment, selection and implementation, including computers and software), training, planning and implementation of optimal dis-investment/ standby assets preservation programme for infrastructure and equipment, labour adjustment programmes;
- (b) to rehabilitate and preserve critical infrastructure and equipment (including inventories of spare parts, rehabilitation of locomotives, wagons, and track) or protect the environment; and
- (c) selective, high-yielding new investments to meet new market opportunities (e.g. Trans-Asia-Europe corridor) or substantially reduce costs of present operations.

4.1.7 Regional Collaboration Meeting

Approximately 15 days after submission of the Russian version of the Draft final reports for Modules A,B & C the Consultant will organise a joint meeting of the heads of the national railway operating companies, and the relevant ministers responsible for policy making in the three main Central Asian States (approximately 15 beneficiary state participants may be foreseen), or their designees. The agenda of the meeting will be to:

- discuss the regional aspects of the studies findings and recommendations
- define areas where regional agreements should be entered into or reinforced during the restructuring process.
- define a programme for the development of such agreements
- reinforce the TRACECA Tariffication project

The consultant may propose that the meeting be organised at a location within the region, or at the EBRD in London, or at TACIS in Brussels (see Section 4.2 following).

4.2 Outline of Implementation Procedures

The substantial technical steps required for project implementation have been integrated into the work packages.

The consultant will work with national rail company directors or their designates. The railway will be expected to make available all existing information useful for the performance of this study.

Local experts or Institutions must be engaged as staff by the consultant for routine data collection and logistic support. The evaluation of tenderers proposals will be based in part on the completeness and credibility of their dispositions to work with local entities. Time allocated to local staff (as distinct from Counterpart staff) must be clearly shown in the proposal.

EU consultants must spend a maximum of working time in the region.

Any assemblies of counterparts or local experts within the NIS are to be arranged entirely at the expense of the consultant, including travel and accommodation of participants. Likewise office space, interpretation, secretarial services, and all other inputs required for the purposes of the work are to be provided by the consultant.

4.3 Timetable

The Consultant will mobilise its team in Almaty within 1 month after award of the contract. Total duration of the assignment will be seven months. It is noted that Modules A, B & C of this project share the same start date and are to be carried out simultaneously, not sequentially.

4.4 Global budget

Approximate staffing requirements for the entire work defined above are estimated at 110 staff weeks, along the lines indicated below. However, the Consultant should exercise professional judgement and may submit an altered staffing plan as it feels necessary to achieve the objectives and scope of the study as defined above.

Senior railways management consultant (Team leader)	21*
Institutional/management specialist	15
Economist/financial analyst	15
Railway operations specialist	10
Rolling stock/workshops engineering specialist	8
Infrastructure engineer	8
IT/accounting/MIS specialist	19
Labour adjustment/training/retraining specialist	8
Environmental management specialist	6

* It is anticipated that this or the economist role would include traffic analysis and forecasting. Flexibility will be allowed to consultants to rotate staff through the three modules A, B and C.

Approximately 10 % of the project budget may be foreseen for local experts, interpreters, secretarial support etc.

5. Reporting

A brief Inception Report will be produced one month after the start of the contract.

The Draft Final Report for this module will be due five months after award of contract. TRACECA and EBRD will review the report simultaneously with the Railway, and comments will be rendered to the Consultant within 30 days from date of receipt. The Consultant shall then prepare a revised report reflecting the combined comments of the Railway and the Final Report will be rendered in 30 days from receipt by the Consultant of the combined comments.

All reports are to be delivered in the numbers, languages and locations as follows:

	Bound		Loose-leaf		Diskette (Eng.+Rus)
	English	Russian	English	Russian	
TACIS Brussel	1	1	0	0	0
TRACECA Brussels	5	1	1	1	1
TRACECA Tashkent	1	1	1	1	1
TACIS Nationa (each state)	1	5	0	0	0
Beneficiary National Rai Head Office (each state)	1	10	1	1	0
EBRD London	5	1	1	1	1

The importance of high quality Russian texts, delivered on time, cannot be overemphasised. The reporting dates in this TOR are for the delivery of the English language text. The Russian language text should be provided no more than five calendar days later, at the beneficiaries head office and the TACIS national CU.

6. Factors Ensuring Sustainability

The project is vital for the enablement of outside investment in the railways concerned. In this respect it places the initiative for sustainability on the consultant (to design a viable restructuring plan which will ensure the beneficiaries ability to survive and reimburse any eventual loan, in a competitive economic environment) as well as on the beneficiary to implement the plan.

7. Environmental Impact

See section 4.5

8. Monitoring and Evaluation

The key indicators of success will be:

- engagement in open and constructive dialogue with the concerned railways senior management and the government hierarchy controlling them
- production of a restructuring plan acceptable to the beneficiary governments and to the EBRD
- design of investment packages acceptable to the beneficiary governments and to the EBRD

MODULE B - UZBEKISTAN RAILWAY RESTRUCTURING STUDY**1. Background****1.1 Needs of Beneficiaries**

Like other railways of the Former Soviet Union, the Uzbekistan Railway (the 'Railway') has experienced a dramatic decline in traffic since 1991. Traffic has fallen from 72.4 billion freight tonne-kms (btkm) in 1991, prior to separation from the Central Asian Railways (where the Uzbek Railway was joined with Kyrgyz, Tajik, and Turkmen Railways), to 15.0 btkm anticipated for 1996. Passenger traffic, which is only a small proportion of total traffic, has fallen from 5.4 billion passenger-kms (bpkm) to 2.5 bpkm. Revenues have been buffered to some extent from the decline in traffic volume by large (real) increases in freight tariffs over this period. Consequently, despite the fact that the Railway has so far made only modest adjustments to its establishment size and costs, it was still able to record a profit before tax in 1995 of Som 3.24 billion, or US\$ 81 million (at the current official exchange rate of S40=\$1). However, depreciation is seriously undervalued and there has been an accumulating backlog of deferred maintenance and investments. While the Railway has the legal freedom to increase its tariffs further, it is meeting increasing resistance from its clients and is concerned that little headway is left for further tariff increases.

1.2 Problems to be Addressed

Consequently, the Railway management has determined that restructuring is now needed to reduce costs and better focus the Railway on its present and future role. Management is already well advanced in planning of the new organisation and drafting of associated new legislation. Proposals for the first stage, commencing in 1997, envisage separation and establishment of two new state enterprises. One will be for infrastructure (track, signalling, communications, power). The second will be for passenger services (including ownership and maintenance of the coaches, terminals, and the passenger interface). Motive power, dispatching, all freight services, and other functions would remain with the existing Railway. As soon as these initial major steps are shown to be working, it is envisaged that freight services, including wagon ownership and maintenance, and certain vertically integrated social support functions (schools and health facilities) would be separated and privatised (the majority of staff housing has already been privatised).

1.3 Relations to Past and Present TACIS Projects

See Annex "Past And Present Projects Of Direct Interest To The Study".

1.4 Co-ordination With Other Donors

See Preface following Table of Contents on page 2

2. Rationale and Objectives***GOVERNMENT REQUEST***

The Railway and the Government of Uzbekistan (the 'Government') have requested technical and financial support from TRACECA who is co-operating closely with the European Bank for Reconstruction ('EBRD') to assist in the design and implementation of the railway restructuring programme. TRACECA has agreed to provide technical assistance to support the Railway in further developing its plans for comprehensive restructuring and to define a priority programme of investments as well as other measures needed to support implementation of the restructuring, which would then provide the basis for appraisal of a possible EBRD and other loans. These Terms of Reference (TOR) define this initial technical assistance programme entitled Uzbekistan Railway Restructuring Study (the 'Study').

OBJECTIVES

2.1 The Study will support Government and Railway to further develop its plans for comprehensive restructuring in light of its current and expected future market opportunities and its goal to be a commercially driven, financially self-sustaining enterprise. The study will advise on the future relationship between Railway and Government, development of a commercially oriented organisation structure and specific measures to improve the efficiency and effectiveness of railway transport. - It will also advise on the need to match - assets and staff to future traffic demand and this will include the possibility- of contracting out non core railway activities.

2.2 The Study will also provide a restructuring implementation plan. This plan, which is expected to cover a 5 year time frame (1998-2002), will- describe the organisation of a project implementation unit and the legislative, regulatory and planning -instruments which are required for implementation such as a new railway law (see Annex Past and Present Projects - Legal Framework), a contract plan between the Government and the Railway with detailed regulations regarding their future co-operation, an agreement about restructuring targets, action plans, social plans if required and training.

2.3 The Study should allow phased planning and implementation. It will indicate capital requirements and overall requirements for the period 1998-2002.

2.4 The Study is expected to promote commercially oriented planning and thinking within the Railway. It should also strengthen the commercial and financial orientation of future investment planning. The Railway's investment absorption capacity should be estimated and its main investment targets assessed. This should provide a framework to prioritise planned projects.

2.5 Particular consideration should be given to the international freight traffic. Key areas for harmonisation with neighbouring railways should be identified in the field of operation, traffic, tariffs and customs procedures to promote this important traffic.

2.6 As the Railway was previously closely linked with neighbouring railways the principles of future co-operation with these railways should be outlined; these principles may impact on the restructuring concept for example in the maintenance and repair sector, management information systems etc.

2.7 Existing studies should be taken into consideration. The study should provide a framework and show interfaces for those areas where studies from other financing sources will be available.

2.8 The environmental obligations and regulations of TR should be established and assessed taking account of relevant national laws. Any major environmental deficiencies in railway operations or maintenance should be identified and addressed in the 5-year restructuring plan. -

3. Risks and Assumptions

See Module A Section 3

4. Main Components

4.1 Tasks

4.1.1 Brief Overall Review

i. a brief overall review of all major facets of the Railway's present and anticipated future traffic, operations, facilities, equipment, finances, organisation, management, human resources, environmental impacts, and legal situation;

4.1.2 Legal Framework, Organisation Structure, Management Information System

- ii examination of the legal framework and status of the Railway, its respective powers, obligations, and responsibilities, and its relationships to the Ministry of Transport and Communications and other Governmental agencies, including price control and anti-monopoly authorities;
- iii examination of present and proposed internal Railway organisation and management structures (including reporting and decision hierarchies, information systems, corporate and individual incentives structures);
- iv assessment of the present management information systems (operations, finance, accounting, billing, marketing, corporate planning, project evaluation and capital budgeting, personnel and administration) relative to the needs of a modern commercial organisation, and identification of future development requirements;

4.1.3 Traffic and Financial Situation

- i. analysis of present traffic patterns and recent trends for key traffics by commodity type (for instances dry bulks, liquid bulks, containerised general cargo, non-containerised general cargo in full car loads (FCL) and less than car loads (LCL), temperature controlled) and passenger type (inter-city, local, commuter), by line, and by direction. Export, import and transit freight traffic should be given special attention and forecasts of future traffic should take into account recent trends, but should be based more fundamentally on anticipated future changes in the industrial and agricultural structure, economic organisation, and trade patterns in Central Asia, and the prospects for inter-modal competition (including pipeline, road, and air); more detailed projections should be provided for 1998-2002 with indicative projections to the year 2007.
- ii analysis of current level and structure of railway costs for the most important traffics, comparison with the level and structure of tariffs, and recommendations concerning any changes in tariffs which may be desirable in light of both the costs of handling the traffic and the apparent sensitivity of the shippers to changes in tariff;
- iii identification of any traffics which may not be financially profitable, and which cannot through management action be made profitable, but which the Government may deem socially necessary, and definition of the basic elements of a contract between the Government and the Railway which would both provide incentives to handle such traffic in the most efficient way (possibly by other modes) and also provide compensation to the Railway for financial losses associated with such traffic;
- iv assessment of the present and prospective future financial condition (profit and loss, assets and liabilities, cash flows) of the Railway and associated debt servicing capacity under optimistic and pessimistic scenarios;
- v examination of the railway's debt and arrears situation as well as barter payments to the Railway;

4.1.4 Operation and Resources

- i Analysis of the Railway's operational efficiency and identification of low cost investment improvements;
- ii Assessment - of facilities and equipment of network infrastructure (taking account of current condition) relative to expected future requirements, identification of surplus assets, and definition of a programme for management or disposition of surplus assets;
- iii Assessment - of maintenance and repair management, procedures, facilities and locations;-

iv Comparative assessment of present and future human resource - requirements of the Railway (including support units which may be privatised), and definition of an adjustment programme, including retraining, attrition, and buyouts

4.1.5 Environmental Aspects

survey of the environmental impacts of Railway construction, maintenance, and operations, identification of any problem areas, and recommendations for any needed measures

4.1.6 Immediate Priority Capital Requirements

identification and preliminary assessment of immediate priority capital requirements:

(a) to support the restructuring programme, e.g. development of legislation, management information systems (systems assessment, selection and implementation, including computers and software), training, planning and implementation of optimal dis-investment/ standby assets preservation programme for infrastructure and equipment, labour adjustment programmes;

(b) to rehabilitate and preserve critical infrastructure and equipment (including inventories of spare parts, rehabilitation of locomotives, wagons, and track) or protect the environment; and

(c) selective, high-yielding new investments to meet new market opportunities (e.g. Trans-Asia-Europe corridor) or substantially reduce costs of present operations.

4.1.7 Regional Collaboration Meeting

See Module A Section 4.1.7

4.2 Outline of Implementation Procedures

See Module A Section 4.2

4.3 Timetable

The Consultant will mobilise its team in Tashkent within 1 month after award of the contract. Total duration of the assignment will be six months.

4.4 Global budget

Approximate staffing requirements for the entire work defined above are estimated at 63 staff weeks, along the lines indicated below. However, the Consultant should exercise professional judgement and may submit an altered staffing plan as it feels necessary to achieve the objectives and scope of the study as defined above.

Senior railways management consultant (Team leader)	18*
Institutional/management specialist	9
Economist/Financial analyst	9
Railway Operations Specialist	5
Rolling stock/workshops engineering specialist	3
Infrastructure engineer	4
IT/Accounting/MIS specialist	7
Labour adjustment/training/retraining specialist	4
Environmental Management Specialist	4

*It is anticipated that this or the economist role would include traffic analysis and forecasting Flexibility will be allowed to consultants to rotate staff through the three modules A, B and C.

Approximately 10 % of the project budget may be foreseen for local experts, interpreters, secretarial support etc.

5. Reporting

A brief Inception Report will be produced one month after the start of the contract.

The Draft Final Report for this module will be due 4 months after award of contract. TRACECA and EBRD will review the report simultaneously with the Railway, and comments will be rendered to the Consultant within 30 days from date of receipt. The Consultant shall then prepare a revised report reflecting the combined comments of the Railway and the Final Report will be rendered in 30 days from receipt by the Consultant of the combined comments.

All reports are to be delivered in the numbers, languages and locations as follows:

	Bound		Loose-leaf		Diskette (Eng.+Rus)
	English	Russian	English	Russian	
TACIS Brussel	1	1	0	0	0
TRACECA Brussels	5	1	1	1	1
TRACECA Tashkent	1	1	1	1	1
TACIS Nationa (each state)	1	5	0	0	0
Beneficiary National Rai Head Office (each state)	1	10	1	1	0
EBRD London	5	1	1	1	1

The importance of high quality Russian texts, delivered on time, cannot be overemphasised. The reporting dates in this TOR are for the delivery of the English language text. The Russian language text should be provided no more than five calendar days later, at the beneficiaries head office and the TACIS national CU.

6. Factors Ensuring Sustainability

See Module A Section 6

7. Environmental Impact

See Section 4.5

8. Monitoring and Evaluation

See Module A Section 8.

MODULE C - TURKMENISTAN RAILWAY RESTRUCTURING STUDY**1. Background****1.1 Needs of Beneficiaries**

The Turkmenistan Railways ('TR' or the 'Railway') was established on 15 November 1991, after the declaration of independence of Turkmenistan. Its network comprises part of former USSD Railway and part of the Middle Asian Railway Department, a decentralised unit of the former USSR Railway. The TR is a hybrid organisation, part government department and part state-owned enterprise. Several decrees of 1993 regulate the Railway's status at three levels: (a) the State apparatus to which the Chief of the Railway belongs, ranked as a Minister, (b) the Railway itself, and (c) 62 ancillary state-owned enterprises.

TR operates a network of 2196 route-kilometres with broad gauge track (1.520m). The network is not electrified and consists of single track, except for a 41.3 km double track section. Its main line links Turkmenbashi, Ashgabat, Mary and Chardjev. In 1995, TR carried 10.1 million tons and 8,568 million tonne-kilometres of freight. Passenger traffic is about 10% of total traffic. Around 30% of freight tonne-kilometres appear to be transit or export/import traffic.

Traffic levels have declined substantially in recent years as a result of structural changes in Eastern European and Central Asian economies. Total freight traffic decreased by 62.5% from 22,881 million tonne-kilometres in 1992 to 8,568 million tonne-kilometres in 1995. The traffic decrease had been expected by TR to slow down in 1996. However, in the first half of 1996 TR carried 3,600 million tonne kilometres, compared with the Railway's target of 11,000 million tonne-kilometres for the total year.

The Railway's 1995 Profit and Loss Account still shows an apparent profit. Apart from a grant of Roubles 60 million in 1993, the railway has received no subsidies from the Government of Turkmenistan (the 'Government'). However depreciation and repair funds are based on very low historical values. TR officials estimate that asset values should be increased several hundred times to match reality. The allocated amounts for investments and construction do not appear to reflect the Railway's current requirements. Domestic freight traffic is not currently expected to cover its costs. Its tariffs are about 25 times lower than transit and some export/import cargo. Apart from annual budgeting, TR has not undertaken long-term financial forecasting or business planning. Government and TR concentrated their efforts on opening the new Sarakh line to Iran which is part of the Transasian Rail Link from China to Europe. Increasing transit freight traffic and revenues are expected along this newly opened intercontinental transport corridor, as well as along the Trans Caucasian Corridor from Kazakhstan, Uzbekistan via Turkmenistan to Georgia and Azerbaijan.

1.2 Problems to be Addressed

Staff productivity dropped significantly from 0.96 million traffic units per employee in 1992 to about 0.4 million traffic units in 1995 as staff reduction didn't follow traffic decline. However in addition to the 22,000 direct railway employees in 1995 there are a further 9,000 employees who belong to ancillary services.

The steep decline of freight traffic since 1991, and inadequate tariff adjustments have caused real revenues to decline. In addition, scarce availability of foreign currency has prevented spare parts provision and caused a backlog of repair and general overhaul, in particular for locomotives, freight wagons and track. Since the independence of Turkmenistan, the Railway has been cut off from its workshops for repair and general overhaul, which are now located outside the country. In addition TR had to pass on all foreign currency income to the Government in return for local currency. The increasing lack of spares can probably no longer be met by cannibalising surplus stock.

Since the foundation of TR, the Government has made efforts to phase out ancillary services and to adjust staff numbers to declining traffic levels. Limited autonomy and the current functional organisation structure do not enable TR and ancillary state-owned companies to act as market-oriented companies. However, the dramatic fall in railway freight traffic since 1991 and the continuing decline of the country's economic activities, appear to have focused the Government increasingly on restructuring of the railway.

1.3 Reactions to Past and Present TACIS Projects

See Annex "Past And Present Projects Of Direct Interest To The Study".

1.4 Co-ordination With Other Donors

See Preface following Table of Contents on page 2

2. Rationale and Objectives

GOVERNMENT REQUEST

The Railway and the Government have requested technical and financial support from TRACECA who co-operates closely with the European Bank for Reconstruction and Development ('EBRD') to assist in the design and implementation of the restructuring programme. TRACECA/EBRD have agreed to provide technical assistance to support the Railway in further developing its plans for comprehensive restructuring and to define a priority programme of investments as well as other measures needed to support implementation of the restructuring, which would then provide the basis for appraisal of a possible EBRD and other loans. These Terms of Reference (TOR) define this initial technical assistance programme entitled Turkmenistan Railway Restructuring Study (the 'Study').

OBJECTIVES

2.1 The Study will support the Government and Railway to further develop its plans for comprehensive restructuring in light of its current and expected future market opportunities and its goal to be a commercially driven, financially self-sustaining enterprise. The Study will advise on the future relationship between Railway and Government, development of a commercially oriented organisation structure, and specific measures to improve the efficiency and effectiveness of railway transport. It will also advise on the need to match assets and staff to future traffic demand and this will include the possibility of contracting out non core railway activities.

2.2 The Study will also support the implementation process of restructuring by assisting TR to establish restructuring implementation plan. This plan, which is expected to cover a 5 year time frame (1998-2002), will describe the organisation of a project implementation unit and the legislative, regulatory and planning instruments which are required for implementation such as new railway law (see Annex Past and Present Projects - Legal Framework), contract plan between the Government and the Railway, an agreement about restructuring targets, action plans, social plans, if required, and training.

2.3 The Study will allow phased planning and implementation. It will indicate capital requirements for emergency investments and overall requirements for the period 1998-2002.

2.4 The Study is expected to promote commercially oriented planning and thinking within the Railway. It should also strengthen the commercial and financial orientation of future investment planning. The Railway's investment absorption capacity will therefore be estimated and its main investment targets assessed. This should provide a framework to prioritise the existing and future projects in a realistic manner and provide the basis for later project appraisals of financing institutions.

2.5 Particular consideration should be given to the international freight traffic. The study should include proposals about how far the Railway's procedures should be internationally harmonised in order to promote this important traffic.

2.6 The principles of future co-operation with neighbouring railways should be outlined: these principles may impact on the restructuring concept, for example in the maintenance and repair sector, management information systems etc.

2.7 Existing studies should be taken into consideration. The study would provide a framework and show interfaces for those areas where studies from other financing sources are ongoing or expected.

2.8 The environmental obligations and regulations of TR should be established and assessed, taking account of relevant national laws. Any major environmental deficiencies in railway operations or maintenance should be identified and addressed in the 5-year restructuring plan.

3. Risks and Assumptions

See Module A Section 3

4. Main Components

4.1 Tasks

4.1.1. Overall Review

a brief overall review of all major facets of the Railway's present and anticipated future traffic, operations, facilities, equipment, finances, organisation, management, human resources, environmental impacts, and legal situation;

4.1.2 Legal Framework, Organisation Structure, Management Information System

examination of the legal framework and status of the Railway, its respective powers, obligations, and responsibilities, and its relationships to the Ministry of Transport and Communications and other Governmental agencies, including price control and anti-monopoly authorities;

examination of present and proposed internal Railway organisation and management structures (including reporting and decision hierarchies, information systems, corporate and individual incentives structures);

assessment of the present management information systems (operations, finance, accounting, billing, marketing, corporate planning, project evaluation and capital budgeting, personnel and administration) relative to the needs of a modern commercial organisation, and identification of future development requirements;

4.1.3 Traffic and Financial Situation

analysis of present traffic patterns and recent trends for key traffics by commodity type (for instance dry bulks, liquid bulks, containerised general cargo, non-containerised general cargo in full car loads (FCL) and less than car loads (LCL), temperature controlled) and passenger type (inter-city, local, commuter), by line, and by direction. Export, import and transit freight traffic should be given special attention and forecasts of future traffic should take into account recent trends, but should be based more fundamentally on anticipated future changes in the industrial and agricultural structure, economic organisation, and trade patterns in Central Asia, and the prospects for inter-modal competition (including pipeline, road, and air); more detailed projections should be provided for 1998-2002 with indicative projections to the year 2007.

analysis of current level and structure of railway costs for the most important traffics, comparison with the level and structure of tariffs, and recommendations concerning any changes in tariffs which may be desirable in light of both the costs of handling the traffic and the apparent sensitivity of the shippers to changes in tariff;

identification of any traffics which may not be financially profitable, and which cannot through management action be made profitable, but which the Government may deem socially necessary; and definition of the basic elements of a contract between the Government and the Railway which would both provide incentives to handle such traffic in the most efficient way (possibly by other modes) and also provide compensation to the Railway for financial losses associated with such traffic;

assessment of the present and prospective future financial condition (profit and loss, assets and liabilities, cash flows) of the Railway and associated debt servicing capacity under optimistic and pessimistic scenarios;

examination of the railway's debt and arrears situation as well as barter payment procedures;

4.1.4 Operation and Resources

Analysis the Railway's operational efficiency and outline low cost investment improvements;

assessment of facilities and equipment of network infrastructure (taking account of current condition) relative to expected future requirements, identification of surplus assets, and definition of a programme for management or disposition of surplus assets;

assessment of maintenance and repair management, procedures, facilities and locations;

comparative assessment of present and future human resource requirements of the Railway (including support units which may be privatised), and definition of an adjustment programme, including retraining, attrition, and buyouts;

4.1.5 Environmental Aspects

survey of the environmental impacts of Railway construction, maintenance, and operations, identification of any problem areas, and recommendations for any needed measures;

4.1.6 Immediate Priority Capital Requirements

identification and preliminary assessment of immediate priority capital requirements:

to support the restructuring programme, e.g. development of legislation, management information systems (systems assessment, selection and implementation, including computers and software), training, planning and implementation of optimal dis-investment/ standby assets preservation programme for infrastructure and equipment, labour adjustment programmes;

to rehabilitate and preserve critical infrastructure and equipment (including inventories of spare parts, rehabilitation of locomotives, wagons, and track) or protect the environment; and

selective, high-yielding new investments to meet new market opportunities (e.g. Trans-Asia-Europe corridor) or substantially reduce costs of present operations.

4.1.7 Regional Collaboration Meeting

See Module A Section 4.1.7

4.2 Outline of Implementation Procedures

See Module A Section 4.2

4.3 Timetable

The Consultant will mobilise its team in Ashghabad within 1 month after award of the contract. Total duration of the assignment will be six months.

4.4 Global budget

Approximate staffing requirements for the entire work defined above are estimated at 63 staff weeks, along the lines indicated below. However, the Consultant should exercise professional judgement and may submit an altered staffing plan as it feels necessary to achieve the objectives and scope of the study as defined above.

Senior railways management consultant (Team leader)	18*
Institutional/management specialist	9
Economist/Financial analyst	9
Railway Operations Specialist	5
Rolling stock/workshops engineering specialist	3
Infrastructure engineer	4
IT/Accounting/MIS specialist	7
Labour adjustment/training/retraining specialist	4
Environmental Management Specialist	4

*It is anticipated that this or the economist role would include traffic analysis and forecasting. Flexibility will be allowed to consultants to rotate staff through the three modules A, B and C.

Approximately 10 % of the project budget may be foreseen for local experts, interpreters, secretarial support etc.

5. Reporting

A brief Inception Report will be produced one month after the start of the contract.

The Draft Final Report for this module will be due 4 months after award of contract. TRACECA and EBRD will review the report simultaneously with the Railway, and comments will be rendered to the Consultant within 30 days from date of receipt. The Consultant shall then prepare a revised report reflecting the combined comments of the Railway and the Final Report will be rendered in 30 days from receipt by the Consultant of the combined comments.

All reports are to be delivered in the numbers, languages and locations as follows: ~

	Bound		Loose-leaf		Diskette (Eng.+Rus)
	English	Russian	English	Russian	
TACIS Brussel	1	1	0	0	0
TRACECA Brussels	5	1	1	1	1
TRACECA Tashkent	1	1	1	1	1
TACIS Nationa (each state)	1	5	0	0	0
Beneficiary National Rai Head Office (each state)	1	10	1	1	0
EBRD London	5	1	1	1	1

The importance of high quality Russian texts, delivered on time, cannot be overemphasised. The reporting dates in this TOR are for the delivery of the English language text. The Russian language text should be provided no more than five calendar days later, at the beneficiaries head office and the TACIS national CU.

6. Factors Ensuring Sustainability

See Module A Section 6

7. Environmental Impact

See Section 4.5

8. Monitoring and Evaluation

See Module A Section 8.

MODULE D - TADJIKISTAN & KYRGHYZSTAN RAILWAY RESTRUCTURING STUDY

1. Background

The Tadjikistan and Kyrgyzstan Railways are separate national companies which have not until now participated in the preliminary negotiations which have taken place between the EBRD and the Railways of Turkmenistan, Uzbekistan, and Kazakhstan. They are relatively small networks which are appendices of the three much larger Central Asian Railways.

Transport in both countries is predominantly by road, but the railways do play an absolutely vital role in the international trade of both countries. Much traffic on the Tadjikistan Railway is transit traffic for Uzbekistan, between the Ferghana Valley and Samarkand. Kyrgyzstan carries no transit traffic.

Uzbekistan is presently constructing a new line to dis-enclave its Fergahna network and link it to the rest of the Uzbek network solely on Uzbek territory, which will thus deprive Tadjikistan of much of its revenues. There are in fact several rail construction projects throughout the region which are aimed at ensuring a maximum of national autonomy, in spite of an evident need for all of the Central Asian Railways to collaborate for mutual survival.

The declining traffic levels and consequent financial problems characteristic of the three major Central Asian Railways are equally applicable to the Tadjikistan and Kyrgyzstan. There is a vital need to define and implement a new commercial role for these railways. This would enable external investment. However, Tadjikistan and Kyrgyzstan are very highly dependent on the three major Central Asian networks, and inevitably their future will be determined largely by events beyond their national borders.

2. Rational and Objectives

Given the foregoing, the actions of this sub-project will be similar to, dependent on, and closely linked throughout to the evolution of the three major TRACECA/EBRD Central Asian Railway projects.

The objective is that the Tadjikistan and Kyrgyzstan Railways may then benefit from the same opportunities as the major railways, to achieve commercial viability and to attract external investment under a regionally coherent TRACECA/EBRD restructuring plan.

3. Risks and Assumptions

See Module A Section 3.

4. Main Components

The Main Components of this sub-project are identical to the Scope of Work for the three major Central Asian railways projects.

Likewise the timetable will be similar to that of the three major modules, but a delay of up to four months is permitted, relative to start and completion of those three modules.

The consultant is free to propose a staffing plan, as well as the allocation of staff between Tadjikistan and Kyrgyzstan.

5. Reporting

The reporting procedures will be the same as those of the three major Central Asian railways projects.

6. Factors Ensuring Sustainability

The project is vital for the enablement of outside investment in the railways concerned. In this respect it places the initiative for sustainability on the consultant (to design a viable restructuring plan which will ensure the beneficiaries ability to survive and reimburse any eventual loan, in a competitive economic environment) as well as on the beneficiary to implement the plan.

7. Environmental Impact

Environmental impacts are listed among the Main Components of the project. The project itself will have no direct environmental impact.

8. Monitoring and Evaluation

The key indicators of success will be:

- engagement in open and constructive dialogue with the concerned railways senior management and the government hierarchy controlling them
- production of a restructuring plan acceptable to the beneficiary governments and to the EBRD
- design of investment packages acceptable to the beneficiary governments and to the EBRD

MODULE E - Feasibility Study Concerning Interconnection Possibilities Between the Telecommunications Networks of TRACECA Countries.

1. Background

1.1. The objective of the TRACECA programme is the development of the rail, maritime and road transport corridors linking the Georgian Black Sea harbours with the Caspian harbours and further to the Central Asian Republics.

1.3. In the meeting held in Paris on 21, 22 and 23 April 1996, railway managers agreed that the first condition for the implementation of the TRACECA programme was the setting up of an efficient telecommunications network linking the various TRACECA countries. Furthermore, against the background of growing competition and an urgent necessity to improve productivity, an efficient telecommunications network is most definitely an asset.

For this purpose a two-phase approach has been proposed, including :

- * first stage : a feasibility study on how to implement the interconnection of the different systems;
- * second stage : training to use the new system.

1.4. This project is aimed at providing technical assistance and training to all rail organisations in the region in the field of railway communications.

1.5. Taking into account the recommendations made by the delegations from the 7 countries during the above-mentioned meeting (Paris, April 1996), the following two modules have been identified for execution under the present project (labelled as modules X and Y) :

- * Module X : Terrestrial telecommunications
- * Module Y : Exchange of computer data

2. Objectives

2.1. The general objectives of this project are :

- * to diagnose the telecommunications system used by TRACECA railways,
- * to present the European telecommunications systems and of the technical standards applied by European railways,
- * to help TRACECA railways choose an adequate solution for interconnecting the telecommunications system (telecommunications, information technology) between themselves and with European railways,
- * secondly, if sufficient budgetary funds are made available, to arrange a training scheme in order to teach TRACECA railway staff how to use the adapted system.

2.2. The consultant will clearly specify in his proposal the nature and cost of equipment and supplies, training aids, hardware and software that he recommends be used for the project.

3. Risks

This project demands strong coordination between the 8 countries involved, firstly in carrying out the studies, secondly, and above all, in adopting common, or in all events, compatible solutions. There needs to be strong desire in each country involved to reach common or compatible solutions

4. Principle project components

4.1 Diagnosis of the present situation

4.1.1. The diagnosis applies to modules X and Y.

4.1.2. The diagnosis of the existing communications network shall include

** A survey of the existing network*

- technical characteristics of cables and centres, compatibility with international standards
- suppliers
- age of equipment
- number of kilometres of cable per category and per country
- geographical maps indicating the location of cables and centres
- national and international numbering plan
- capacity, saturation and poor quality phenomena
- mode of establishing "automatic" and "semi-automatic" international telephone communications

If the semi-automatic mode is widespread, there would undoubtedly have to be a gradual move to the automatic mode throughout the network. Furthermore, if the diagnosis reveals that the automatic mode is operated in analogue, it would prove necessary to investigate the possibility of switching to digital operation. This would allow the phone network to move towards the prospective International Railway Telecommunications Network (IRTN),

** the nature of computer data currently exchanged*

- access to the railway computer service by customers and border services

The aim is to establish whether forwarding agents can give customers information using the railway computer system on the movements of wagons, damage to goods, pricing and invoicing. In the same way, can border services (police, customs, etc.) use the computer system to receive advance information which would help them speed up their operations? If these customer-oriented services do not exist today, is it planned to introduce them ?

- standardisation of computer messages

The message coding used in Central Asia and in the Caucasus shall be described so that it may be ascertained whether it is compatible with European coding or if it should be altered.

** a survey of existing studies*

Studies related to this theme may already be under way, or have been completed (e.g. DE CONSULT's Railways Infrastructure Maintenance and UNCTAD's Rail Tracker Freight Monitoring System). The diagnosis shall therefore comprise a survey of these studies giving a summary of each one. The feasibility study shall be conducted taking into account the findings of these studies.

4.1.3 Mode for collecting data needed for the diagnosis.

Two specialists will spend 3 days in each of the 8 countries sending out a list of the desired data beforehand.

4.2. Presentation of the European systems

It is evident that familiarisation with the European railways, and technical methodologies and procedures used by them (modules X and Y) would encourage project participants, particularly telecommunications department managers, to collaborate more actively and in a sustained manner.

Therefore, it is proposed to stage a familiarisation visit to Europe for about eight participants. This visit should present in working environments the most efficient modern EU technologies and procedures for communications.

We propose that this be held in Poland, whose telecommunications network is currently being upgraded. Both the Katowice and Tczew have already switched to 'digital' with fibre optic transmission cables. Eight further centres will be shortly converted too. There is therefore a two-fold pedagogical interest:

- to demonstrate the future system
- and the problems linked to the transition phase

Russian language interpretation shall be provided to allow visitors to dialogue with working professionals on how the system works.

4.3. Recommendations and training for the selection of a new system

4.3.1. Based upon the diagnosis carried out, recommendations regarding the further development of the communications network will be drawn up, to include :

- * measures that can be taken to improve system efficiency and productivity in the short term (without any major investment).
- * measures that can be taken to improve efficiency and productivity in the medium and longer term (with investment).
- * measures that can be taken to meet manpower requirements, (staff skills and training requirements).

4.3.2. For each of the modules (X and Y), a phased action plan and an investment programme will be drawn up, to comprise :

- Objectives of the rehabilitation / modernisation project
- Project timescale
- Project organisation and management (implementation stages, etc.)
- Details on the changes and improvements which need to be made to the existing network facilities
- Sizing and technical characteristics of the equipment recommended, length of cable to be laid per country, compatibility with other European systems

- Provisional estimates of costs of equipment procurement, with a list of prospective regional and European suppliers including in particular their nationality. Estimated cost of installation and rehabilitation activities. Overall cost and cost per country.
- Details on the numbers and level of personnel required for network modernisation to make it more efficient.

4.3.3. The reorganisation and investment proposal may include:

- * rearrangement of existing facilities,
- * extension and/or repair of existing utilities,
- * installation of new equipment,
- * interconnection with Europe

4.3.4. Technical provisions for an international railway telecommunications and data transmission network.

To enable an optimum use of the new telecommunications systems, guidelines will be drawn up in the form of technical provisions. Whilst respecting the configuration autonomy of the national networks, the implementation of the international network will have to meet the common technical provisions laid down in the guidelines.

The general principles related to the structure and operations of each national railway telecommunications and data transmission network as well as its general technical characteristics should be harmonised where harmonisation is absolutely vital to its integration in the international system.

Training

4.3.5 Secondly, if sufficient budgetary funds are available, training will need to be organised to instruct staff how to work with the new system. The objective of this training is to share the experience and know-how of Western railways, which are well versed in this new telecommunications technique.

4.3.6 The various groups to be trained may be identified as follows :

- * managers of railway telecommunications departments
- * technicians specialised in implementing the new technologies
- * instructors training users of the new equipment.

The main objective is to train, with the help of the supplier, instructors who will in turn be able to impart their training to their colleagues.

4.3.7. In order to facilitate the participation of some categories of railway staff, it is recommended to organise two separate training sessions, one for the Caucasian region, the other for Central Asia.

4.4. Logistics

The Consultant shall be responsible for arranging necessary living accommodation, transportation, communications, equipment, document reproduction, secretarial services, and all other services required for the purpose of the work.

4.5. Timetable and Reporting

4.5.1. The project is to be completed within a period of eleven months (see Appendix B)

Task duration and staff assignments are to be clearly shown on planning schedules in the proposal. Time spent on-site and in the office (i.e. in own company) should be clearly visible. Milestones for output and key dates for data acquisition are to be indicated.

4.5.2. Annulled.

4.5.3. Annulled.

4.5.4. Technical Deliverables

All reports are to be delivered in the numbers, languages and to locations as follows:

	Bound		Loose-leaf		Diskette (Eng.+Rus)
	English	Russian	English	Russian	
TACIS Brussel	2	1	1	1	0
TRACECA Brussels	5	1	1	1	1
TRACECA Tbilisi	2	1	1	1	1
TRACECA Tashkent	2	1	1	1	1
TACIS Nationa Beneficiary	1	5	0	0	0
National Rai Head Offices	1	10	1	1	0
EBRD London	1	1	1	1	1

The (DOS compatible) word processing programme to be used will be agreed with TACIS.

The importance of high quality Russian texts is emphasised. These must be issued at the same time as the English language texts.

4.5.5. Reporting is to be in accordance with standard TACIS Guidelines. These foresee:

Inception report

The Inception Report is to be issued 1.5 months after the contract start date. It shall summarise initial findings and propose any modifications to the methodology and work plan. In particular, it will adapt the work plan to the needs of each individual TRACECA state taking into account the parallel activities of other Technical Assistance programmes, avoiding duplication of effort, and addressing unfulfilled needs.

It will also confirm or amend the list of institutes/organisations/consulting bodies to be directly involved in the implementation of the project.

Project progress report

This report will be submitted at the end of month 5. It will cover technical progress to date.

One month will be allowed for TACIS to study the contents of the report and to guide the following phase of this project.

Final report

The draft final report will be submitted at the end of month 10, and the final report at the end of month 11.

All reports must include an Executive Summary.

Appendix A: Presentation of consultants' findings - UIC

UIC was created in 1922. Although cooperation between the founding companies dealt with all aspects of the rail domain, UIC was particularly active from the outset in the technical field. To fulfil technical specialists need for constant contact, UIC Committees were set up

- C5, Committee for Rolling Stock and Traction, created in 1959, very active in the field of powered and hauled stock

- C7, Fixed Installations Committee, also created in 1959, dealing with track technology and structures, as well as signalling and telecommunications,

- C11, IT Committee, which focuses its activities on coding and data exchange issues in relation to standardisation.

All three Committees were created when the Committee for "Technical Matters" which dates right back to the launch of UIC, was dissolved.

When it comes to technical expertise, UIC is without equal. It increasingly involves UNIFE in its work, so that the result is common specifications, which are very much in the vein of European railway legislation.

The catalogue of UIC leaflets is considerable and is used as a basis for technical harmonisation. It concerns in particular aspects of traffic management (command, control, communications system):

signals and control systems,
radio systems,
telecommunications systems,
IT systems.

UIC has signed an agreement with nine major companies from the European signalling industry to pursue a jointly-developed procedure, with a view to developing a new train control-command system ETCS. The development of a new intelligent device for vehicles (sub-project EURO-CAB), able to function with the current train control-command systems, is of vital importance in this respect. Furthermore, it will include interfaces for the new equipment enabling it to transmit data between track and train.

The standard international ground-train radio link dates back to the early 1970s. In general, today's railway radio communications systems have three main features:

- they are analogue

(Digital technology, which has advantages in terms of cost and performance, is replacing analogue technology on the market, and specialists are of the general opinion that analogue products and components will have become obsolete by the year 2005.

- as they are different, they are not compatible

- some railways should begin upgrading their equipment before the year 2000

Therefore, through the UIC programme of activities the railways should pave the way for a new interoperable radio telecommunications system that will draw on the most recent advances in telecommunications and IT technology.

UIC has been cultivating relations with the 1520 mm gauge railways for quite some time, especially in the field of IT. In the last few years, these relations have been given a new lease of life, especially in the fields of railway management freight transport.

UIC has already participated in a training programme for the railways of Central Asia and the Caucasus, under the TRACECA programme in 1995. Several of the specialists proposed for this "Interconnection" project have already been involved in projects in countries in the former USSR, in particular in Central Asia and the Caucasus region. Their activities are clearly stated in their CV's.

Appendix B: Provisional implementation timescale

Month 0

Phase A: Diagnosis

M	Organisation of first visit in Central Asia
M + 1	1st visit to 2 countries in Central Asia (8 days)
M + 2	2nd visit to 3 countries in Central Asia (15 days)
M + 3	visit to 3 countries in the Caucasus (15 days)
M + 4 B	France for drafting of intermediate report and preparation of phase B
M + 5	preparation of phase B and distribution of intermediate report

Phase B: Presentation of the Polish system

M + 6	visit to Poland by 8 specialists from the Caucasus and Central Asia
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Phase C: Drafting of initial guidelines

M + 7	drafting of initial guidelines in Europe
M + 8	presentation and approval of guidelines in Asia and the Caucasus

Phase D: Drafting of recommendations

M + 9	drafting of recommendations in Europe
M + 10 Caucasus	presentation and approval of recommendations in Asia and the
M + 11	publication and distribution of final report

ANNEX to the TRACECA/EBRD CENTRAL ASIAN RAILWAY RESTRUCTURING STUDIES

PAST AND PRESENT PROJECTS OF DIRECT INTEREST TO THE STUDY

TRACECA PROJECTS

Documentation concerning these projects is available for consultation by tenderers in the TRACECA Co-ordination team offices in Brussels and in Tashkent. Copies of reports will not be supplied at tender stage and should not be requested.

As some of these projects are distinctly duplicated by the TRACECA/EBRD project, the onus is placed firmly on the consultant carrying out the TRACECA/EBRD project to seek complementarity, to avoid wasteful double deployment of EU resources, and to avoid confusing beneficiary state rail management with duplicatory questions and similar sounding mission objectives.

LEGAL FRAMEWORK

A substantial transport legal framework project started in December 1995 and will continue until December 1997. At present a rail codex (as well as road and maritime) have been drafted and are under discussion at Ministerial level and higher within the beneficiary states. They cover in detail freight transport, and in skeleton form passenger transport. They have met general approval as suitable models and it is anticipated that legislation will result during the 1997.

TRAFFIC FORECASTING

A substantial transportation data base and modelling study started in December 1995 and will end in July 1997. Traffic data has been collected for 21 commodity groups across eight countries, based on customs returns, rail, road and maritime traffic statistics, and user surveys. It is believed that the data collection from established non-security rated sources has been fairly exhaustive. Forecasts will be produced based on a range of scenarios. Many contradictions in traffic declarations have been noted, within and between different TRACECA projects.

RAIL INFRASTRUCTURE MAINTENANCE

Started in June 1996 and will end in The project is producing feasibility studies for the Chardzev Bridge, the Akatau-Bejneu line, and is studying rail operations on the Turkmenbashi-Druzhba axis.

RAIL ROLLING STOCK MAINTENANCE

Started in December 1995 and will end in March 1997. The project is producing recommendations on the re-organisation of rolling stock maintenance, on a regional basis. Reporting includes existing facilities, status of spares inventories, and spares procurement procedures.

INTERMODAL TRANSPORT

Started in December 1995 and will end in early 1997. The project is producing recommendations on the development of container traffic in the region. Reporting includes existing infrastructure, equipment and institutions.

TARIFFICATION AND TIMETABLES

A substantial project based in Tashkent started in August 1996 and will end in February 1998. It addresses core issues of commercialisation of freight traffic, particularly transit traffic. It will recommend and promote regional collaboration on business development for the rail sector. It will design and attempt to implement collaborative mechanisms for promotion of rail transport, new rail tariff models and financial arrangements between regional railways and their clients. There is a most distinct risk of duplication between this project and the TRACECA/EBRD project, hence particular attention is to be paid to co-ordination.

PRE-FEASIBILITY STUDIES

Upon the demand of beneficiary states several ambitious new rail links of possible very long term interest will be investigated by a separate TRACECA project oriented mainly to the roads sector. The rail sector components concern possible future links between Bishkek-Osh-Kashgar, and Bishkek-Torugat-Kashgar. These pre-feasibility studies will run concurrently with the EBRD studies. They are separated from this project because of their long term focus, and the intention is to avoid

distractions within this TRACECA/EBRD project which is of immediate urgent interest to the beneficiaries.

OTHER PROJECTS

Several other TRACECA projects cover the rail sector in the Caucasus, the maritime and roads sectors, as well as trade issues.

A past TACIS project has dealt with rail restructuring in Turkmenistan (with little sustained effect). Japanese technical assistance agencies are reportedly interested in supporting rolling stock maintenance in Kazakhstan and Uzbekistan, as well as infrastructure at Druzbha. International railway supply companies are making tentative proposals to Central Asian national railway companies to supply equipment with loan packages, but no such deals appear to be agreed.