

List of International Projects



ALGERIA Train station configuration, development of technical specifications of superstructure components and preparation of specifications for the signalling system. (05-033)

Implementation of a gradual phased-in approach to the computerization of the mechanical function within the **Algerian Railway SNTF**. (91-003)

Development of a plan for the computerization of the mechanical operation at **SNTF**, including locomotive maintenance, locomotive driver scheduling and spare parts management. (90-005)



ARGENTINA Technical and commercial audit of the railway, including all proposed investment plans and policies, for the **International Finance Corporation (IFC)**. (01-093)

Assistance to **SEFEPA** in developing a business plan and marketing strategy for the privatization and concessioning of the railway, including due diligence analyses, definition of investment requirements, and preparation of contract agreement. (00-079)

Technical, economic and financial feasibility study for each of the three stages of the proposed Transpatagonia Railway Project, aimed at privatizing the railway and constructing or rehabilitating some of the existing lines. (97-117, 99-032 and 98-043)

Development of a business plan for the privatization of the Mar del Plata passenger rail service in Argentina, in collaboration with a group of private investors. (92-012)



ARMENIA Evaluation of the cost of a detailed fiber-optic cable routing and evaluation of the adequacy of the proposed new telecommunication system to meet all the present and foreseeable future needs of the railway, for the **World Bank**. (00-052)

Feasibility study to determine the potential approaches and costs for restoring the rail links, especially near the borders, among Armenia, Turkey, Georgia and Azerbaijan, including review of previous reports, assessment of the condition of the track and infrastructure in each country border areas, and development of cost estimates for repair of these lines. (00-028)

Assessment of the condition of existing infrastructure and rolling stock of the Armenian Railway with the objective of defining the appropriate investment programs for a potential **World Bank** loan. The metro system was also reviewed. (99-016)



AUSTRALIA Evaluation of the costs of transporting bauxite by rail between **Alcan's** proposed Ely Mine in Queensland, Australia and the port at Pennefather. (96-001)



BANGLADESH Rail transportation feasibility study to transport coal from the Phulbari Mine to Khulna. Establishment of the institutional model, evaluation of infrastructure upgrade and rolling stock costs, operating costs, and cost per tonne of transporting coal from a proposed mine, under **private** funding. (05-039)

Technical and management assistance to Bangladesh Railway (BR) in carrying out materials procurement and civil works packages following the 2004 flooding under **Asian Development Bank (ADB)** Emergency Loan and Government of Bangladesh funding. (04-062)

Feasibility study, economic analysis, detailed design and infrastructure and operating cost estimation for the construction of a 95 km long railway line from Dohazari to Cox's Bazar for **Bangladesh Railways (BR)**. (00-068)

Engineering design services to **BR** for converting BR's existing metre gauge line from Joydebpur to Dhaka to a dual gauge (DG) line. (00-008)

Technical assistance for the preparation and issue of domestic and international bids for the rehabilitation of **BR** following the 1988 floods. (98-088)

Development of locomotive maintenance management systems, assistance in the operationalisation of the Central Locomotive Workshop (CLW) which is **BR**'s overhaul workshop, in the overhaul of components and locomotives, in the procurement of spare parts, development of a computer assisted maintenance management system, and assistance in the restructuring of the rolling stock department and the preparation of a development plan for the railway. (96-046 and 99-008)

Design for the component to be integrated into the bridge deck on the Jamuna River Multipurpose Bridge to accommodate **BR**'s rail link, for **Hyundai**. (96-031)

Detailed environmental impact assessment of the Jamuna rail link project for the **Asian Development Bank (ADB)**. (95-026, 95-034, 96-007, 97-012 and 97-030)

Preparation and supervision of a detailed resettlement plan, for the **ADB**. (95-026, 95-034, 96-007, 97-012 and 97-030)

Construction supervision of the Jamuna rail link project, for the **ADB**. (95-026, 95-034, 96-007, 97-012 and 97-030)

Preparation of plans and technical specifications, and tendering services for the Jamuna rail link project, including the telecommunications system, for the **ADB**. (95-026, 95-034, 96-007, 97-012 and 97-030)

Conceptual and detailed design for the construction of the Jamuna rail link project, for the **ADB**. (95-026, 95-034, 96-007, 97-012 and 97-030)

Technical, economic and financial feasibility study for the Jamuna rail link project, including social, environmental and resettlement assessments, for the **ADB**. (94-039)

Monitoring of policy reforms implementation for Bangladesh Railways, for the **ADB**. (94-066)

Organisational reform of Bangladesh Railway (Phase II), for the **ADB**. (94-050)

Technical review for the improvement of the telecommunications system of Bangladesh Railway under **NORAD** funding. (91-024)

Development of tender documents for the leasing out of the excess capacity of **BR**'s optical fibre digital telecommunications network. (91-012.Tel)

Organisational reform of Bangladesh railways, for the **ADB**. (91-012)



BOSNIA-
HERZEGOVINA

Assistance, for the **European Bank for Reconstruction and Development (EBRD)**, to the railway of Bosnia-Herzegovina for the acquisition of computer and communications equipment and accompanying software to enable the design and installation of management information systems. (04-031)



BRAZIL

Review, for the **International Finance corporation (IFC)**, of the investment plan prepared by MRS Logistica S.A. for investment in double tracking, signaling and telecom upgrade, procurement of new locomotives and rehabilitation of existing fleet, procurement of new cars and other miscellaneous network and operations investments. (05-059)

Review, for **Alcoa**, of proposed 50 km alignment between Juruti Port on Amazon and a potential bauxite mine. Review of final alignment, identification of problem areas and their consequences. (05-069)

Technical assessment of the Ferrovia Centro-Atlantico (FCA) railway and evaluation of the adequacy and relevance of the investment plan presented by the railway to the **International Finance Corporation (IFC)**. (98-003)

Technical assessment of the Ferrovia Sul-Atlantico (FSA) railway and evaluation of the adequacy and relevance of the investment plan presented by the railway to the **IFC**. (97-049)



BURKINA FASO Inspection of locomotive parts purchased by the **Canadian International Development Agency (CIDA)** for Burkina-Faso for the rebuilding program of the railway's fleet of GM locomotives. (91-047)



CAMBODIA Assist the **Royal Government of Cambodia (RGC)** with structural reform to inject private sector participation (PSP) in rail operations, to formulate a legal and regulatory support for PSP, and capacity building for RGC regulators to monitor the care and operation of the rail assets. (04-018)

Evaluation of the commercial viability of investing in the rehabilitation of the Royal Railways of Cambodia within a framework of establishing a public-private partnership (PPP), financing by **Asian Development Bank (ADB)**. (03-185)



CAMEROON Railway operations study for an alumina refinery project for **Aluminpro Inc.** (05-049)

Identification and evaluation of Computer Assisted Communications Based Train Dispatching Softwares available on the market and preparation of tender documents for the selection of a Consulting firm to supply and implement the above mentioned software for **CAMRAIL**. (00-012)

Detailed evaluation of CAMRAIL's loan request to **IFC** for the proposed concession agreement for the operations of the RNCFC railway in the Cameroon. (99-003)

On behalf of **CIDA**, locomotive spare parts inspection and quality control as well as procurement follow-up for parts shipped to the Cameroun, Senegal and Mali. (93-052)

Management and financial technical expertise to the **National Railways of Cameroon** for a period of over two years. (91-023)



CHILE Operational audit of **FEPASA (Ferrocarril del Pacifico S.A.)** in order to evaluate its progress and to identify new cost reduction opportunities. (03-163)

Independent evaluation of the operational problems faced by FEPASA in order to formulate recommendations regarding operational changes that could improve operating efficiency and capacity of the railway to meet its obligations towards **IFC** future funding. (00-031)



CHINA Review and strengthening of the technical, economic, financial, environmental, socio-economic and resettlement studies, for the proposed Dali-Lijiang Project in order to bring the project to a level suitable for external financing by the **ADB**. (03-117)

Post-evaluation of the **ADB**-funded Jing-Jiu railway Project. (02-068)

Review and strengthening of the technical, economic, financial, environmental, socio-economic and resettlement studies for the proposed Guizhou-Shuibai line in order to bring the project to a level suitable for financing by the **ADB**. (97-020)

Review and strengthening of the technical, economic, financial, environmental, socio-economic and resettlement studies for the construction of a new railway line between Daxian and Wanxian (the Dawan line) in Sichuan province in order to bring the project to a level suitable for financing by the **ADB**. (94-053)



COLOMBIA Evaluation of solutions to increase a line's capacity. Estimation of infrastructure costs and rolling stock needs. (05-082)



CÔTE D'IVOIRE Technical, economic and financial feasibility study of a new railway line and port installations to link the port of San Pedro to potential mines in the Ivory Coast and Guinea, under **CIDA** financing. (98-071)

Technical assistance to **SITARAIL** to modernise its railway and to reorganise its motive power maintenance department. (00-013)

Assistance to **SITARAIL** to evaluate various technical options that would combine both the railway's needs for telecommunication systems and the optimal use of existing telecom equipment. (97-096)

Preparation and delivery of a training program related to the management of rolling stock for the newly appointed Director of Procurement of **SITARAIL**. (97-074)

Complete overhaul of **SITARAIL**'s fleet of twenty GM locomotives and provision of rolling stock maintenance services. (95-027 and 96-206)



CROATIA Assistance, for the **European Bank for the Reconstruction and Development (EBRD)**, to Croatian Railways (HZ) in the preparation and appraisal of proposed investments in a optic fibre system on corridors X and Vb of the HZ rail network and in the double tracking of the Dugo-Selo-Krizveci section of corridor Vb, including provision of procurement support for the finalisation of tender documents. (03-166)

Technical assistance to **HZ Railways** on technical aspects of locomotive rehabilitation, participation in the preparation of calls for tender, including preparation of technical specifications, tender evaluation and contract monitoring. (99-005)



ECUADOR Technical, economic and financial evaluation, for the **Canadian International Development Agency**, of a new railway line linking Quito to the ports of Guayaquil and Esmeraldas. (02-038)



EL SALVADOR Evaluation of the feasibility of rehabilitating the Salvadorian railway and preparation of an action plan either to re-invest in the railway with the participation of the private sector or to divest from it, for **Comisión Ejecutiva Portuaria Autónoma (CEPA)**. (03-175)



EGYPT Spare parts procurement services, supervision and execution of the rehabilitation and modernisation of locomotives, workshop improvements, followed by one year of fleet maintenance for the **Egypt National Railways (ENR)**. (01-047)

Provision to **ENR** of a site license for CANARAIL's Train Performance/Simulator (TPC) software to optimize the operation of block trains. (94-072)

Development and delivery of a training program to **ENR** staff in the use of the newly acquired Data Fare Portable Ticket Issuer System. (94-007)

Writing of ICL interfacing software for a portable ticketing system and training of personnel, for **ENR**. (92-016)

Design of an automated system for a reservation and ticketing system for the **ENR**. (90-002)



ENGLAND/
FRANCE Supervision of installation of the signalling system put in as part of the Channel Tunnel rail connection between England and France for the **Euro-Tunnel Consortium**. (91-038)



ESTONIA Due diligence of investments proposed by potential private concessionaires to privatize the Estonian Railways, for the **International Finance Corporation** of the World Bank. (01-060)



FRANCE Technical assistance to **Eurorail** for the maintenance of rolling stock for the “Shuttle” rail service between France and England through the Channel Tunnel. (95-013)



GABON Inspection of an EMD GP-11 locomotive bought by **COMILOG** from the national Railway Equipment Company. (05-044)

Inspection of two C30/C36 locomotives for **COMILOG** prior to delivery and final acceptance. (04-067)

In-depth review of the various aspects of **COMILOG**'s rolling stock maintenance operations. (04-045)

Training on the computerized track occupancy control system for the **Société d'exploitation du transgabonais (SETRAG)**. (03-189)

Supervision of the overhaul of a GE traction motor and procurement of spare parts for the **Compagnie des Bois du Gabon**. (97-046)



GEORGIA Evaluation of a proposed investment plan of Silk Road Group's existing operations and proposed rail car investments and overview of the railway system in Georgia. (05-029)



GHANA Railway cost estimated related to the development of an integrated alumina complex project in Ghana for **Alcoa**. (05-018)

Detailed evaluation of the Ghana Railway in order to recommend various actions that would minimise its operating costs and improve transport of minerals, for the **Bauxite Company of Ghana** and the **Manganese Company of Ghana**. (01-005)



GUINEA Bankable feasibility study to analyze the cost and strategy to expand the capacity of the Conakry to Fria rail line from 700,000 tonnes to 1.4 million tonnes per year. (06-020)

Track and signaling technical assistance for the N'Dangara railway line for the **Compagnie des Bauxites de Guinée (CBG)**. (06-014)

Elaboration of the maintenance program for the signalling installations of the mineral line Kamsar-Sangaredi, for the **Compagnie des Bauxites de Guinée (CBG)**. (05-019)

Engineering, operational and technical assistance services provided to Global Alumina. (05-009)

Earthworks technical assistance for the N'Dangara railway line for the **Compagnie des Bauxites de Guinée (CBG)**. (04-077)

Determination of optimal train configurations for the transport of bauxite and alumina between mine sites and the Port of Kamsar, using trains simulations, for **Global Alumina**. (04-061)

Production of a new maintenance of way manual for the CBG .	(04-009)
Detailed engineering for a new 10 km rail line to access the N'Dangara plateau near Sangaredi, for the CBG .	(03-193)
Feasibility study for the construction of a rail line, a loading facility and a marshalling yard at N'Dangara, for the CBG .	(03-151)
Rehabilitation of 531 ore wagons for the CBG .	(03-136)
Design of 2 km of mine haul road, including a crossing of the Pora river and of the railway which connects the Sangaredi mine to the port at Kamsar, for the CBG .	(02-028)
Technical and operational study of new rail lines and related loading facilities from two existing bauxite ore bodies at Silidara and Bidikoum to the existing rail head at Sangaredi, for the CBG .	(01-023)
Verification, for CBG , of the existence of dead zones in radio communications on the railway line between Kamsar and Sangaredi.	(00-041)
Development and delivery of locomotive driver training courses to locomotive drivers from CBG .	(98-045 and 99-017)
Provision of general management training for a senior railway official from a mining railway in Guinea, for the CBG .	(97-087)
Provision of rules training and re-certification to CBG operating personnel.	(96-096.08)
Training of CBG 's employees on rail track rehabilitation, Association of American Railroads (AAR) standards and quality control procedures.	(96-096.7)
Modification of existing operating rules and special instructions for the installation of a computer assisted track occupancy system in Guinea (CAMBS) for the Chemin de fer de Boké, a subsidiary of the Compagnie des Bauxites de Guinée .	(96-096.6)
Elaboration of a three-year action plan including an operating budget as well as a long term investment program for locomotives and ore wagons for the CBG .	(96-096.5)
Locomotive, wagon and heavy track maintenance equipment parts inventory analysis for the CBG .	(96-096.4)
Provision of specifications for various hardware and timber requirements for CBG 's rail bridges and procurement of the timber.	(96-096.3)
Elaboration and delivery of a railway management training course for CBG managers.	(96-096-2)
Inspection of the bridges of the Rio Kabata and the Rio Nunez rivers in order to determine required rehabilitation works, for the CBG .	(96-096.1)
Provision of on-going management and technical support for the maintenance and rehabilitation of locomotives, for the CBG .	(96-095)
Procurement of shunter locomotive for the Chemin de fer de Boké of the CBG .	(96-051)
From 1995 to 2001, complete operation of the Chemin de fer de Boké, the mining railway of the CBG , running between Sangaredi (the mines) and Kamsar (the port), and long-term technical assistance.	(95-048)



INDIA Technical and contract implementation evaluation of additional core subprojects to be part of the Indian Railway Sector Improvement Project (RSIP) to be financed by the **Asian Development Bank (ADB)** and assistance in the preparation of the Second Railway Sector Improvement Project (RSIP2). (04-002)

		<p>Technical evaluation of core subprojects and of the construction contract implementation part of the railway sector improvement project to be financed by the Asian Development Bank. (02-072)</p>
	INDONESIA	<p>Restructuring, for PT. Kereta Api (Persero) of the railway in Java into five business units. (02-081)</p> <p>Technical assistance to the Government of Indonesia (GOI) and PERUMKA in order to develop and prioritize various railway projects in Sumatra and development of Terms of Reference. (97-069)</p> <p>Development of a corporate restructuring plan aimed at converting PERUMKA (the Indonesian railway) into a publicly owned limited liability company (PERSERO). (96-013)</p>
	JAMAICA	<p>Financial and operating viability study of the Jamaica Railway on a privatized basis for Railway Management Services Limited (RMSL), a private group of investors. (95-027)</p>
	JORDAN	<p>Evaluation of the condition of Aqaba Railways Corporation's (ARC) locomotive and wagon fleets, review of maintenance practices and assessment of the adequacy of the ARC's maintenance facilities. (95-025)</p> <p>Assistance to the Government of Jordan in its preparation for the Amman Summit, held in October 1995, under CIDA financing. (95-006)</p> <p>Preparation of a detailed feasibility study for a new rail line to Shediya and preparation of detailed tender documents for its implementation. (92-047)</p>
	KAZAKHSTAN	<p>In-depth review of Kazakhstan's three railways, including institutional, financial, rolling stock and infrastructure reviews, and recommendation of possible privatization and restructuring options. (96-091)</p>
	KENYA	<p>Update of existing MIS strategy of the Kenyan Railways to provide for a new business paradigm focused on commercial operations that are customer-oriented and profit-driven. (96-070)</p>
	MALAYSIA	<p>In association with Ernst & Young, Malaysia, financial, institutional and technical evaluation of the KTMB railway and preparation of the strategic plan for its restructuring and concessioning. (00-066)</p> <p>Technical assistance in implementing a locomotive and electric multiple units (EMU) maintenance program at KTMB railway, for Bombardier. (00-065)</p> <p>Technical, financial and economic feasibility study of constructing and operating the TOK ARON/JUANTAN railway on the East coast of Malaysia. This was followed by the preliminary design of the new rail line. (96-066 and 97-084)</p> <p>Traffic forecasts and participation in the economic viability analysis for the modernization of the railway on the corridor from Padang Besar to Singapore and from Port Klang-Kuala Lumpur-Kuantan to Kuala Teregganu. (94-046)</p>



MALI Technical assistance to the **Régie du Chemin de Fer du Mali (RCFM)**, to evaluate the various technical options that would combine both RCFM's needs for telecommunication systems and the optimal use of existing telecom equipment. Preparation of tender documents for detailed design, supply and installation of equipments, and integration into the main telecommunication artery. (97-039)

Procurement agent on behalf of the **RCFM**. (94-069)

Preventive maintenance and complete overhaul of the **RCFM**'s fourteen GM road locomotives. The achieved availability rate determined CANARAIL's compensation. (94-062)

Evaluation of **RCFM**'s telecommunications system and recommendations to upgrade it. (92-026)

Technical and procurement assistance to **RCFM** for the intermediate rehabilitation of eight GM locomotives. (92-026)



MALAWI Assistance to the **World Food Program (WFP)** with the operational logistics for transporting food by train between the Port of Nacala and Malawi. Solutions that would address emergency repairs and solutions for the implementation of an effective operation were recommended. (02-049)



MAURITANIA Diagnosis of the current railway operation. Elaboration of strategies to enable the doubling of the annual tonnage and of tariffs for the haulage of minerals for the **Société Nationale Industrielle et Minière (SNIM)**. (06-007)

Inspection and qualification of new bogie components manufactured by the Maxion factory in Brazil for the **Société Nationale Industrielle et Minière (SNIM)**. (02-033)

Quality control and inspection of the bogie components purchased by **SNIM** and manufactured in Mexico. (00-002)

Design and delivery of a two module training programme on locomotive and rolling stock maintenance to **SNIM**'s Mechanical and Electrical Engineers. The objective of this training programme was to familiarize **SNIM**'s Engineers whose basic education is not railway oriented, with the general aspects of maintenance and reliability. (99-055)

Detailed design and layouts for the modification of **SNIM**'s car-bodies to increase their capacity up to 34 m³, estimation of related costs and implementation plan. (99-047)

Training of **SNIM** personnel in the use and the maintenance of "end of train" units. (99-033)

Inspection of new freight wheels manufactured in Maxion's plant in Brazil, for **SNIM**. (98-094)

Computerisation of a track geometry car for **SNIM**. (98-057)

Locomotive driver training course for locomotive drivers of **SNIM**. (97-035)

Factory inspection of 275 bogies for mineral cars manufactured in Brazil, for **SNIM**. (96-008)

Provision of expertise needed to solve problems related to vehicle dynamics and excessive wheel wear, to **SNIM**. (95-065)

As part of a study on the causes of derailments, evaluation of the conditions of SNIM's fleet of cars and locomotives, and of its tracks. The competence of **SNIM**'s engineers was also evaluated in order to establish a base for investigation. Seminars on Canadian methods and theories regarding derailment investigations were also given to SNIM engineers. (95-011)



MEXICO Technical supervision and project update of the **International Finance Corporation (IFC)**'s investment in the railroad concession Ferrocarriles Chiapas-Mayab and of the railroad's performance over the first six years of operation. (05-069)

Technical review and verification of compliance of the Ferrocarriles Chiapas Mayab (FCCM) project with specified concession agreement conditions for the **IFC**. (03-181)

Technical assessment of the operating costs and investment plan of a new railway concessionaire in Southern Mexico, in order to evaluate the technical soundness and adequacy of the proposed investment plan for infrastructures and equipment for future **IFC** funding. (99-058)

Assistance to **GEC ALSTHOM/GEO RAILMEX** in reorganizing and re-equipping their wheel, axle and bearing shop and their air brake shop to enable both shops to receive AAR certification. (94-077)



MONGOLIA Preparation of a five-year business plan as groundwork for developing corporate and restructuring options for the **Mongolian Railways (MR)** that would enable MR management to operate the railway as a competitive business enterprise under a corporate structure in a market environment. (94-014)



MOROCCO Evaluation of the optimum axle load for 120 new phosphate wagons to be purchased by the **Office National des Chemins de fer du Maroc (ONCF)**. (00-043)

Under a World Bank funding, advice and assistance to **ONCF** to identify restructuring options for the railway. (00-021)

NORTH & WEST AFRICA Assistance for commissioning and provision of after-sale services for **GM** locomotives in North and West Africa. (94-045)



PERU Independent evaluation of the investment and marketing plans prepared by Ferrocarril Central Andino, S.A. (FCCA) and formulation of recommendations to **International Finance Corporation (IFC)** which is considering to support FCCA in financing 5 years of a 30-year concession. (01-058)

Independent evaluation of the Investment Plan and Marketing Plan prepared by Ferrocarril Transandino, S.A.(FTSA) and recommendations to **IFC** which is considering to support FTSA in financing 5 years of a 30-year concession totalling US \$ 50.5 million. (01-008)



RUSSIA Study aimed at improving railway operations by recommending improvements in freight forwarding procedures, better communications systems and by introducing marketing initiatives centered on the needs of railway customers. Analysis of the needs of the **Russian Railways RDZ**'s freight customers and training of its staff in marketing focused services. (97-113)

Definition of a strategy and implementation plan for marketing structures within **Russian Railways**. (96-088)

Assistance to **Russian Ministry of Transport** in the preparation of an international tender for the supply and installation of a new packet data network. Institutional and financial advisory services and recommendation on institutional and management measures necessary to realize the full benefits of the investment program. (95-008)

Preparation of a commercially-justified program of investment to improve the telecommunications capability of **Russian Railways** for data and voice transmission. (93-026)

Analysis and recommendations for operational and infrastructure improvements for the Moscow - St. Petersburg Corridor for **European Bank for Reconstruction and Development (EBRD)**. (92-013)



SAUDI ARABIA

Procurement of the rolling stock, supervision during manufacturing and their eventual commissioning for the North-South Railway project for **Public Investment Fund - Ministry of Finance**. (05-204)

Evaluation of the replacement of track components and of changes to track alignment in order to increase train speed to 220 km/hr and evaluation of the signalling system for **Saudi Railways Organisation**. (05-062)

For **SCEC-K&A**, feasibility study for the rehabilitation of a railway station's signalling system and for the reconstruction of a workshop. (04-032)

On behalf of the Public Investment Fund, a division of the minister of Transport, carried out a feasibility study and detailed design of a new 2,400 km railway line for transportation of mineral ores to the Arabian Gulf coast and passengers between Riyadh and the Jordanian border in the north. The work comprised detailed design of the track, bridges, earthworks, and intersecting public road modifications and functional specifications for the rolling stock, signalling and telecommunications, all in support of a railway operating plan developed by the consultant. (03-183)

Establishment of a maintenance and line renewal policy to fight sand contamination for **Saudi Railways Organisation (SRO)**. (01-086)

Coordination of work and inspection of turnouts and switch ties for the **Saudi Cement Company**. (01-013)

Inspection of wheels for **SRO**. (02-100)

Inspection of disc brakes for passenger coaches for **SRO**. (02-080)

Inspection during manufacturing in plant and at port of loading, of GM-SDL50 locomotives manufactured in Canada for the **Saudi Railway Organisation**. (97-019)



SENEGAL

Strategic analysis of all projects associated with the modernization of the Senegalese railway network for **Investment Promotion and major Projects Agency**. (04-038)

Preparation and delivery of four (4) training modules to **SEFICS'** staff during the implementation of a locomotive rehabilitation project. (00-007)

Supervision of the overhaul of six traction motors and one D-14 alternator carried out for the **Senegalese Railway (SNCS)** in a sub-contractor's shop in Canada. (97-003)

Technical training in locomotive maintenance to two groups of **SNCS** apprentices. (96-057 and 96-043)

Preventive and day-to-day maintenance of GM road locomotives, procurement of spare parts and follow-up and verification of manufacturing of locomotives in GM's plant in Canada, for **SNCS**. (96-029)

Supervision services for **SNCS** during the purchase of 5 GM locomotives, including contract review and price verification, review of technical specifications and inspection during manufacturing and at part of delivery. (95-046)

Technical assistance to the **Société d'exploitation ferroviaire des industries chimiques du Sénégal (SEFICS)** in repairing and maintaining its locomotives and training of its personnel. (93-055 and 94-065)

In collaboration with the railway's purchasing department, purchasing agent for the **SNCS** for all parts required for Canadian- and German-made GM locomotives. (93-051)

Economic and technical feasibility study of implementing a train radio positioning system for **SNCS**. (93-045)

Management of the preventive maintenance and overhaul program for **SNCS's** nine GM locomotives, management of the procurement of the spare parts required to maintain the locomotive fleet. The achieved availability rate established **CANARAIL's** compensation. (93-032)

Assistance to the **SNCS** Director of Internal Audit and Management Systems in developing the required tools to manage its investment and asset development projects to improve its management control tools and to set up internal audit procedures and prepare the necessary procedures manuals. (92-031)

Rolling stock maintenance assistance to the **SNCS**. (90-008)



SERBIA Assistance to the Serbian Railway (ZTP) for the acquisition of computer and communications equipment and accompanying software to enable the design and installation of management information systems, for the **European Bank for Reconstruction and Development (EBRD)**. (04-008)

SOUTHERN AFRICA Fuel management program including energy conservation for the Southern African Railways of Namibia, Botswana and Zambia. (96-019)



SUDAN Feasibility study upgrading the **Sudan Railways Corporation's (SRC)** signalling and telecommunications systems. (94-031)



TAIWAN Personnel secondment to the **International Railway Engineering Group (IREG)** for the construction of the high speed railway line in Taiwan. (01-076)

Secondment of railway engineers (various disciplines) to the **Taiwan High Speed Rail Corporation (THSRC)**. (01-030)

Design of a necessary dispatching and operational control systems including rules, manuals and procedures to be utilized to operate the **THSRC** Construction Railway in a safe, efficient and productive manner. (00-095)

Technical expertise for project management and track and bridge design for a high speed rail project, for the **Ministry of Transport and Communications of the Democratic Republic of China**. (96-207)

Development of overall transportation, engineering and operations plans for a high speed rail system for the West Taiwan Corridor area. (90-001)



TANZANIA Management, over a two year period, of the **Tanzania Railways Corporation's (TRC)** main and running locomotive workshops. (96-086 and 00-089)

Development of a system for classifying the different rail lines comprising the **TRC**'s network on the basis of service requirements. Recommendation of track geometry standards for each class of track, definition of when maintenance interventions are required and the tolerances to be achieved in doing the work. Incorporation of the preceding considerations into a revised Civil Engineering Manual for the Railway. (95-063)

Evaluation of overall demand, both current and potential, for telecommunications services along the **Tanzania/Zambia Railway (TAZARA)** corridor in Tanzania and establishment of what infrastructure was required to meet this demand. (94-056)

Assistance to **TRC** trainers in planning, implementing, monitoring and assessing training in locomotive maintenance for workshop craftsmen and trainees. (93-024)

Development of an institutional and a business strategy for **TRC** to establish a property management unit in order to have a plan for the commercial use of its land with defined targets. (93-008)

Study of track manning levels for the **TRC**. This project evaluated maintenance needs for different track structures and train densities and recommended minimum gang strengths and optimal work methods for performing the work. (92-035)

Detailed design and tender documents for a new coach and wagon workshop for the **TRC**. (92-034)

Development of a master plan to meet the telecommunications needs of the **TRC** over the next 10 to 15 years. (92-003)



THAILAND Provision of services of a tunneling expert for the Mae Klong Line Feasibility Study. (01-084)

Assistance to the **Government of Thailand** in the development of a policy framework and the preparation of a detailed regulatory regime (including the design of a new independent regulatory body) to facilitate the establishment of a new relationship between the railway industry and the Government. (01-041)

Feasibility study which investigated the technical, legal, economic, social and environmental aspects of establishing a maintenance contract company designed to maintain rolling stock for both the private sector and the **State of Railway of Thailand**. (99-073)



TUNISIA Supervision of the rehabilitation of six traction motors carried out in a sub-contractor's shop in Canada, for the **Société Nationale des Chemins de Fer Tunisiens (SNCFT)**. (98-036)

Technical assistance, including construction supervision and design review, for the rehabilitation of 31 metal bridges on the Tunis-Sousse-Sfax-Gabès rail line, for the **SNCFT**. (97-002)

Supervision of the rehabilitation of four traction motors and provision of technical training for three groups of railway employees in traction motor maintenance in a Canadian workshops, for the **SNCFT**. (96-023)

Supply, adaptation and installation of a computer assisted maintenance management system for the **SNCFT**. (96-020)



UGANDA Advisor to the Government of Uganda for the privatization of the **Uganda Railways Corporation (World Bank funding)**. This 5 year contract includes due diligence investigations, development of changes to the regulatory and legislative regime, determination of structure of the new concession, assistance in preparing the bidding process and with the selection of the new concessionaire, and post-transaction monitoring (establishment of monitoring performance targets). (00-059)



UNITED STATES Profile data gathering or estimation and running of a TPC; estimation of fuel and rolling stock leasing costs. Engineering audit of the railway portion of the proposed project, for **Vanness Company**. (05-047)

Development of the routing and infrastructure costs for a high speed rail service linking Miami, Orlando and Tampa, for the **State of Florida**. (95-219)

Project management and contract management services to a consortium of companies developing a TGV-type high speed rail project in Texas. (91-203)



URUGUAY Economic and financial evaluation of the restructuring and the rehabilitation of the Uruguyan Railway, and development of a proposed concession/business model to do so for the **Government of Uruguay**. (02-020)



UZBEKISTAN Preparation of terms of reference and selection of a company capable of re-evaluating UTY'S assets according to International Accounting Standards, for the **Uzbekistan Temir Yollari (UTY)**. (05-015)

Assistance with implementation of railway restructuring, including preparation of an overall business plan, due diligence of five departments to be divested, review and implementation of international accounting standards and rationalisation of procurement and other business practices for the **Uzbekistan Railway (Uzbekistan Temir Yollari - UTY)**. (02-046)

Assistance to UTY with the procurement and technical aspects of locomotive re-powering and foundry workshops modernization. (01-079)



VENEZUELA Advice to the **Instituto Autonomo de Ferrocarriles del Estado (IAFE)** for the privatization of the freight service supplied by IAFE between Barquisimeto and Puerto Cabello. (02-022)

Technical assistance for the appraisal of locomotive maintenance policies and maintenance facilities of the **FERROCAR** railway. (01-014)



VIETNAM Technical assistance for the Hanoi - Ho Chi Minh City Railway Bridge Rehabilitation Project. (02-002)



YUGOSLAVIA Assistance to the **World Bank** Transport Sector Representative with the assessment of priority public expenditures and reforms to revitalize the Serbian and Montenegro Railways. Evaluation of the condition of the two railways, identification of priority investment and preparation of a 5 Year Investment Plan. (01-006)



ZAMBIA Training in locomotive maintenance as part of a locomotive rehabilitation project, for the **Zambian Railway**. (00-009)

Study of the potential for increased traffic on the Mulobezi branch line of the **Zambian Railways** and provision of an overview of the cost of upgrading the line's infrastructure. (91-011)
