

Reshaping Argentina's Railways

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1. Background

In early 1989, the Argentine economy was experiencing hyperinflation and virtual fiscal collapse. In August 1989 after the change of Government, the Argentine Congress passed the State Reform and Public Enterprises Restructuring Law. The law's aim was to reduce the deficit and revitalize the economy by encouraging private sector operation of major state-owned enterprises. For railways, the largest state enterprise contributing to the deficit, private participation was to be implemented through concessions.

When President Menem took office in July of 1989, Ferrocarriles Argentinos (FA), the state-owned railroad, operated roughly 35,000 kilometers with 92,000 employees, and was losing about US\$600 million annually. The history of the railways' decline and growing dependence on the Treasury is not unique to Argentina. The reasons are not difficult to identify, including a production, rather than customer-oriented culture, competition from other modes (especially roads), as well as weak management and inadequate investments. These facts were reflected in the falling traffic of the three distinct "businesses" operated by

FA (freight, intercity passenger, and the Buenos Aires City commuter passenger services).

Other symptoms were rolling stock (unreliable locomotives, and half out of service), bad track (55% of the track in less than acceptable condition), and a high rate (30% to 50%) of fare evasion in the Buenos Aires commuter services.

The inevitable result was a chronic financial disaster (US\$2 million losses daily), combined with increasing unreliability and unsafe conditions. There was no further hope for a company that was mainly a provider of surplus employment and uneconomic services, subject to political pressures, and strongly influenced by workers' unions, suppliers and local authorities.

2. Strategy for Change

There were two options: let the situation continue until FA collapsed, or do something drastic. Collapse would have transferred rail traffic to roads, with higher tariffs and an adverse effect on exports, particularly grains. This impact would have been aggravated when maintenance of important sectors of the national road network was contracted out, since this would have led to highway tolls and vehicle weight and size restrictions which would have increased road charges and, paradoxically, improved the competitive position of rail transport.

The Argentine suburban passenger system is among the larger systems in the world, generating more traffic than New York City and in the same league as London and Paris. Discontinuing passenger services in the Buenos Aires area would have meant road congestion and loss of the only available mode of transport for thousands of people. In addition, if railway services had

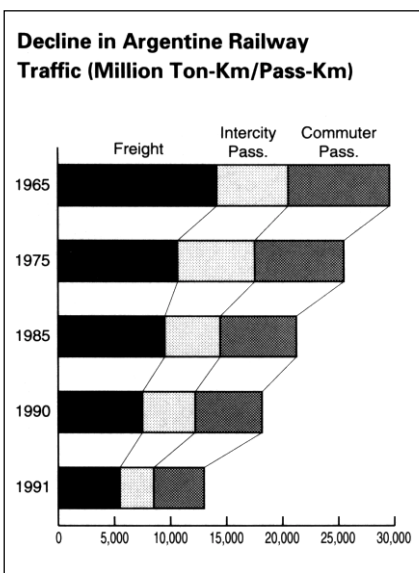
stopped, it would have been very difficult to resist the consequent political pressure to restore them, or to expect any cooperation from union leaders. Action was imperative.

Framework for change

The comprehensive strategy was rooted in several principles: (1) The Government could no longer fund the huge deficit; (2) FA was unsalvageable as an enterprise; (3) At least some rail freight transport was viable; (4) The commuter services in the Buenos Aires Metropolitan Area, although unprofitable, were so important that they had to be continued; and, (5) Existing rail staff levels were far too large, but reducing staffing without a social and political consensus would have created serious problem.

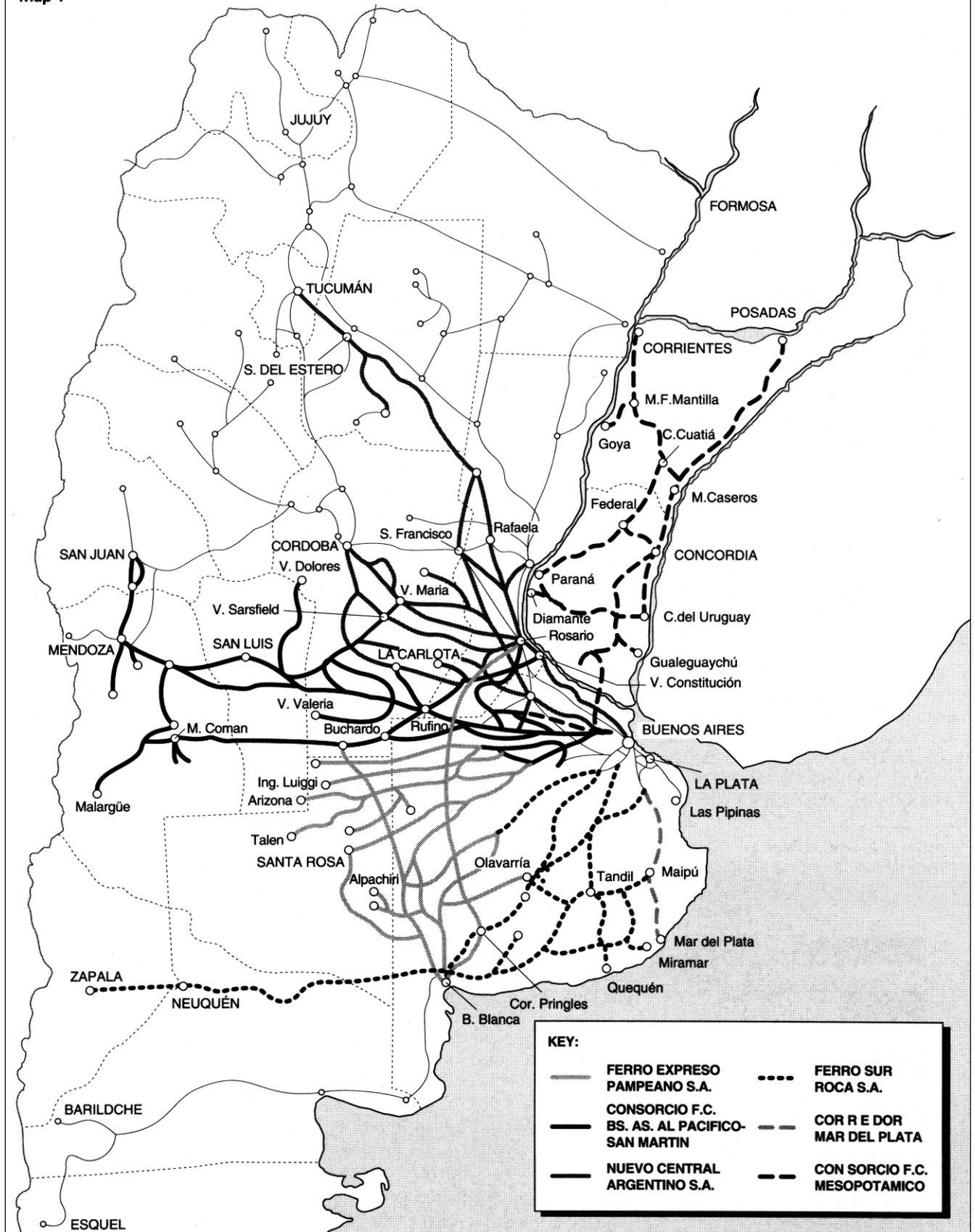
Initial strategy

By mid-1990, an integrated restructuring program was agreed with the World Bank (IBRD). The initial program included several key elements: (1) Concession of four freight networks, representing 60% of the total network; (2) Grouping of all commuter services into a separate unit and establishment of a new state-owned commuter passenger enterprise; (3) Rationalization of intercity passenger services following a detailed cost analysis in which commercial and essential services would be identified; (4) Establishment of a new railway regulatory agency, or agencies; (5) Creation of a Buenos Aires Metropolitan Transport Authority with participation from the Federal Government, the Province of Buenos Aires and the City of Buenos Aires; (6) Revision of operating practices and rules and design of a labor strategy to improve productivity and reduce redundant staff; and, (7) Disposal of excess assets, and creation of a railway real estate devel-



Note: This article is based on the personal opinions of the authors, and does not necessarily reflect policies or positions of the World Bank or the Government of Argentina.

Map 1



opment unit. Some of these elements became the conditions of an IBRD loan of US\$300 million that the government has used to fund labor severance payments.

Objective of reform

The concession process had four primary objectives:

1. To reduce the railway's financial burden on the national budget by elimination subsidy to freight services and the one viable intercity passenger corridor, and to focus any remaining subsidy on those intercity passenger lines that could be justified on social grounds and on commuter lines and, in addition, to refocus the subsidy to metropolitan passenger services from operations to capital improvements;
2. To improve service to shippers and passengers
3. To rebuild railway facilities by rehabilitating and renewing plant and equipment as necessary, and
4. To develop a cadre of Argentine private-sector railway managers.

3. Concessioning

Freight lines

Despite years of decline, parts of the rail freight business were viable given a radical transformation of existing railway culture and practices. Private, long-term concessions (30 years, plus an optional 10-year term) were adopted as the best approach. However, it was both politically and economically difficult to concession the entire FA network in a single piece because: (1) The financial resources required of the bidder would be considerably greater than if the system were divided into smaller networks; (2) It would be much more difficult to change working rules and operating condition on a national basis; and, (3) Competition between networks might help promote efficiency (and the first network could become a leading model for later concessions).

The state-owned railway corporation was created in the late 1940s after the nationalization and merger of more than 15 private railways into six relatively-independent railway companies with track networks ranging between 2,700 and 10,700 km, and traffic vary-

ing between 1.0 and 3.6 million tons annually. There was a 1-meter gauge, one standard gauge (1435mm), and four broad gauge (1676 mm) networks. After some study, the prior networks were mostly used as the basis for the design of the new concessions. FA remained temporarily remained (until 10 March 1993) in operation only to operate some intercity passenger services pending transfer to the provinces. After that date, the FA shell served only as a long-term repository for intercity and freight railway assets, which were to continue to be owned by the State and concessioned to the private sector for operation.

The government-designated six rail freight packages (see Map 1) include:

1. The Bahía Blanca-Rosario corridor, linking the major grain export ports of Bahía Blanca and Rosario, and the lines and branch lines of the area (5,300 km; broad gauge, formed by portions of the Roca and Sarmiento lines; 2 million tons; minor intercity passenger services);
2. The Urquiza line (2,700 km; standard gauge; 1.2 million tons; 1.7 million intercity passengers in 1990, when bidding documents were drawn up);
3. The Mitre line (4,800 km; broad gauge; 2.5 million tons; 3.0 million intercity passengers);
4. The San Martín line and the remaining portion of the Sarmiento line (4,700 km; broad gauge; 3.4 million tons; 1.3 million intercity passengers);
5. The remainder of the Roca system (3,300 km; broad gauge; 1.3 million tons; 1.8 million passengers), comprising the Roca lines not included in the Bahía Blanca-Rosario package, serving the area south of Buenos Aires and carrying cement, grain, chemical products, salt, and stone;
6. The Belgrano line (6,400 km; meter gauge; 1.5 million tons; 450,000 passengers) serving the north and central parts of Argentina and carrying international traffic to Bolivia and Chile, as well as grain, soybean by-products, sugar, and containers.

The remaining 8,000 km of the cargo system — including approximately 5,000 km of meter gauge, 500 km of

standard gauge, and 2,500 km of broad gauge track — do not appear to be economically viable, nor do they have traffic of national significance. They have been offered to provincial governments in case they have local significance. Those not accepted by the provinces will be abandoned.

As previous figures show, freight traffic on most Argentine railway lines is very light (an average of 400,000 ton-km per track-km compared, for example, with the USA where the average is over 5 million). Improved and more reliable operations will increase traffic levels, but the amount of traffic likely to be captured back from highways by the rail system is uncertain, a risk that concessionaires must take. Without an increase in traffic, traffic density is so low that operating expenses will have to be kept to an absolute minimum.

The concessions had the following characteristics: (1) All cargo operations were to be performed by private-sector concessionaires for specific networks - concessionaires would pay the government a fee ("toll" or "Canon"); (2) The concession would be for 30 years (plus an optional 10-year extension) and included freight-train marketing, operations, rolling-stock maintenance and rehabilitation, and track maintenance and rehabilitation. The concessionaire would have exclusive rights to its track, unless it gave operating consent to others; (3) Although freight and intercity passenger services were initially combined, the government subsequently divided freight from intercity passenger services because the obligation to provide passenger services reduced the expected financial performance of the freight franchise. The ensuing freight franchises required only that the freight operator allow intercity passenger operations by FA, the provinces, or a third party concessionaire, in return for payment of a compensatory track rights fee ("peaje"). The proposed level of that toll was among the items considered for awarding cargo franchise bids; (4) Concessionaires were to hire only FA employees at the outset, but only those required by the working practices and operational needs which the concessionaire negotiated directly with the unions, with the Government not being

Table 1 Results of Freight Concession Bidding (as of March 1994)

Line	"Canon" (First 15 Years) (US\$ Millions)	Investment Proposed (US\$ Millions)	Length (km)	Traffic Projection in Year 5 of concession (million tons)	Personnel
FEPSA	36.0	218	5,163	5.5	1,012
NCA	49.1	411	4,520	3.2	2,260
Ferrosur	15.0	166	4,791	1.7	1,370
BAP	71.0	344	5,493	2.3	2,260
Mesopotamico	2.2	58	2,751	1.0	1,336
Total	173.3	1,197	22,718	13.7	8,238

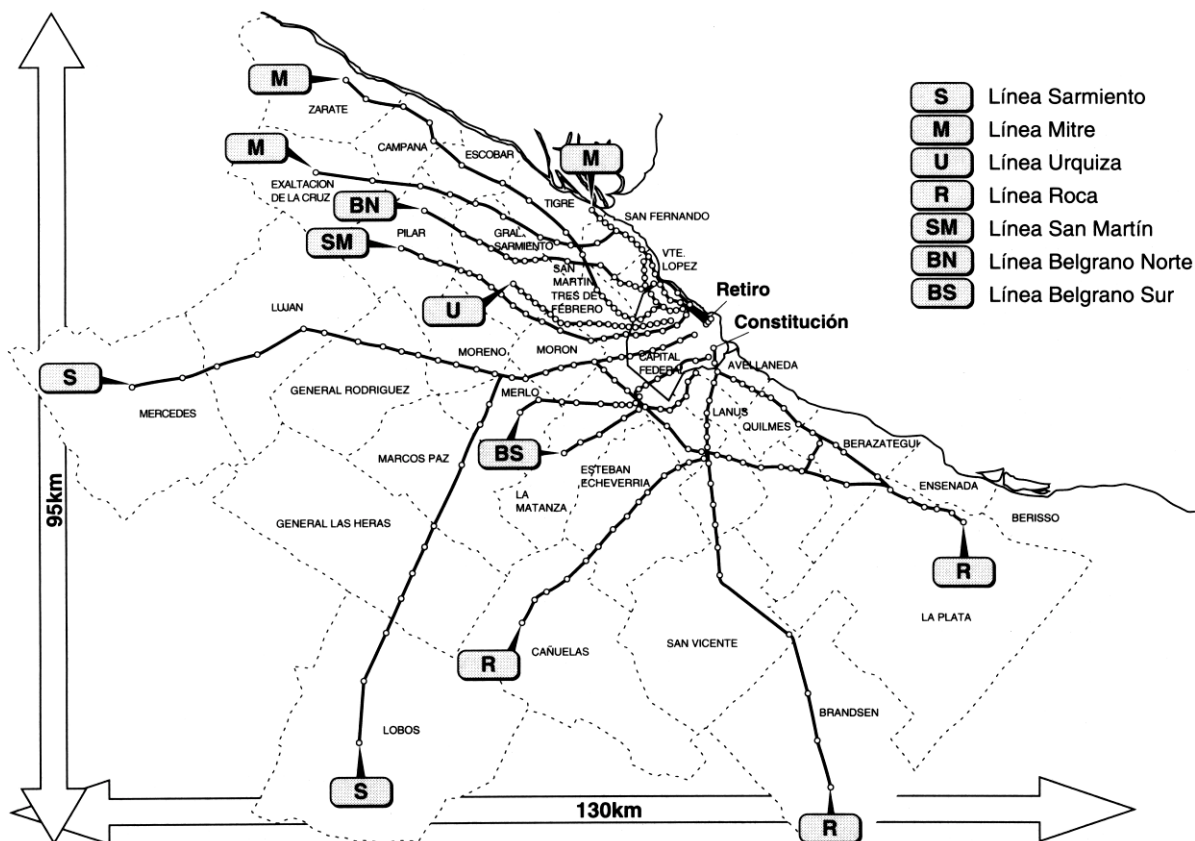
involved except for safety reasons. Personnel not hired by concessionaires would receive severance payment from FA. In practice, the ratio between prior FA staffing levels and concessionaire hiring has been around 4 to 1; (5) Although rail freight rates were effectively deregulated, present legislation requires that every railway operator file its maximum rates by commodity with the Secretary of Transportation.

Progress to date (Table 1)

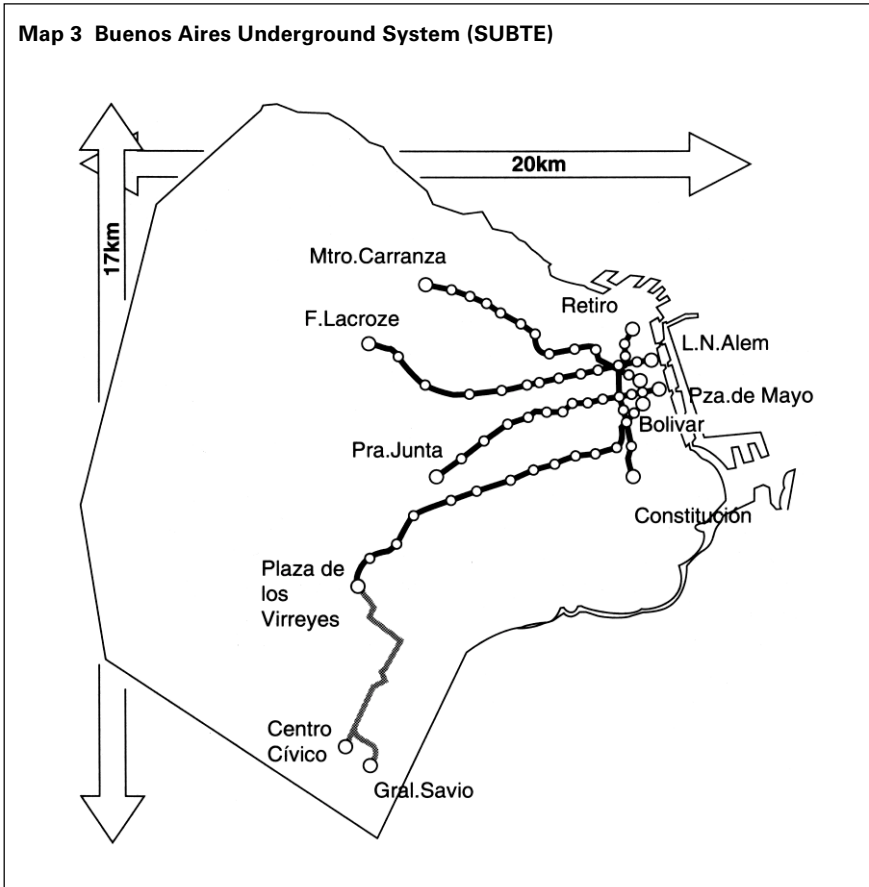
So far, the following steps have been accomplished:

1. The Bahía Blanca-Rosario concession (two bidders) started operations on 1 November 1991. The consortium (FEPSA) was led by a major Argentine construction and industrial holding company (Techint) which chose Iowa Interstate Railroad, from the USA, as its operating partner;
2. The old Urquiza line concession (now called Ferrocarril Mesopotamico Gral. Urquiza) was awarded to the sole bidder, a major Argentine metallurgical company, which chose the Railroad Development Corp. (supported by Conrail) from the USA as its operating partners. Operations started in October, 1993;
3. The Mitre line concession (Nuevo Central Argentino — NCA) had two

Map 2 Buenos Aires Metropolitan Commuter Services



Map 3 Buenos Aires Underground System (SUBTE)



bidders, and was awarded to a group led by an Argentine grain and vegetable oil shipper, the major shipper on the line. Montana Rail Link/Anacostia & Pacific/RBC, from the USA, is the railway operator for the consortium. Operations started in December, 1992;

4. The concession (two bidders) for the San Martín line (now called the Buenos Aires al Pacífico — BAP) was awarded to the same group that won the Urquiza line. Operations started in August, 1993;
5. The former Roca system was awarded to the sole bidder (Ferrosur Roca), a group led by the largest cement producer in Argentina, and main shipper of the line. Its operator is CANAC (the consulting arm of the Canadian National Railway), and operations started in March, 1993;
6. No bids were submitted for the Belgrano line. In October 1993, the Government created a new state-owned corporation to continue operations and transfer the line to the private sector after improving the

system, and making it more attractive.

Freight concession bids followed a two-envelope system. Envelope 1 contained technical and financial qualification documents. Envelope 2 included: the present value of investments proposed by the bidder for improvements to railway equipment, facilities, and right-of-way, during the first 15 franchise years; the bidder's business plan and a description of its previous railway operating experience; the present value of additional investments to be made by the bidder during the first 15 franchise years in non-railway property, such as intermodal facilities, storage silos and port facilities; the present value of the "canon", or franchise fee, that would be paid to the government for the exclusive freight use of the right-of-way and certain equipment and facilities; the level of "toll" or payment that the cargo franchisee would require for the operation of intercity passenger services on its lines; the number of current FA employees to be hired; and, the interest

held in the group by Argentine firms.

The point system used for freight franchises changed very slightly from the first concession to the later ones; for the later ones it was:

- 30 points for the basic investment plan
- 5 points for additional investments promised
- 25 points for the organizational plan
- 8 points for the maintenance plan
- 12 points for the "canon"
- 5 points for level of payments required for passenger operations
- 15 points for the number of former FA personnel to be hired.

The formula placed the greatest emphasis on investment followed by the quality of the proposed operational and investment plans. Points awarded on the basis of employment of FA personnel clearly reflect a political compromise, as well as the fact that the money for severance payments to surplus employees was limited. In addition, although the training or development of a management cadre was not explicitly recognized, it was considered as part of the business plan evaluation. Table 1 shows the final results of the bidding process.

Intercity Passenger Services

A detailed train-by-train cost study was undertaken at the end of 1991. Its purpose was to distinguish between commercially-viable services (covering avoidable costs), commercially non-viable services, and essential services (non viable but serving communities with no alternative form of public transport).

The study found only one service, Buenos Aires-Mar del Plata (formerly part of the Roca system), that had the potential to be financially viable. The Buenos Aires-Mar del Plata line, which links Buenos Aires with its most important beach resort, is 400-km long and carries 1.8 million passengers per year



■ Retiro Station in Buenos Aires Courtesy: D.Okubo

(nearly 20% of FA's total 1991 passenger-km since most passengers ride the full distance). It is the most heavily-travelled passenger line on the network and carries a significant number of passengers willing to pay premium fares. This service was offered using a bidding process similar to that developed for freight franchises, and four bidders submitted offers in May 1992.

On May 20, 1992, the government announced that all services other than Buenos Aires - Mar del Plata would be discontinued on 1 January 1993, unless provincial authorities funded the losses of services they selected to continue. Local governments had to state their interest and start funding half of the losses commencing 1 August 1992. Other services were to be closed on 1 September. Provinces wanting to continue railway operations would have the service transferred for their own direct operation or for operations to be performed by private concessionaires they selected.

Although the initial provincial reaction was cool, a few provinces eventually tried to continue services, but most could not afford the required subsidy. After postponing the deadline from 1 August to 10 March 1993, to allow more time, nearly 70% of the services were discontinued. The remaining services were transferred to the four provinces that required them, including the Buenos Aires - Mar del Plata line after suspension of its bidding process. These provinces have announced plans to concession their services in the near future.

Buenos Aires Metropolitan commuter services

The government started from the principle that, unlike the previously-fragmented FA operations, only an integrated oversight agency could properly control the intense, peak, short distance railway services around Buenos Aires. Step one in the restructuring was the establishment, in December 1989, of the Suburban Railways Administration, initially as part of FA. Step two was more ambitious; in March 1991, Ferrocarriles Metropolitanos S.A. (FEMESA), was separated from FA and established as a new and independent state-owned corporation. This was un-

derstood at the time to be an intermediate stage towards an even more ambitious goal — private-sector operation of suburban services under concessions.

FEMESA oversees a network which includes 899 km of lines, 267 stations, and 1800 trains carrying over one million passengers each business day. The Government divided the FEMESA lines into seven packages, to be offered as franchises together with the underground system (SUBTE), whose 44 km of lines serving 76 stations and moving 140 million passengers per year were previously operated by a corporation owned by the Municipality of Buenos Aires (see Map 2 and Map 3).

FA's financial losses on commuter services were never accurately calculated because joint and common costs were shared with other FA railway services, but rough estimates showed a suburban deficit of about US\$150 to 250 million per year. Unfortunately, the day-to-day operating deficit was so large that nothing was left for equipment, plant, and facilities rehabilitation, resulting in service deterioration.

Within the framework of the FEMESA and SUBTE concessions, the government will continue to own the right-of-way, equipment, stations, and facilities. All property not required for service operation, including the large downtown terminals, will be sold or franchised separately to real-estate developers. Government revenues from that development will be used to support metropolitan service subsidies.

Concessions are being awarded through an international competitive

bidding process for a period of 10 years (20 years for SUBTE), which may be indefinitely extended for additional 10-year terms. Unlike freight and intercity passenger franchises, metropolitan railway concessions require public financial support, so the concession looks to minimum government outlay, not maximum income.

Bidding documents defined the minimum service (coaches per hour, frequency, travel time, punctuality) and the specific capital program required. Also, maximum fares for standard service and fare increases as a premium for performance were established. Concessionaires will be responsible for the commercial and technical development of lines, including fare collection, and must execute at least the capital investment program identified by the government. Among bidders found to have acceptable credentials and plans, the bidder requiring the lowest subsidy in present value terms for the first 10 years was awarded the franchise.

A three-envelope bidding process was used. Envelope 1, common to all packages, contained information concerning bidder identity and qualifications, with emphasis on the railway or technical operator's experience in conducting metropolitan railway operations. In Envelope 2A, specific to each line, bidders provided a detailed business and operating plan for the franchise; last, in Envelope 2B, also specific to each line, bidders submitted a financial proposal for the franchise, including their subsidy requirement.

After an initial Envelope 1, the government asked all groups for addi-

Table 2 Results of Suburban/Metropolitan Concession Bidding

Line	Payment Required (US\$ Millions)	Investment Proposed (US\$ Millions)	Length (km)	Projection in Year 5 Traffic (000,000 pass.)	Personnel
Mitre	84.1	221.2	182.1	63.9	1,660
Sarmiento	(177.9)*	193.2	166.6	106.1	1,528
Roca	(70.0)	136.0	252.4	150.5	2,062
San Martin	(44.7)	62.7	55.4	63.7	867
Belgrano South	166.1	43.8	58.4	19.1	788
Belgrano North	196.7	58.7	51.9	28.2	830
Urquiza	101.7	37.8	25.6	26.0	697
SUBTE	(438.4)	399.2	44.1	171.0	2,129
Total	(182.4)	1,152.6	836.5	628.5	10,561

* Indicates that the bidder expects an operating surplus of this amount over the period of the concession.

tional information as part of an "Improved Envelope 1". This information, together with Envelope 2, was submitted on 5 June 1992, for the Sarmiento, Mitre and SUBTE/Urquiza packages. The proposal for the Roca and San Martin lines was submitted on 14 August, and, for the Belgrano North and Belgrano South lines, on 5 September 1992.

The benefit of awarding solely on the basis of the lowest bid, as the government is doing for the metropolitan lines, is that the award process is direct and transparent. Any bidder completing the Envelope 1 and 2A process was fully acceptable, and the government was free to select the lowest bidder. All seven packages were awarded at the end of 1992, and contract discussions then got well under way. Negotiations with one of the groups have been completed, and the subway and one commuter line operations were transferred in January 1994. San Martin and Belgrano North were transferred on 1 April and Belgrano South on 1 May. Table 2 shows the outcome of the bidding process.

4. Conclusion

By mid-1994, there will be at least 10 private railway operations. At the beginning of this process, FA was losing over US\$600 million per year, with metropolitan, intercity passenger, and cargo services being liable for about 35%, 25%, and 40% of that amount, respectively. As a result of concessioning, government outlays will fall below US\$150 million annually.

What has been learned from the experience so far? There are a number of conclusions:

1. Under reasonable circumstances, concessioning works. Acknowledging that this has been a pioneering effort and much had to be learned, expectations are good, though still cautious. The response of domestic and foreign private companies demonstrates that the private sector agrees that there is an opportunity to be exploited, although the risks of the traffic projections and financial projections are only now emerging. Government risks, such as failure of concessions, and service deteriora-

tion or discontinuance, are also recognized. This said, there are few who would turn back the clock although the transition has not been troublefree;

2. Concessioning is inherently complex and can never be perfect. It is possible to construct evaluation formulae wherein a series of diverse, even conflicting factors are included, but the price for doing so is delay, along with results that are hard for government to evaluate and for bidders to understand. Formulae depending more heavily on a pre-qualification process followed by a single financial outcome can potentially be faster and more defensible. The choice depends on circumstances.
3. Advance preparation goes a long way toward determining the outcome. Bids can never be better than the quality of the request for proposals. Further, as was demonstrated in Argentina (and elsewhere, as in the Conrail restructuring in the USA), planning and evaluation formulae that reward optimism on the part of bidders will elicit just that. Railway concessions are always difficult to value correctly. Unclear or conflicting criteria encourage unrealistic requirements and engender miscalculations on the part of bidders. If the successful bids are too unrealistic, there may well be a second round of privatisation. These processes are not necessarily one-shot operations. Not all private-sector ventures succeed, even under the best of circum-

stances.

4. Those managing concessioning must balance a desire to explore every aspect of the process and construct elaborate bidding mechanisms, with the need to maintain momentum and avoid discouraging bidders. Another high price of delay is the damage done by indifferent management and employees in the interim after the changes have been announced but before the transfer has taken place. In some cases, winning bidders are confronted with properties and patronage less valuable than they had bid for because of this delay;
5. Railway privatisation requires patient education and consensus building among the various stakeholders (managers, employees, users, political leaders). This process took several years in Argentina and, in fact, may actually be rooted in planning and analysis that began years before. It has taken at least as long elsewhere.

By far the most important factor in the success of the process so far, is the political will and clearly-expressed goals of the government. As is true throughout the government's privatisation program, the political and economic stakes are high; it has been absolutely crucial that the government be willing to retain its commitment through the hard as well as the popular steps to be taken. Countries undertaking a similar process must have the same continuity of effort. ■



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Mr Jorge H. Kogan was born in Buenos Aires in 1946. After graduating with an MSc. from the University of London, he joined the Federal Ministry of Transport for 7 years as Director for National Transport Planning. He also served as Chairman of the Prices and Tariff Committee of the Ministry of Public Works and Services. He was Director of Aerolineas Argentinas for 5 years before becoming President of Dytecna, a consulting firm to the Government of Argentina managing the Railway Restructuring Unit. His responsibilities include developing the general strategy for restructuring the Argentine railways, rationalizing railway operations, and privatising the metropolitan railway and subways of Buenos Aires.



Louis S. Thompson

Mr Louis S. Thompson was born in 1941 in Florida. After graduating with an MBA from Harvard University, he worked as a consultant engineer and economist in Cambridge, MA, and Washington DC. He has also worked for a number of years at various posts within the US Department of Transportation. He has been Railway Adviser to the World Bank since 1986 where his responsibilities include consultation about all the Bank's railway lending activities and developing reports and policy positions. He has published articles on railways statistics and restructuring and is researching energy use in transport.