Case Study
Virgin Trains

This case study describes how a successful private railway operating company doubled passenger numbers over a period of 12 years, partly through sound commercial management. Second, it describes the experience and lessons learned from franchising in an uncertain environment created by a major infrastructure investment by a separate railway infrastructure company.

1 Rail Franchising in Britain

After nearly 40 years in the public sector as British Rail (BR), the British railway industry was completely transformed over the period 1994-1997, with the separation of infrastructure from operations, franchising of passenger services, and selling off freight operations.[390] BR's passenger rolling stock was divided into three rolling stock leasing companies (ROSCOs), which were sold in 1996. Since then, the ROSCOs have also leased most new locomotives, coaches, and multiple units to passenger train operating companies.

Since privatization, passenger rail services in Britain have been operated by private sector companies mostly through franchises. Open access operators also serve some lines on a purely commercial basis. The right to run passenger train services rights were franchised to 25 (now 20) train operating companies (TOCs), creating 'competition for the market'. To make frequent franchising competitions possible, the TOCs were privatized with no significant asset base; they buy access to infrastructure services from Network Rail under terms approved by the independent Office of Rail Regulation. Franchises were let for 7-15 years; the longer franchises were awarded in return for commitments to invest.

1.1 Virgin Rail Franchises

British bus operators won most of the franchises, in part due to their expertise in cost cutting, gained during the 1980s when they were privatized. Two franchises, West Coast and Cross Country, were awarded to the Virgin Rail Group, a private limited company that is a subsidiary of Virgin Management, another private limited company controlled by Richard Branson, who established Virgin Atlantic airlines. Virgin's successful bid for the rail franchises was in part due to its aggressive timetable for replacing the aging fleet.

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[390] More details on the railway reform in Britain can be found in "Reforming Railways—Learning from Experience" (http://www.cer.be/publications/books/2099-new-reforming-railways-learning-from-experience) and "Privatizing British Railways: Are There Lessons for the World Bank and Its Borrowers?" (http://siteresources.worldbank.org/INTTRANSPORT/214578-1099319223335/20273748/Final%20Version%20for%20Publication.pdf)

Both Virgin franchises were for long-distance intercity services that could benefit from Virgin's expertise in marketing and customer service. The 15-year franchises began in 1997 and are scheduled for termination in 2012. They were let for 15 years[391] because they were expected to involve major investments,[392] which require an extended pay-back period,[393] and create major disruption to infrastructure. The Cross Country agreement was terminated early, in 2007, under Government's re-mapping of franchise services, but West Coast remains with Virgin until 2012.

Under franchising, the regulatory relationships between Government and private operators such as Virgin were formalized through contractual provisions specified in franchise agreements and related documents. Box 1 summarizes key elements of the West Coast Franchise Agreement.

Box 1 Virgin West Coast Franchise Agreement

National Rail Franchise Terms (300 pages):

- defines the required contents of all franchise agreements (FAs)
- sets out what each FA must address
- deals with interpretation and definitions
- treated as part of FA

Franchise Agreement (90 pages):

- specific to each franchise
- defines some output measures, e.g., train performance, customer satisfaction
- deals with inputs, e.g., train fleet, key contracts, assets
- defines processes, e.g., timetable change, closures
- sets out fare regulations
- specifies total subsidy, to be received by operator or premium paid by operator for the right to run a set of services

Service Level Commitment:

- specifies routes and minimum services (can be exceeded if not detrimental to other users) including frequencies, stops, earliest/latest trains, and maximum journey times
- changes in response to investment (now on 4th since 2007 but, for other franchises, changes less often)

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391 The Government decided in 2010 to increase franchise lengths to 15-22.5 years again to increase investment. See http://www.dft.gov.uk/consultations/closed/2010-28/govresponse.pdf

392 Bidders were asked to bid with and without the investments.

393 Although franchisees leased rolling stock from ROSCOs, this was not a requirement; the possibility existed for TOCs to buy rolling stock themselves.

Franchisees generally bear most revenue risk[394] and all cost risks, except for changes in track access charges, which trigger an equivalent change in subsidy or premium payments.

2 Ownership, Governance and Organization

Virgin Rail Group is owned jointly by Virgin Management (51 percent) and Stagecoach Group plc (49 percent), which bought this share in 1998. Both owners are represented on the Board of Directors of Virgin Trains and each has a Joint Chairman. Its brand name is Virgin Trains.

Virgin Rail is headed by a CEO. Other management posts are a COO, an Executive Director, Commercial, and Directors for Business Support, Communications, Human Resources and Finance. Despite running far more services, West Coast Trains has only 3,000 staff, compared to 4,000 before privatization.

Virgin Trains' vision is: *'To become the most safe, consistent, reliable and profitable of the train operating franchises in a climate that respects different views and people need not be afraid to be open and honest'.*

Virgin differentiates itself from its competitors in its corporate organization and staff management. Its decentralized regional structure empowers local staff to suggest and implement changes and their proximity to customers helps them understand customer needs.

Front line staff are recruited for their interpersonal skills and are encouraged to interact with customers. More than 20 staff on the Human Resources team deal with recruitment, training, and career development. Virgin established a training academy to enhance staff skills; workshop themes include how to give and receive constructive feedback; ceremonies acknowledge outstanding employee performance; and indicators of staff morale such as sick leave and staff turnover, are closely monitored.

3 Fares and Ticketing

The Department for Transport regulates some Virgin ticket fares, which is common among franchises, for example, cheap returns not purchased in advance, and commuter seasons' tickets. To allow for inflation, increases are linked to retail price index changes. For other ticket types, Virgin operates an airline-style yield management system—computer software is programmed to set fares that maximize revenue. The system uses pricing to balance train use between peak travel times, when trains can be full and passengers may have to stand, and slack periods. Internet marketing shows passengers a range of ticket price options and times for journeys.

This system has resulted in much greater fares differentiation. The highest fares, which have increased dramatically, especially in First Class, are purchased on the day of travel. But, the lowest fares, available only through advanced booking, are

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[394] Initially the franchises bore all revenue risk but the revenue is now shared with government when it differs significantly from amounts assumed at franchise award.

fraction of the highest fares. In addition to national discounts for special categories such as youth, elderly, disabled, and military, Virgin competes with cars by offering discounted fares for families and groups. Virgin launched a travel club for First Class ticket holders and also offer a 10 percent discount for ‘carnets’ of 10 tickets, witfree parking, and public transport at each end of the journey.

Virgin and other intercity operators have adopted ticketing innovations from airlines —customers can purchase tickets on line and print their own e-tickets.

To make it easier to for customers to buy tickets, Virgin introduced self-service ticket vending machines. It also established and owned a majority share in a major ticket retailer (thetrainline.com) but sold this in 2006. Virgin has now established a new website that sells tickets for other operators as well as for its own services.

Improving the journey

All trains have an onboard shop; enhanced mobile phone reception; power points for charging mobile phones and laptops; full public address throughout the train; a QuietZone™; and facilities for mobility impaired customers. Wi-Fi facilities, available on all trains, are free in First Class and fee-based in Standard Class. For safety and security, all trains are fitted with CCTV recording equipment.

Passenger charter and complaints

Virgin Trains has a Passengers’ Charter that sets out services and undertakings to:

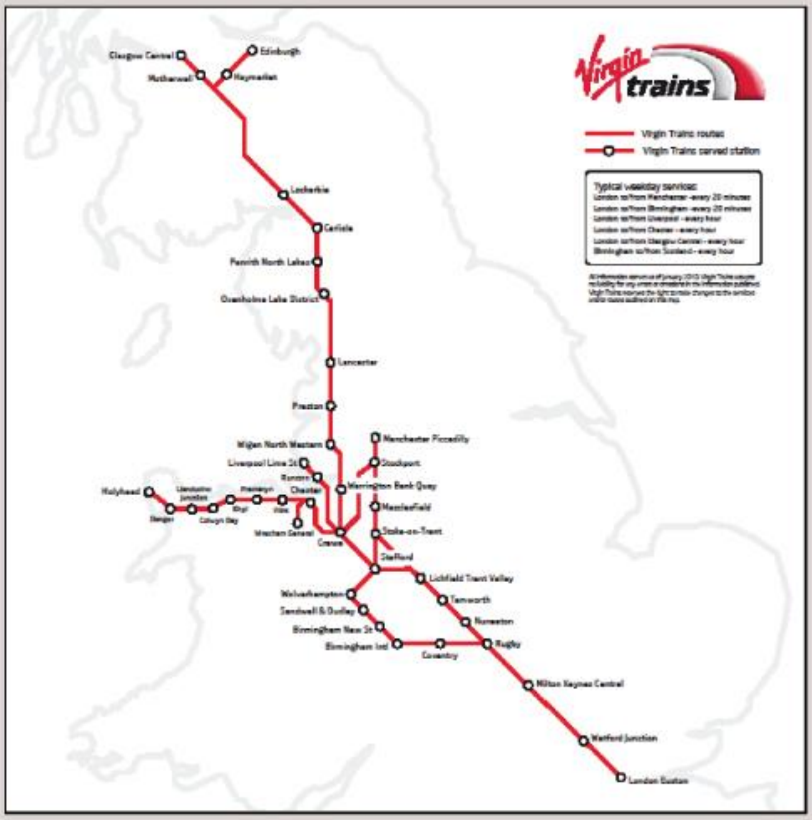
- Provide impartial information to customers about journey planning and ticket prices
- Meet the needs of customers with disabilities
- Inform customers about the handling of complaints

The Virgin Rail policy on responding to complaints is set out in its Passengers’ Charter.[395] Complaint or comment forms are available on most trains, at major stations, and as downloads from the company website; passengers can mail forms free of charge to Virgin. If a customer is unhappy with Virgin’s response, s/he can contact Passenger Focus, an independent Government watchdog that protects rail passenger interests.

The Virgin Trains Passengers, Charter does not create any contractual relationship between Virgin Trains and its customers. Instead, legal obligations are specified in the National Rail Conditions of Carriage, which apply to all train operating companies in the UK, and form part of the customer contract with Virgin Trains upon ticket purchase. These obligations apply to all train operating companies in the UK.

[395] http://www.virgintrains.co.uk/assets/pdf/global/passengers-charter-new.pdf

Figure 1 Map of Virgin West Coast Services



Source: Virgin website

4 Major Investment

Virgin Trains' plans for West Coast Trains and its original agreement with Government were predicated on the urgent need to replace rolling stock and renew infrastructure on the West Coast Main Line (WCML), which links London with major population centers around Birmingham, Manchester, and Glasgow (Figure 1). The WCML is the busiest line in Britain, carrying more than 40 percent of UK rail freight as well as Virgin and other passenger services. Government strongly supported the WCML upgrade project, even before franchising, to solve the major backlog in infrastructure renewal.

Under the vertically separated industry structure introduced at privatization, the WCML infrastructure was to be upgraded by Railtrack (now Network Rail). The project experienced major delays and cost overruns and, despite reducing the scope (principally, lowering the top speed from 225 to 200 kph), the final cost was about £9.0 billion—four times the original budget.

Railtrack's collapse led to financial difficulties for many TOCs and the franchise agreements for West Coast, Cross Country[396] and many others were replaced in 2002 by management agreements under which government assumed revenue and

[396] Cross Country had been loss-making but subsidized from West Coast profits. By 2002 both were in difficulties.

cost risks and operators were paid a management fee. The management agreements for the Virgin franchises continued until 2006—this was longer than for other such contracts due to the prolonged period of uncertainty before the infrastructure investment was complete, which made it difficult to finalize new franchise agreements.

During 2001-04, in anticipation of infrastructure upgrading, Virgin procured new rolling stock for West Coast, financed through financial leases with ROSCOs. For operation on electrified lines, 51 Pendolino trains (tilting electric trains–shown in photo below) were built and now are being maintained by Alstom and leased from Angel Trains (one of the ROSCOs). For operations that run off electrified lines, 21 Voyager trains (tilting diesel trains) were built and are being maintained by Bombardier and leased from Voyager Leasing (unusually, *not* one of the ROSCOs). Virgin was the first operator group to negotiate contracts to purchase new rolling stock that included manufacturer-provided maintenance. The manufacturer took over depots for this purpose. This major innovation may explain the success of introducing tilting trains, in contrast to the experience in other countries.

Pendolino using tilting technology (Source: Virgin website)

5 Services and Performance

Following completion of the infrastructure upgrade, Virgin introduced a new timetable on West Coast in December 2008, offering 30 percent more trains and faster journey times (Figure 2). The routes from Manchester and Birmingham to London had train frequencies increased to every 20 minutes, comparable to many commuter routes, and the most frequent long-distance train services in Europe. Although Pendolinos are capable of 225 kph, they travel at a maximum speed of only 200 kph due to signaling constraints. Nevertheless, the 640 km from London to Glasgow can now take as little as 4 hours 9 minutes.

Figure 2 Main Services Provided By Virgin West Coast From London

From London	Trains per direction per day	Fastest train (hrs:mins)	Average journey time (hrs:mins)
Birmingham New Street	49	01:22	01:26
Liverpool Lime Street	16	02:08	02:13
Manchester Piccadilly	46	02:07	02:09
Glasgow Central	13	04:09	04:26

The evolution of traffic levels on West Coast are summarized in Figure 3. Between 2002-03 and 2009-10, train km increased by 51 percent and passenger km by 81 percent. Despite the fact that most of the increase in services occurred after 2007-08, most traffic growth was before that date as new rolling stock improved services. After 2007-08, passenger growth slowed, partly due to the recession. Virgin Trains has succeeded in luring considerable traffic away from the airlines, especially for the London-Manchester market (300 km), where rail is most competitive and its share of the rail and air market now exceeds 75 percent.

Figure 3 West Coast - Growth in Traffic

	2002/3	2003/4	2007/08	2008/09	2009/10	2002/3-2009/10	2007/8-2009/10
Passengers m	15.2	14.9	21.8	23.0	26.6	75%	22%
Passenger km	2,899	2,745	4,211	4,453	5,255	81%	25%
Train km 000	23.5	24.6	24.2	29.7	35.5	51%	47%

Source: Office of Rail Regulation, various years.

Figure 4 shows that the Public Performance Measure or PPM (% trains less than 10 minutes late) and overall customer satisfaction improved dramatically over the period. The biggest improvements occurred immediately after new rolling stock was introduced in late 2004. Then, following completion of the upgrade in late 2008, both indicators continued to improve. However, in common with other TOCs, Virgin's West Coast customers continue to give poor ratings to 'value-for–money', some facilities and some aspects of service. Despite the Virgin Rail's focus on staff and customers, customer scores for staff performance were below overall customer satisfaction ratings, ranging from 70 to 90 percent, depending on the function.

Figure 4 West Coast - Quality of Service

	2003/4	2007/08	2008/09	2009/10
Public performace measure (PPM)	66%	79%	83%	85%
Overall customer satisfaction	79%	83%	85%	90%

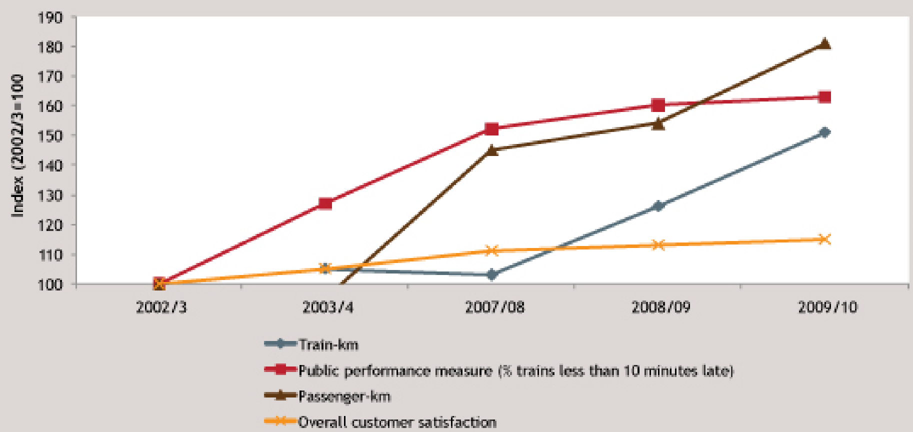
Source: Gourvish (2008), Stagecoach PLC Annual Report 2009/10 and author's calculations.

Figures 5 and 6 show indices of train km, train performance, passenger km and customer satisfaction, revealing that train km and train performance are closely correlated with traffic and customer satisfaction. Other factors in boosting demand appear to be the completion of rolling stock acquisition in 2004, and of the infrastructure upgrade in 2008.

Figure 5 West Coast - Performance Indices

Indices (2002/3=100)	2002/3	2003/4	2007/08	2008/9	2009/10
Train km	100	105	103	126	151
Public performance measure (% trains less than 10 minutes late)	100	127	152	160	163
Passenger km	100	95	145	154	181
Overall customer satisfaction	100	105	111	113	115

Figure 6 West Coast – Performance Indices



6 Financial Results

Figures 7 and 8 summarize the financial results for Virgin West Coast over the period 2000-01 to 2009-10.[397] Operating margins[398] for West Coast range from 4-13 percent (average 9.0 percent), more than on other Intercity franchises[399] and well above the typical margins of 3-4 percent for most British rail franchises.

[397] These are calculated from Stagecoach Annual Reports as Virgin Rail does not make financial reports available to the public. Data prior to 2008-09 is excluded as Virgin Rail ran Cross Country and West Coast then; therefore, the data were not comparable.

[398] Given that Virgin Rail has invested little of its own capital, operating margins are more relevant indicators of financial performance than rate-of-return on capital employed.

[399] Including Cross Country on which margins were quite low, often negative.

Figure 7 West Coast – Turnover and Profit (Current Prices)

	2000/1	2001/2	2002/3	2003/4	2004/5	2008/9	2004/5
Turnover (£m)	392.6	567	582.8	664	518.4	657.8	725.1
Operating profit	26.1	64.9	58	28.8	31.5	87.1	52.0
Operating margin	7%	11%	10%	4%	6%	13%	7%

Source: Gourvish (2008), Stagecoach PLC Annual Report 2009/10 and author's calculations.

Figure 8 West Coast – Turnover and Profit (Current Prices)

Figure 9 shows that subsidies peaked on Virgin West Coast at £328.4 million in 2003-04 because infrastructure and rolling stock were in poor condition and efficiency incentives were lacking for Virgin under the management contract. Due to these large Government subsidies, Virgin has made acceptable returns (see Figure 7). In 2006, Virgin returned to a franchise agreement and in 2008, the infrastructure upgrade was completed. Subsidies have, therefore fallen and in 2008-09, Virgin West Coast finally paid a surplus to Government.[400]

Figure 9 West Coast - Operating Subsidy (Current Prices)

	2000/1	2001/2	2002/3	2003/4	2004/5	2007/08	2008/09
Operating subsidy £m	57.7	190.9	188.8	328.6	113.0	161.6	-71.6

Source: Gourvish (2008) & Office of Rail Regulation.

7 Assessment

Problems with the Virgin rail franchises emerged, in part from overly optimistic revenue projections in the initial franchise bids (Nash et al) and, in the case of West Coast, a complex and disruptive infrastructure project that included many stakeholders, high political exposure, and reputational risk. The seriousness of these problems emerged only over time.

[400] Under the original franchise agreement Virgin should have paid its first premium in 2002-03. The switch to premium in 2008-09 also reflects lower track access charges in 2008-09, which are considered in setting the subsidy.

How did these problems arise? Some have alleged that Virgin out-negotiated Railtrack, a weak organization that failed to protect its own interests, and Railtrack could not deliver (Gourvish). It is true that Virgin negotiated skillfully to transfer project risks on to Railtrack, thereby protecting its own commercial interests and the interests of other operators. This helped ensure that the reputation of Virgin, and the reputation of the railways in general, did not suffer unduly since the railways' reputation was already tainted by ageing assets and unreliability.

It is debatable whether it was sensible to franchise West Coast as a vertically separated operator, given the complexity and disruption expected from infrastructure upgrading and the massive task of coordinating the introduction of new rolling stock. Some problems might have been avoided if Virgin had also been in charge of infrastructure, although new problems might have arisen since rail infrastructure is not a core competency of Virgin Trains.

Contracts within the British rail industry are complex and those for West Coast the most complex of all. Governments should embark on such arrangements *only* when they have considered them carefully, employed the best technical, commercial, and legal advice, and ensured a *genuine transfer of risk* to the private sector.

Still, there were some major achievements from Virgin's involvement that went far beyond the benefits of introducing marketing skills from the airline industry. Virgin is a single-minded and tough commercial operator with a strong customer focus, and involving Virgin led to the smooth introduction of tilting trains on a scale unprecedented anywhere in the world. In part, this can be attributed to the innovative procurement of rolling stock, which included maintenance provision. Virgin's skills, combined with substantial investment from other partners, doubled passenger volumes, mainly through taking market share from air. This enabled government to receive a payment from Virgin, rather than to continue paying subsidies.

This case study shows what can be accomplished by involving a competent private sector partner with strong commercial skills and a focus on its staff and customers.

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