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# **Information Systems and Technology Outsourcing: Case Lessons from 'TravelTrack'**

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*This case concerns an information systems and technology (IS/IT) action research intervention into a train operating company in the newly privatized rail industry in the United Kingdom. Having operated for many years as a nationalized industry under government control, but outside the strictly commercial sector, the new company found itself in the position of having many of its important IS/IT systems being run by separate companies – it was outsourced without ever having made an outsourcing decision. The project involved information management in the maintenance wing of the company. After the event, analysis of the problem situation revealed the extent of the company's IS/IT management difficulties. Many of these problems were directly attributable to privatization and the outsourcing arrangements imposed upon the new company. The lessons from the case cast serious doubts upon the long-term benefits of outsourcing key systems and are believed to represent a significant learning vehicle relating to IS/IT adoption and exploitation.*

## **BACKGROUND**

Until quite recently the UK railway system was run as a state public service (British Rail) on behalf of the government. British Rail was privatized by the Thatcher government in an attempt to capture better efficiency and value for money through the exploitation of free market principles. The privatization took the form of franchising British Rail into a number of independent profit-making companies, with the government reserving the right to appoint the franchisees. The company commissioning the IS/IT study (here referred to as RTOC – Regional Train Operating Company) was one of the passenger train operating companies; other independent companies managed the track and supplied freight train services, rolling stock or heavy maintenance. Also privatized was the former systems development wing of British Rail, which had been responsible for developing and managing the IS/IT systems

underpinning the rail industry. This left RTOC in the position of being *de facto* outsourced, without ever having made any decision to outsource. Most of their key operating IS/IT were still the systems developed by British Rail's development wing, which was now split into separate commercial enterprises with which RTOC was obliged to develop contractual relationships of a form that had previously not been necessary. External suppliers were now responsible for providing the mainframe services upon which RTOC relied. New IS/IT, in the future, would have to be commissioned or developed in-house.

The action research team was asked to advise on the management of information for fleet maintenance. The perceived problem was the high frequency of unscheduled delays caused by mechanical defects with the train units. This led to many operational problems, customer dissatisfaction and high maintenance costs, and attracted penalties imposed by TravelTrack (the track operating company) whose service was disrupted. It was argued that better analysis of the data captured during repairs would allow better targeting of maintenance, and better preventative maintenance. If it could be established which defects caused the majority of the problems, it was assumed, that these could be fixed during regular servicing. Mechanical problems would be better diagnosed and anticipated, prophylactic action taken, problematic components would be replaced before they failed in service, and the delays could be greatly reduced.

The project involved an extensive study of IS/IT systems and associated information management processes at three different sites. Contacts with the company lasted over three years, with the main body of work being undertaken over the period September 1996 to October 1999. The action research was undertaken using Soft Systems Methodology (Checkland, 1985; Checkland and Scholes, 1991; Checkland and Holwell, 1997). Over fifty personal and telephone interviews, meetings, workshops and presentations were conducted, at every level in the company from engineers and train drivers to the board of directors.

## SETTING THE STAGE

Precise definitions of IS/IT outsourcing differ in the literature (Glass, 1996) but there is general agreement that it is the carrying out of IS/IT functions by third parties (Kettler and Walstrom, 1993). Expenditure on IS/IT outsourcing is considerable, with much of it placed with a few companies (Clark et al., 1995). However, there has been only a small (but increasing) number of empirical studies of IS/IT outsourcing, a feature noted by several authors (e.g., Sobol and Apte, 1995; Arnett and Jones, 1994). In particular, there have been few British studies (Willcocks and Fitzgerald, 1993; Cronk and Sharp, 1995). Several conceptual frameworks have been used to underpin outsourcing research including transaction cost theory, organizational politics (Lacity and Hirschheim, 1993) core competencies, agency theory and partnership (Hancox and Hackney, 2000). Much of the research has centered around the outsourcing decision; for instance Lacity and Hirschheim (1993) studied the outsourcing decision-making process in thirteen companies. Their research highlighted the political nature of this decision making, as well as its cost efficiency focus, and served to demonstrate how complex it was to make objective decisions about the subsequent success or failure of the decision. At RTOC, no outsourcing decision was ever taken—the company simply became outsourced as a result of privatization. The researchers were involved in trying to take meaningful action in this context, and able to observe over a long period, and in considerable depth some of the difficulties that were encountered.

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