

Application services put rail travel on track for success

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Simon Paladino – Project Director, RJIS Technology Refresh, RSP, ATOC



Challenge

The Association of Train Operating Companies (ATOC) manages many activities on behalf of the UK's 22 Train Operating Companies (TOCs) in order to improve the planning, operation, delivery and marketing of rail services. One of ATOC's four operating companies, Rail Settlement Plan Ltd (RSP), is responsible for the distribution of fare and timetable data and the allocation and settlement of rail revenue totalling nearly £5 billion a year.

In 1998 RSP commissioned Fujitsu to develop an innovative new application called the Rail Journey Information Service (RJIS). By incorporating a series of ATOC's legacy systems onto one integrated platform, RJIS created a single source of information combining the timetables, fares, route planning, ticketing and transaction services needed to buy rail tickets and complete travel enquiry requests.

In 2008 RSP and Fujitsu began discussions about the evolution of the service in order to ensure that it had sufficient flexibility and capacity to meet the changing needs of passengers and TOCs as efficiently and cost-effectively as possible.

Steve Howes, Managing Director, RSP, says, *“Over the years since RJIS first went into service the rail industry has evolved to meet the needs of its passengers. So, working in partnership with Fujitsu, we wanted to identify which elements of RJIS were still important to us, which could be phased out and what new functionality we needed, so that we could refocus our resources and investment accordingly.”*

Solution

ATOC agreed a five year, £13 million deal with Fujitsu to refresh, enhance and streamline the hardware and applications technology used by RJIS, so that it could be supported until at least 2014. It also had to have the capacity to handle an increase in workload, largely driven by a massive growth in online sales (25% year-on-year) and greater use of Ticket-on-Departure vending-style machines used to collect ticket.

In addition, Fujitsu wanted to ensure that the new solution met the requirements of the Payment Card Industry Data Security Standards (PCI-DSS) and provide the functionality necessary for ATOC's "Positive Audit" - an enhanced accounting audit statement used to show that it is controlling tickets sales effectively and transparently.

To achieve these aims Fujitsu undertook three key developments of the RJIS service. Firstly, at the heart of RJIS is the Core Data Service, the Data Factory, that stores and distributes the source information for fares, timetables and route planning. This data is imported every day and converted by Fujitsu to meet a defined industry standard. However, the use of different source files occasionally resulted in inconsistencies. So, Fujitsu changed the way in which the information is accessed to ensure that everyone across the industry uses a common set of data.

SUMMARY OF KEY FACTS

Organisation

Association of Train Operating Companies (ATOC)

Services delivered

Refresh, update and manage the hardware and applications needed to operate The Rail Journey Information Service (RJIS)

Key metrics

- Processes 1 million rail journey transactions a day
- Responds to 820,000 enquiry requests every day
- 100% SLA achievement for 2 years

Benefits

- **Improved customer experience** – have timely access to accurate fares and timetables and more choice how to buy
- **Reduced operational costs** – simplification and consolidation of the system will save over £1 million
- **Increased productivity** – will improve operational productivity by making it easier for users to access and process information
- **Ensured stability** – a modern and resilient platform delivering 100% performance and supported until at least 2014
- **Greater capacity** – operations can now be scaled to ensure sufficient capacity to meet growing demand
- **Increased flexibility** – can exploit future opportunities such as changing travel patterns and new technology
- **Ensured compliance** – provides the tools to meet prevailing industry and retail standards, such as PCI-DSS

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Secondly, Fujitsu decoupled the RJIS Journey Planning application from the rest of the service and completely updated its look and feel to bring it in line with other modern business applications. The new Java-based Fujitsu Journey Planner now includes a faster, more responsive user interface, with rapid start-up times, so it is easier to use and requires less training, and can also be accessed using the latest Windows operating systems.

In response to the needs of TOCs, Fujitsu also introduced a number of new enhancements to maximise operational effectiveness and productivity. These include displaying more information relating to fares, such as alternatives and restrictions, and the ability to view search results as a matrix for simple comparison. Customers can also now supply seat preference and check multiple availability of fares.

Finally, Fujitsu is completely updating the underlying technology, including the migration of the RJIS database from Oracle 8 to Oracle 10g, the introduction of new Java front-end and back-end applications, the refreshment of datacentre hardware and introduction of a new Eternus shared storage system. As a result, the RJIS infrastructure will be capable of delivering the new functionality required by the industry, including meeting PCI-DSS requirements, is more secure and has the flexibility and capacity to meet continuing growth and changes in demand.

Simon Paladino, Project Director, RJIS Technology Refresh, RSP, says, *“Despite the complexity and business-critical nature of the systems the RJIS refresh project has been very straightforward - Fujitsu delivered the right technology in the right place at the right time and on budget.”*

The daily operation of the RJIS application continues to be undertaken by Fujitsu as an application managed service, which includes planning 80,000 rail journeys and responding to 820,000 enquiry requests each day. It now stores up to 140 million fares, the timetable for 19,000+ trains and details for 2,500+ train stations across the UK. It also processes 1 million transactions daily, manages over 300 million possible fare combinations, and supports around 4,500+ terminals and 1,600 ticket vending machines. Despite the scale of the RJIS application Fujitsu has a record of 100% achievement of its Service Level Agreement targets for the last two years, both before and after the new contract.

“RJIS is key to our ability to deliver a modern and efficient service to our passengers and Fujitsu’s contribution has been key to ensuring its continued success,” comments Steve Howes.

Benefits

RJIS provides consistent, accurate, current and impartial rail journey information that is updated daily and available online 24 hours a day, 365 days a year. Its rejuvenation and management by Fujitsu is enabling ATOC to:

- **Improve customer experience** – customers have timely access to accurate and consistent fares and timetables and more choice of where and when to buy tickets
- **Reduce operational costs** – simplification and consolidation of the system architecture will save over £1 million over the life of the contract, so the project will be self-financing
- **Increase productivity** – the enhanced user interface, new functionality and greater standardisation will improve operational productivity by making it easier for users to access and process information

- **Ensure stability** – have a modern and resilient platform, with disaster recovery facilities, that is delivering 100% performance and can support future business requirements until at least 2014
- **Greater capacity** – operations can now be scaled to ensure sufficient capacity to meet growing demand being driven by new service improvements, such as Ticket-on-Departure
- **Increase flexibility** – enables the TOCS to exploit future opportunities such as changing travel patterns, evolving customer demand for integrated and multi-modal travel and new technology changes
- **Ensure compliance** – provides the tools to meet prevailing industry and retail standards, such as PCI-DSS.

“The improvements made by Fujitsu on behalf of RSP to RJIS and its efficient management of the service are making it easier for rail passengers to get where they want, when they want,” explains Steve Howes.

Approach

Given the scale and complexity of the RJIS application, Fujitsu had to utilise an extensive range of technical and project management skills in order to manage every aspect of its performance. This includes the hardware, datacentre operations, network infrastructure and application services ranging from design and testing through to release, change control and ongoing management.

In particular, Fujitsu is a Global Oracle Partner with over 2,300 Oracle professionals. As well as being a Certified Advantage Partner across applications, middleware, database and business intelligence streams, Fujitsu provides application managed services to over a quarter of a million Oracle end-users. Equally critical was Fujitsu’s extensive Java skills-set, which helped create a modern and flexible infrastructure that could be easily integrated with other business applications to enable the introduction of new sales channels.

In order to deliver some of the new enhancements to RJIS Fujitsu was able to draw upon its global capability and expertise by utilising a team of experts from Fujitsu in Japan to configure the new Eternus storage system array so that it delivered optimum performance and benefits.

“Fujitsu’s ability to successfully deliver a project like RJIS is a testament to both the scale and depth of its own expertise and its willingness to leverage the strong relationships it has with other leading IT companies on our behalf,” states Simon Paladino.

Expertise

Fujitsu has a long-standing relationship with ATOC and the rest of the UK rail industry and its technological skill and market insight have made it a market leader in rail retail. Furthermore, Fujitsu’s extensive retail experience offers rail organisations the opportunity to leapfrog a generation of development and investment by leveraging its knowledge of successfully deploying innovative retail solutions.

Steve Howes says, *“Over the period of the RJIS contract we have increasingly come to see Fujitsu not just a supplier, but as a partner with a deep understanding of the business objectives of both RSP and its stakeholders.”*

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