

by nominated persons in each stakeholder, it enables TOCs to review their daily performance figures and customer usage patterns for the first time ever. As a result, LENNON has quickly become an invaluable tool for these organisations to create products that are targeted to increase sales and maintain high levels of customer service.

"LENNON was designed to produce management information that commercial directors and retail managers could actually use," adds Tony Lacy. "Delivered via the Internet, it provides TOCs with instant access to information that will help them to determine which products are profitable, how accurate the retailing process is and exactly how much products contribute to the business in terms of daily earnings."

The solution has transformed rail settlement processes and improved the way the industry accesses and uses passenger fare information to create new products and enhance customer service. And this is a view shared at the highest level. LENNON has been in operation for just over one year but "has already revolutionised the way train company data is processed" according to George Muir, Director General of ATOC.

Plaudits are coming thick and fast. In March 2004 at the influential Railway Industry Innovation Awards, ATOC won the Information Technology award for the LENNON solution. On presenting the award, judges said they were particularly impressed with the "smooth introduction of such a complex system which also had to interface with much older equipment". And in September 2004 at the equally prestigious National Rail Awards, RSP and Atos Origin were awarded the Outstanding Teamwork award.

The solution's innovative review capabilities offer the most exciting prospects to retailers and are changing the way these companies work, because now TOCs have access to high-quality management information on a daily basis. Stakeholders can analyse customer trends more accurately than ever before, and even assess the financial impact of unplanned events such as derailments. "It is this commercial angle – daily performance statistics delivered in 'real time' – which represents an enormous breakthrough for the industry," concludes Tony Lacy. "With LENNON, we have helped RSP harness technology to produce accurate and useful metrics and deliver very real business benefits."

Atos Origin is an international information technology (IT) services company. Its business is turning client vision into results through the application of consulting, systems integration and managed operations. The company's annual revenues are more than EUR 5 billion and it employs 45,000 people in 50 countries. Atos Origin is the Worldwide Information Technology Partner for the Olympic Games and its clients include ABN AMRO, Akzo Nobel, Alstom, BNP Paribas, BP, Ericsson, EDF, Euronext, Fiat, France Telecom, ICI, ING, KPN, Lucent, Philips, Renault, Royal Bank of Scotland, Saudi Aramco, Schlumberger, Shell, Telecom Italia, UBS, UK Department for Work and Pensions, Unilever, Vivendi Universal and Vodafone.



LENNON REVOLUTIONISES UK RAIL SETTLEMENT

"The launch of LENNON is a significant milestone for the rail industry, demonstrating how technology is improving efficiency and customer service."

Antony Lain, Chief Executive Officer, Rail Settlement Plan

"Atos Origin offers real partnership to a sector that is increasingly looking to technology for solutions to business problems. The company's strength and depth of knowledge and skills, gained from long experience in the industry, enables it to take on the most complex projects and deliver them successfully – time after time."

Tony Lacy, Director of Transport Strategy, Atos Origin

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	62,000	137,000
	78,000	140,000
	48,778	89,678
	76,551	117,451
	11,737	74,637
	29,500	70,400
	41,115	84,015
	61,991	104,891
	28,377	61,777

CUSTOMER

Britain's railways are booming. Passenger train services are growing faster than anywhere in Europe. One billion journeys were made in 2003 – more than in any year since 1961 – and each day 4,000 trains serving 2,500 stations operate over 18,700 services. With the rail sector facing an increasingly complex and demanding task in every area from customer service to fare and data management, the Association of Train Operating Companies (ATOC) was formed by the 27 train operating companies (TOCs) in the UK to provide leadership and governance to the industry.

Rail Settlement Plan (RSP) is a subsidiary of ATOC. It runs outsourced IT service contracts for rail tickets, ticket issuing systems, reservations, fares, information services, timetables, revenue allocation, revenue settlement between train companies, ticket on departure schemes and credit card automation. It is also responsible for distributing fare, reservation and timetable information to train companies, retailers and agents, gathering sales data, and redistributing the revenue collected from ticket sales.

BUSINESS CHALLENGE

RSP required a new revenue capture and settlement system to replace CAPRI, an 18-year-old batch system created in the days of British Rail. The CAPRI system was designed in such a way that revenue was allocated to the Train Operators only once per period and the system was limited in terms of providing useful management information to stakeholders.

What was needed in today's commercial Railway was an ability to see earnings much more in real-time and have the ability to easily access and analyse the vast amounts of data; which was collected through rail retailing in order that more informed business decisions could be made.

But if the wholesale replacement of one of the world's most complex settlement systems were to succeed, it would need leadership combined with an approach founded on teamwork and strong relationships. The natural choice for RSP

was a partner with experience in large-scale projects in the sector and a track record in co-ordinating multiple parties to achieve a shared goal. This partner was Atos Origin.

SOLUTION

Atos Origin's unsurpassed experience in the integration of UK transport sector IT systems, together with its expertise in dealing with and contributing to travel industry companies and governing bodies, reassured RSP that it was the right partner. Atos Origin would have to create a technology solution – soon termed LENNON (Latest Earnings Networked Nationally Over Night) – but also understand and help to manage the people issues arising from implementation.

Of equal importance on this high-profile project was the identification of clear aims for the new system. Atos Origin worked with RSP and the train operators to pinpoint clear and measurable objectives. There were many stakeholders whose views needed to be taken into account – including RSP, the 27 TOCs, and other third parties such as credit card acquirers and ticket issuing system suppliers. Atos Origin was responsible for ensuring the views of each party were taken into account and that relationships ran smoothly.

Atos Origin employed a strategy of open communication at all levels during all project phases. The project embraced train operators' views and built confidence in the system through industry representation within governance bodies, involvement in testing, regular bulletins and reporting of milestone achievements. Atos Origin and RSP also conducted a series of road shows aimed both at senior TOC management and operational users who would need to implement changes to their working practices.

Ashley Birchall, RSP Account Director at Atos Origin recalls: "These actions enabled the project team to develop and maintain a growing expectation that LENNON would deliver. For example, a major challenge was producing a requirements catalogue that covered the wishes of all 27 TOCs. However once



we negotiated the agreement it enabled the whole community to focus on delivery.”

LENNON is an indisputably complex system – consisting of 15 million lines of code, 15 terabytes of disc space, 40 gigabytes of memory and twenty-eight 900Mhz processors. The implementation was equally complicated. Each of the 27 TOCs had its own IT management processes and a variety of user PCs and communications infrastructures, which presented a challenge to ensure each party could interface with LENNON. To ensure these issues were identified and addressed, a series of readiness reviews were initiated – covering IT infrastructure issues, business processes and user training requirements. The result was that there were no problems with TOC readiness on implementation.

Another major challenge was ensuring that each stakeholder received fair apportionment. The UK settlement system is critically important to the income not only of TOCs but also of other ticket agents and sales channels. Agreeing acceptance criteria that ensured accuracy and speed and maintained very similar apportionment was another exercise in open communication.

Two pilots were run in parallel to the old CAPRI solution to identify differences in results between the systems. LENNON is far more accurate than CAPRI. For example, it automatically corrects undersold tickets and changes in financial conditions, and works to four – rather than two – decimal places in its calculations. The pilot schemes showed that these improved features created a change for some stakeholders in the revenues they received compared to the old system. Through a series of presentations, Atos Origin took the time to explain these differences and ensure everyone understood and accepted them.

Together RSP and Atos Origin ensured that all parties were kept informed and advised of progress on LENNON. Close working relationships with credit card acquirers were also required to address issues such as the introduction of Chip & Pin. Ashley Birchall again: “The implementation has been a great

example of a cross-industry team pulling together to deliver an IT project. This was achieved through focusing on team communication, creating a totally inclusive project governance model, developing and effectively managing team processes and through the will of all members of the ‘virtual’ team to make the project work.

“The success of LENNON is a result of bringing together a very diverse team of people who have competing aims within an extremely large industry and focusing those people on one single objective for the good of the industry.”

The development of a system the size of LENNON would be a challenge in any environment and there are few projects in the world today that match its technical complexity. It processes information on every single UK train ticket sale, collects sales data, validates that data to confirm its accuracy, then allocates earnings to each of the 27 TOCs. And all this is achieved within 24 hours of a ticket being purchased, compared to six weeks with the previous system. LENNON also provides data to support commission payments to retailers of UK rail products.

The system went live on 17th August 2003, and now handles £20 million of passenger tickets sold on Britain’s railway each day – that amounts to annual sales worth more than £3.5 billion. Each and every night the system electronically processes over a million ticket transactions and analyses the data from 10,000 ticket machines at 2,500 stations.

BENEFITS

LENNON not only retrieves and validates ticket sales data from ticket issuing machines at ticketing locations nationwide, but also downloads business critical ticket data back to ticket machines. It apportions the revenue from these sales and carries out settlement of sales to train operators and commission to retailers.

These of course are vital tasks, but LENNON does much more. Through a secure web-based interface accessible