

# SERVITIZATION CASE STUDY

## ALSTOM TRANSPORT



USING EXPERTISE AND TECHNOLOGY TO  
HELP CUSTOMERS MEET THEIR KPIs OF  
PASSENGER MOVEMENT

HELPING CUSTOMERS TO FUTURE-  
PROOF THEIR OPERATIONS

GIVING THE CUSTOMER TIME TO FOCUS  
ON THEIR CORE BUSINESS

**A**lstom is a French multinational company operating worldwide in rail transport. It develops and markets a complete range of systems, equipment and services in the railway industry and is one of the world's largest manufacturers of high-speed trains, tramways and metros, electrical and diesel trains, information systems, traction systems, power supply systems and track work. It also designs, produces and installs infrastructure for the rail network. It operates in 70 countries and employs 26,000 people.

In the UK, one third of all daily passenger rail journeys are made on Alstom trains, in addition to one million daily journeys on the London Underground.

**O**n increasingly busy rail networks, operators face challenges every day to attract passengers to travel with them and to get them from A to B as quickly as possible. The availability of trains is therefore absolutely critical, but maintaining rolling stock is often not the core expertise of the operator; often they are focused on passenger experience, selling tickets and driving trains. This is where manufacturers such as Alstom come in; they have recognised a market for services that keep the trains in working order, and developed successful partnerships with customers as a result.

## **THE JOURNEY INTO SERVICES**

Services were not traditionally a part of the Alstom portfolio; the company began with the merger of three heavy engineering interests, and services, as is often the case, were seen as a cost centre rather than an opportunity for revenue generation. Today, services including maintenance, repair and spare parts management generate 20% of the company's €7bn worldwide sales, with approximately 10% of this in the UK.

The introduction of services was driven mainly by changing technology. Maintenance contracts, for example, were first introduced in the rail industry in 1996, to address the challenges that customers were facing in trying to maintain increasingly complex trains. The addition of microprocessors to rolling stock totally changed the maintenance landscape, and in-house maintenance environments could not evolve quickly enough to keep up. This created a need, and also a major opportunity, for OEMs such as Alstom to offer services.

## **THE VOICE OF THE CUSTOMER**

Over the years, through listening to its customers, Alstom has identified how their needs have developed and changed. More recently, it has recognised that customers' concerns are increasingly about more than maintenance and parts supply; they are also thinking about things related to future-proofing, commercial sustainability and modernisation. The train operator's primary focus has to be on the fare-paying passenger and on offering them the best value experience in what is an increasingly competitive market. Alstom has recognised that it can use the expertise and internal competencies that it has developed in delivering maintenance services and provide these as stand-alone services or part of a package to address customer needs.

Not only this, but Alstom also uses feedback from both its own technicians and also those of its customers who carry out their own maintenance to inform product design from the outset. They work with them to understand which features make maintenance more time consuming and what can be done to help reduce maintenance hours, helping to reduce the maintenance lifecycle cost of the train.

Through whole-life services Alstom can create significant additional value for the operator by understanding in detail their business needs and deploying processes and technologies to optimise the offering to the operators.

## ALSTOM'S SERVICES OFFERINGS



### MAINTENANCE

Maintenance services utilise Alstom's expertise in supply chain and industrial organization and its system engineering competency to provide train availability. Services range from accident repair, technical support and spare parts agreements to fully-outsourced maintenance whereby Alstom takes all responsibility for technical risk, allowing the operator to concentrate on their own core business



### SUPPORT

The competencies that Alstom has developed in order to deliver outsourced maintenance are also available as support services to operators. These services include training, e-documentation, obsolescence management, asset management, dept design, recycling and integrated fleet support



### MODERNISATION

These services address some of the customer's key concerns about future proofing, competitiveness and business sustainability. They support the customer with life time extension, energy consumption and comfort. Services are designed around: energy saving, diesel upgrades, hybrid trains, signaling, passenger experience and accessibility



### PARTS AND REPAIRS

Alstom provides day-to-day support and technical assistance for operators who carry out their own maintenance. Services help customers with: spare parts, repairs, availability, overhaul and test benches

# ADVANCED SERVICES CONTRACT WITH VIRGIN TRAINS WEST COAST

One of Alstom's most well-known customers is the rail operator Virgin Rail Group, with whom it has an advanced services contract. In 1999, Virgin won the franchise to operate a service on one of the major rail routes in the UK, the West Coast Mainline from London to Glasgow, on condition of it replacing all of the existing rolling stock. Virgin agreed a contract with Alstom for a brand new type of tilting train, the Pendolino, along with a full maintenance offering to support this brand new (and therefore arguably risky) technology.

The relationship between Alstom and Virgin continues today. The key features of the contract are all designed to focus on results that are directly relevant to Virgin's core business of moving people on trains.

## CONTRACT FEATURES

### KPIs

Alstom is contracted to present 51 viable trains to Virgin every morning and ensure these are available for 18 hours per day. Trains have to be clean and have all customer-facing features (such as toilets and catering) in working order

### PAYMENT

Alstom is paid on the basis of pence per mile traveled by the trains

### PENALTIES

Since Alstom takes on the risk of technical failures, it receives penalties if trains are delayed or canceled due to technical or maintenance problems

In order to deliver a contract like this, Alstom has invested heavily in facilities and technologies. Its TrainTracer technology provides real-time condition monitoring and identifies problems before they occur. Alstom runs a number of trackside maintenance facilities in order that technicians can be as close as possible to a train with a problem and can rectify it as soon as possible, using the knowledge gathered from the condition monitoring. This 'pit stop' approach helps to decrease immobilisation time- for which Alstom would be penalised because the customer would suffer.

Alstom built in-house a drive-through scanner for trains that monitors key consumables such as wheels and brake pads, automating the preventive maintenance task of examining the train. Trains would previously go into a depot every 30 days for inspection by up to 15 people. Now they are inspected every 3 days using the scanner.

It also commissioned what it called the 'largest and most sophisticated' rolling stock refurbishment facility in the UK, a 13 000 m2 plant in Widnes, used initially to undertake the significant task of repainting all of the Pendolino trainsets operated by Virgin Trains West Coast,

