

Real-time results for the UK's largest home delivery courier network with Fuse



CHALLENGE

Support customer demand for access to real-time, online tracking information

SOLUTION

Leveraging Fuse ESB, Fuse Mediation Router, Fuse Message Broker, and Fuse HQ to update its customer facing websites in near real time and provide real-time data feeds to its clients

BENEFITS

Process for receiving tracking data is 100% automated and takes just 60 seconds for the data to be pushed out in real time to the customer facing web applications versus the previous manual system that took hours; retailer and customer satisfaction has increased with access to real-time tracking information and improved communication flow



REAL-TIME RESULTS FOR THE UK'S LARGEST HOME DELIVERY COURIER NETWORK WITH FUSE

A courier delivers an important package to a home. The package does not require a signature and the recipient is not in, so he leaves it in a safe place and is off to his next stop. Within 60 seconds of the package being left in the safe place, the home delivery company, the retailer and the consumer are all able to access that tracking information online. When a signature is required, the same process is followed, but additionally, the image of the signature is tracked and made available online in the same timeframe. Not only is this convenient—but it is also what consumers have come to expect in the age of online retail.

There are currently 32 million active online consumers in the UK, and the Interactive Media in Retail Group (IMRG) predicts that number will increase. Cost and convenience are the key drivers behind the significant shift in the UK's retail industry over the past few years from traditional in-store sales to online sales. Today's consumers want a fast, easy and seamless buying experience—and at a low cost. While increased demand is a benefit to retailers, growing online retail sales have posed numerous challenges, in particular delivering the goods to the customers precisely when, where and how they want them, and providing customers with access to real-time, online tracking information.

The changes in the UK retail industry have directly impacted the UK delivery courier industry, as carriers have quickly sought ways to deliver the products and services required to support their retail clients' changing needs. Hermes, the UK's largest home delivery courier network, handles more than 110 million collections and deliveries per year for leading high street, direct catalogue and online retailers such as Next Directory, QVC and Lands' End, as well as providing a successful parcel collection and delivery service for consumers, myhermes.co.uk. The company has over 7,500 lifestyle couriers throughout the country and 1,600 permanent employees across a network of two hubs, 19 depots and its headquarters in Leeds.

As the UK retail industry began to shift, Hermes decided to invest in key technology and operational changes to maintain its competitive advantage. Mike Leyland, IT Director for Hermes explains: "Our retailers and customers were demanding new types of products and services as well as changes in communication and information flow that would deliver real-time tracking visibility."

But, Leyland says, Hermes was not equipped to support these requirements with its traditional courier delivery model based on paper manifesting. The process required the overnight printing



and distribution of up to 7,000 paper reports, the documents then had to be returned for image scanning, and only then could the company update internal systems and clients. Because Hermes' previous mainframe system provided limited integration with external systems across different protocols, the only way to link to a retailer was using CSV files and FTP. To achieve real-time tracking requires fast, message-based communication between all parties, which was not possible with the company's existing system.

Mobile solutions to automate parcel delivery used for tracking high value deliveries were seeing wider adoption and reduced costs. To retain its market position and support its goal of doubling in size within five years, the company took an aggressive approach, introducing a change program to replace the paper manifest with a mobile device that offered the ability to return parcel tracking data in real time. The first phase involved the rollout of 7,500 Windows mobile devices equipped with a mobile network SIM card. This allowed Hermes to capture tracking data and signatures at the source and return them to its central systems.

"The mobile devices were sending the data back in real time over the GPRS mobile network. But we were still receiving that data in batch mode, so the process for inputting the information into the systems and pushing that data out to the client-facing websites was cumbersome and slow," explains Leyland. "To complete the new program and maximize the value of our data, we needed a way to update our customer facing websites in near real time and provide the option of real-time data feeds to clients."

THE FREEDOM OF OPEN SOURCE WITH THE SECURITY OF AN ENTERPRISE-CLASS SUBSCRIPTION FROM FUSE

After considering a number of potential suppliers to deliver the real-time messaging solution, Hermes selected one of Fuse's partners, Answer Consulting to help build their application. "During initial discussions, it was clear that Answer's expertise and technical competence complemented perfectly with Hermes' growth need in this area," said Neil Dickinson, Head of Projects and Delivery for Hermes. "Answer invested time in understanding our business and identifying the right solution to support real-time messaging. We were confident that they would be a good cultural fit for our organization."

During discussions with Answer, Hermes was able to narrow down its options. Closed source, proprietary ESB offerings were discounted due to Hermes' reluctance to tie itself to any one vendor-specific solution. The company was not comfortable with pure open source due to the lack of support. Looking at open source offerings it also concluded that the MULE ESB was not



appropriate due to ambiguous licensing. After a thorough evaluation of the possibilities, Hermes chose a solution based on the Fuse offering.

FuseSource, a wholly owned subsidiary of Progress Software, is a community of open source experts that provide software, support, training, and consulting for the most popular Apache-licensed open source integration projects including Apache ServiceMix, ActiveMQ, Camel and CXF. The FuseSource team includes key committers and the leaders at Apache who know the code the best to help FuseSource customers build reliable and scalable software integration infrastructure.

Hermes is using the Fuse ESB open source platform based on Apache ServiceMix, Fuse Message Broker, Fuse Mediation Router, and Fuse HQ for real-time system monitoring and alerts.

“We wanted the flexibility and autonomy to do what we wanted with the solution, but without the risk of having all of the intellectual property rights with just one or two people within our organization—as would be the case with pure open source,” says Dickinson. “Part of the value of Fuse is that it comes with the support of an enterprise-level vendor. Fuse also presented a ready framework that could deliver very rapid results. It was a perfect solution for our organization.”

The development of the ESB was done in a four-week development lifecycle by two Answer consultants. This fast delivery was enabled by the sophistication of the Fuse product sets and the modular design that is promoted by using an OSGi container. The integration testing, performance testing and user acceptance testing was performed by Hermes. The open nature of the Fuse architecture along with the open standards it utilizes greatly facilitated testing and allowed Hermes to confidently launch their ESB without issue.

With its previous system, tracking data was received from Hermes’ mobile solution into the company in a 15-minute timed batched window. The company would then process that data, batch it manually into its core underlying databases, and finally push the data out to its web tracking systems—a process that took approximately two hours. With Fuse, the process for receiving tracking data is now 100% automated and takes just 60 seconds for the data to be pushed out in real time to the customer facing web applications.

“The implementation was very smooth and quick,” says Dickinson. “We had no issues at all, and the solution has remained live ever since.”

“Fuse has changed the way we are able to work on a number of levels,” explains Leyland. “The Fuse Message Broker provides us



with fast reliable, real-time messaging. The standards compliant nature of Fuse has greatly simplified development and integration testing between our different systems. The Fuse Mediation Router is enabling quick development of customer specific business logic. And the Fuse ESB OSGi container allows hot deployment of code by our support and development teams which is simplifying the work of any non-Java support personnel.”

HERMES REALIZES “MASSIVE BENEFITS” ACROSS ITS BUSINESS AND IT OPERATIONS

Leyland and Dickinson say the combination of Hermes’ mobile and real-time messaging solutions has delivered “massive benefits” to both its business and IT operations.

Delivering Real-Time Tracking Information: “We are now updating our Web facing applications with tracking data in near real time and we have the option to stream this data to clients in the same near real-time framework,” says Leyland. “ Our retail clients are thrilled to have this real-time visibility, and they can now communicate with their customers faster and with greater accuracy than before. This project has been a major step forward for Hermes.”

New Opportunities for Growth: “We are now able to offer new products and services to our clients for example, we can communicate directly with the customer on behalf of the retailer,” explains Leyland. “Also, if we are working with a new client that wants real-time capability, we can quickly make that available with minimal development work.”

Increased Control Over its Business through Visibility: “With our previous system, once the courier picked up the parcel we had no visibility into what was happening past that point until the paperwork returned and was inputted into our systems,” says Leyland. “But with the combination of our mobile and messaging solutions, we know in real time if the courier has arrived, whether the parcels were picked up, if they are in route to their destination, if and when the driver dropped them off, etc. This data is very valuable for our operations reporting.”

Immediate Alerts and Sophisticated Monitoring: “The alerting mechanism is much more sophisticated with Fuse HQ than what we had before. Previously, if we had a problem it would take somebody to actually acknowledge the problem, raise a call, and get someone in to have a look at the problem. Fuse HQ automatically generates an alert and allows us to get a better diagnosis of the problem within



five minutes versus 30 minutes with our old system,” says Leyland.

Working with State-of-the-Art Technology: “Working with Fuse is also enabling us to expose our IT people to some of the newest technologies and ways of doing things that our market and our clients demand,” explains Leyland. “When I first joined the company a couple of years ago, the developers were working in very traditional ways. With Fuse, they have significantly expanded their skills which is exciting. So the benefits to our group are really tangible.”

EXTENDING THE VALUE OF FUSE

Dickinson believes the messaging system could benefit other areas of Hermes’ business. “There is additional information that is collected as we manage the parcels through our depots and hubs that could be valuable as real-time information in regards to our internal operations. We will be working over the next year to 18 months to see if we can add additional services, by actually putting that data into the real-time message queues.”

The company may also explore further ways it can leverage its new messaging solution to capture additional information, for example by having the couriers offer new products and services at the time of pick up or delivery.

SUCCESS DRIVEN THROUGH COLLABORATION

Gary Parlett, Founding Director of Answer Consulting attributes much of the success of the Hermes project to the close partnership between his group and the Hermes team. “The relationship between us was very effective because it was a true collaboration. We brought in some skills and experiences that fit well alongside Hermes’ very good project management. We have implemented Fuse for both financial services and retail companies, so we certainly realize the benefits of real-time messaging across the supply chain. We always enjoy working with leading businesses like Hermes that are trying to be innovative in a highly competitive environment. We are thrilled that they are finding value from Fuse, and we very much look forward working with them in the future.”

ABOUT ANSWER CONSULTING

Answer, formerly UPCO, is a creator of business solutions for some of the world's leading companies. Creators of bottom-line benefits for all sorts of big and small businesses in every sector, for a decade. It's not a simple thing, it's not a straightforward process, there's an art to it. From global telecommunication gateways to applying white lines on motorways, Answer understands that each business challenge is unique. <http://www.answerconsulting.com/>

Contact Answer Answer, Union Mills, 9 Dewsbury Road, Leeds, UK, LS11 5DD
On the Web: answerconsulting.com Email: answer@answerconsulting.com
Tel: +44 (0)113 2010 600