Audatex Case Study

Taking the weight off insurers and repairers with the help of Dunstan Thomas Consulting

Market pressures and the need to provide the best possible service to clients often makes the decision to re-architect a product inevitable. In the case of Audatex, which provides estimating systems to the motor repair and claims industry, the big question was how to move its market leading software from a multi-user architecture to a web services model as smoothly as possible – without interrupting service to its 2,500 users in the UK.

With the help of Dunstan Thomas Consulting, it achieved its goal to create a high quality software application following best practice programme management processes within tight timescales.

Audatex operates at the hub of the motor repair and claims industry. Owned by US giant ADP, its UK operation is part of a European network of organisations that serve the needs of local motor repair industries. Audatex UK is based in Theale, near Reading, and has around 80 employees.

Audatex has a 75% share of the UK industry. It builds its own software products, but incorporates functionality that is common to all Audatex operations in Europe: a sophisticated graphics package and an offline calculation engine.

Its role is to process estimates from garages, which need to be approved by insurance companies who are being asked to pay for the work.

AudaWorkstation is Audatex UK's flagship product. Audatex began by providing a paper-based claims management process, then developed AudaWorkstation over a number of years. It migrated its software to Microsoft Windows in the late 1990s, and introduced a multi-user version soon afterwards.

Despite Audatex's dominance of its marketplace, it cannot be complacent. It needs to constantly review its software and whether new developments in technology can improve either the way its products operate, or the value that they deliver to clients' businesses.

Mark Stamp, head of product development at Audatex UK, explains why the decision was taken in early 2002 to migrate AudaWorkstation to a web services environment.

"The way the product was structured meant that each customer had its own installation of the software," he says. "That meant upgrading every installation one by one whenever we introduced new releases.

With a web services model, users would access systems hosted at our building in Theale via a feature-rich interface running on a local client pc. We would be able to bring our product up to date, but also have much shorter release cycles in the future."

Having made the decision to re-architect its software, Audatex looked for a partner to help move the project forward smoothly. It had worked with Dunstan Thomas Consulting in the past, when it provided technical training services to Audatex.

"We liked the way they worked, and we were aware that Dunstan Thomas Consulting had skills in Rational Software's RUP methodology," Stamp explains. "We designed the new

software in-house, then brought Dunstan Thomas Consulting in to review the design and help us to bring more process and control to the development programme."

The RUP methodology enabled Dunstan Thomas Consulting to help Stamp's team define roles and responsibilities for the programme. It also provided a framework for documentation and a method of capturing feedback from the wider business.

"We liked the fact that we had regular opportunities to get feedback, and therefore buy-in, from others in the company," Stamp says. "The business analysts in our team were able to act as a bridge between product development, marketing and senior management."

The next stage was to build the new product. Audatex needed extra resource to write the software code, which would eventually top a million lines.
"Naturally we turned to Dunstan Thomas Consulting again," says Stamp. "It had already given us in-depth advice on the design of the product, and we wanted to draw further on its knowledge and experience of building web services applications for other organisations."

The product development phase took around four months, with the team hitting weekly milestones every Friday. The team used Borland Delphi 7 to build the software, which is based on Microsoft dot.net and Enterprise Architect technology. It also used Test Robot from Rational Software to simulate testing across 500 users.

Although the new product is built on the web services model, Audatex made the decision not to move to a full application service provider (ASP) platform, whereby all functionality is held in a central hosted system and client pcs have only a very thin web interface.

Instead, the new product would still have 'fat' feature rich clients that could be updated remotely when new versions are released.

"The central application is so big that we couldn't redevelop it as an ASP service in one hit," explains Stamp. "It was important to introduce major architecture and functionality change in this first phase, then to consider ASP for the future."

Another factor to consider was that the new software had to interface to legacy systems, notably the powerful calculation engine that works out costs of repairs based on data and images submitted by mechanics. And with 2,500 users, Stamp knew that it would be impossible to roll out such a major upgrade overnight. The new and the old systems would need to operate in parallel for several months, and this involved a great deal of work mapping existing processes and file formats to the new system.

Beta testing of the new product began in 2003, and the first implementation went live in July. The system is based on sophisticated workflow and plug-in modules that support all of the processes that surround estimating, which is still handled by the same Audatex calculation engine.

Those processes could include ordering courtesy cars, sending SMS messages to customers letting them know progress on a repair, ordering parts for repairs, invoicing and matching invoices to estimates.

"Our goal in life is to take the weight off insurers and repairers and to make the whole process of getting claims resolved as smooth as possible," Stamp says.

A key difference between the old and new versions of Audatex's software is that information available to insurers and repairers, such as parts and motor specifications can be updated centrally, says Stamp.

"With the old system, each repairer has its own database populated with information about cars, vans and motorbikes," he explains. Every time model data changes, an upgrade to relevant datasets needs to be sent out. That's not so bad for the insurers, because they tend to have one system to update. But the repairers all have individual databases to change, and it can be a time consuming process. With the new system, the database is managed and updated centrally."

Another benefit of the system to insurers and repairers is that they don't need to worry about back-ups and disaster recovery, because this is part of the service provided by Audatex with its centrally managed system.

"We have also made it easier for repairers and insurers to adapt the system to their own businesses," says Stamp. "They can configure the workflow to create standard business processes for their particular organisations."

Because the system is web-based, insurers can also balance workloads between different contact centres. With the old system, each branch office or contact centre had its own records. With the new system, users across the whole organisation can access common data and support customers across a wider region.

"An insurer may have a contact centre in Northampton and one in Exeter," says Stamp. "Northampton may be busy, while staff in Exeter have nothing to do. With the new product, each office can access the other's information."

Audatex will roll the new product out to users over the next 12 months. It will require minimal retraining, because the interface is built around familiar Microsoft Outlook technology.

"We're pleased with the way the programme has run over the past 18 months, and we're confident that the new product will add real value to our customers," Stamp concludes. "It's never easy grasping the nettle and re-architecting a core software product.

But the rigour and technical know-how that Dunstan Thomas contributed kept our programme on track. The guys we worked with came up with fistfuls of ideas, they were right in there with us and proved to be invaluable. They showed dedication and loyalty to the product development team and to Audatex."

With the first public release of the project now well under way, Dunstan Thomas Consulting's involvement in the project has benefited Audatex in several ways. Firstly, its consultants were able to contribute invaluable guidance and experience to the decision making process for the new software architecture. Coupled with the Audatex team's domain knowledge, the result was a more robust, scaleable and more manageable software architecture that will support many new releases and revisions of Audatex's products.

Secondly, the adoption of a tailored software development process has not only improved cohesion and co-operation within the Audatex team, but has also reduced dependencies on individuals in favour of well defined project roles. For example, the already outstanding testing team were able to integrate into the whole development life cycle where previously they existed as an extra step at the end of the coding stage.

Thirdly, formalisation of analysis and design techniques using UML and the extensive use of design tools has resulted in the generation of tens of thousands of lines of code and better internal documentation of design decision. This has reduced long-term maintenance costs by increasing visibility of the impact and opportunities for future changes and enhancements.

And finally, in addition to training the whole Audatex team in current best practises (including requirements management, OOAD and component-based iterative development), Dunstan Thomas consultants were there to help Audatex "walk-the-talk" ensuring that classroom lessons became a new daily way of life to gain maximum value from all the training received.