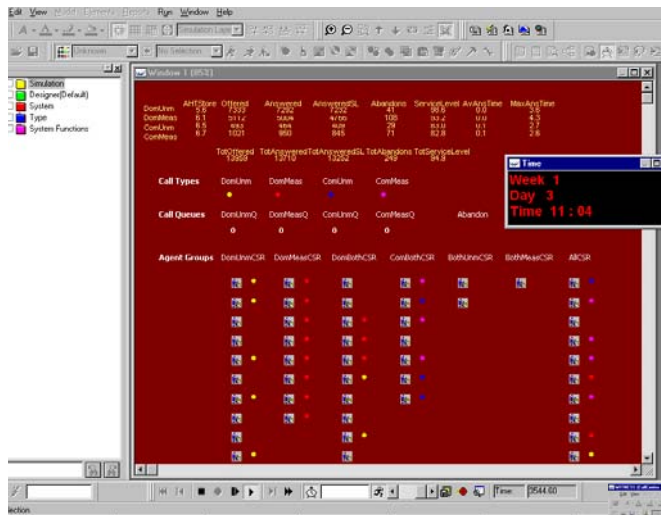


Vertex Make the Right call



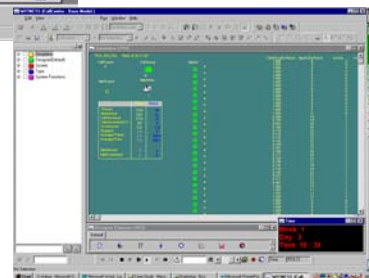
The ability to improve operational performance with minimal additional expenditure is one of the primary reasons why organisations worldwide rely on Lanner Group's simulation technology. One such company, the business process outsourcer, Vertex, has experienced massive benefits with WITNESS, with one project resulting in service levels increasing by a staggering 49%.



Part of FTSE 100 company, United Utilities Vertex is one of the UK's biggest customer management specialists. The company manages end-to-end customer service on behalf of its clients, from initial acquisition through fulfilment and servicing to customer retention. Its client base is diverse, including numerous retailers, technology companies, local authorities and utilities. To date, Vertex has handled over 200 million customer transactions and has collected £6 billion on behalf of its clients!

"Vertex is passionate about service and prides itself on its ability to be effective, efficient, yet innovative. In WITNESS we recognised a tool designed to be just that"

Steve Helm, Head of Business Modelling



Vertex began using WITNESS in September 2002. According to Steve Helm, Head of Business Modelling, WITNESS provided a good fit with the company's overall business strategy. "Vertex is passionate about service and prides itself on its ability to be effective, efficient, yet innovative. In WITNESS we recognised a tool designed to be just that, with the added flexibility that it can be used in all areas of the business."



As a result, it is hardly surprising that Vertex' use of WITNESS to date has not been restricted to one area. Initial projects have included the modelling of five contact centres, the processing of housing benefit claims, modelling of Vertex's fulfilment operations and for central government, analysis of customer conversions to direct benefit payments. Indeed, WITNESS has even been used to model revenue generation for Vertex itself.

However, one project that has been particularly successful, was the modelling of a contact centre for a new utility client. The operation deals with seven different types of calls. Each call is routed firstly to agents working from home, then, if it remains unanswered, to a second site, and finally, to a central contact centre. Although some agents were dual skilled, the majority of agents were only able to deal with one type of call. The operation was facing a number of problems. The service level, measured as the percentage of calls answered within twenty seconds, was below target, whilst the call abandonment rate was considerably higher than required. Given the constraints (including cost) which faced the operation, Vertex had already established that shifts could not be further optimised and improvements were also hampered by the ring-fencing of two of the call types i.e. where calls can only be dealt with by one specific group of agents.

Vertex already recognised that there were numerous solutions to the performance problems, all of which could be explored within WITNESS. Firstly, additional staff could be employed or the existing workforce could be multi-skilled. Alternatively, the company could tap into underused resource in the document handling unit which currently was operating as a ring-fenced stand alone area. Another idea was to blend the two ring-fenced call types with the main contact centre so that they could be handled by a greater number of agents. Finally, the operation could examine the benefit of networking the skill-set - removing the existing hierarchical routing of calls from home-workers through to the main contact centre, thus creating one central contact centre.

To date, Erlang queuing theory had been used along with Excel to plan resource requirements but Vertex recognised that neither could deal with the complexities involved in exploring these very different potential solutions. Says Steve Helm, "we wanted to be able to accurately forecast performance improvements resulting from each small incremental change we make to the operation, and with Excel, this just isn't feasible. Crucially, with WITNESS we can chart performance changes as well as compare scenarios to find the best solution to our needs."



By the time Vertex embarked on this project Steve's team had already built several models and had experienced varying teething problems, primarily surrounding the issue of data collection and internal cooperation. As a result, the company decided to devise a standard simulation process which would be followed for each subsequent project. This approach works well for Vertex. By scoping each project at the outset, everyone involved is aware of what the business requirements are, who and what will be involved, and when it will happen. Once buy-in has been achieved from every area of the business, an initial model is built. Before proceeding with the simulation process, Vertex review the model with its operational staff to verify that it does indeed, reflect actual operations.



The model is then fine tuned and validated against the wealth of historical data which exists within the call centre industry. Only when Vertex is happy with the accuracy of the model does the company proceed with modelling of different scenarios and analysis. The final stage of the process is the hand over of results and recommendations to operations.

This particular model build posed some interesting challenges. Firstly Vertex had to ensure that the call routing was correct and that the calls were getting to the right agents. Key to this was ensuring that the call logic was correct; some units work on priorities whilst others work on the longest time in queue (based on the skill level of the agents). The creation of an overflow to the document handling area was a particularly complex exercise as Vertex had to ensure that calls were only sent to that group when an agent was available (hence not impacting the document handling workload), and when the caller had been waiting a given amount of time (and thus became a risk for abandonment). Repeat calls was an area that Vertex had not really been able to analyse before but by using WITNESS Vertex were able to really understand the issues involved. By looking at what percentage of people who hang up might call back and how long they might take, Vertex were able to strip out the number of calls attributable to repeat calls and re-run the model to check that the outputs matched the original call volume. As a result, Vertex was able to gain a true view of demand not the inflated demand. Vertex also had to consider the impact of transfer calls - when somehow a call has been routed to the wrong agent and needs to be forwarded to someone else.



The first scenario to be examined in WITNESS was whether it was beneficial to employ extra staff or multi-skill existing employees. The results were dramatic. With the existing staffing levels, WITNESS showed that multi-skilling would in fact worsen service levels as each call would effectively be held in one queue. However, as staffing levels increased so did performance. Importantly, WITNESS was able to show that whilst service level targets could be met by simply increasing staffing levels by 45%, if staff were also multi-skilled, the required increase in headcount was only 35%, thus showing an immediate 10% saving in headcount.

The second scenario considered the feasibility of overflowing calls into the document handling section in order to exploit underused resources. Vertex wanted overflow calls to account for 20% of the workload of 30 members of staff. WITNESS showed this could be achieved if calls were redirected after 15 seconds.

Another idea Vertex explored was how any reductions in call duration and call volumes would impact performance. Once again WITNESS revealed some interesting trends. Whilst reductions in either duration or volume alone did not lead to a significant improvement in service, if improvements could be achieved simultaneously then the effect on performance was significant.

Having successfully built the model and explored these initial scenarios, Steve's team handed the model over to operations. After experimenting further with WITNESS, the operational staff decided to take on board its recommendations; multi-skilling the workforce, taking on some extra staff and using the overflow facility. They were also able to reduce call duration slightly through process improvement and through the identification of true demand, in effect reduce call volume. The end result has been staggering with service levels increasing from 55% to the target of 82%, and the abandonment rate being slashed from 18% to 5%.



Steve Helm is delighted with this project. "Thanks to WITNESS we have vastly improved performance of this operation. Key to this was a successful model build and crucially, early buy-in from operations who very quickly understood the benefits it offered. All in all this is a really successful WITNESS application which we aim to repeat time and time again."

