

Hospital Trust creates new operational efficiencies with IP innovation

“We were definitely not trying to find a quick fix. Nevertheless, we saw vendors trying to shoehorn our requirements into ‘off-the-shelf’ enterprise-type solutions. Only BT and Nortel were prepared to listen to us and work together to develop a solution specific to the unique needs of our hospital.”

Bobbie Lawrence
Head of IT Service Delivery
Guy's and St Thomas' NHS Foundation Trust

BT Nortel converged solution helps Guy's and St Thomas' NHS Foundation Trust transform the customer experience – delivering fast access to optimised healthcare services and comprehensive major incident management

Executive Summary

As one of the largest NHS Trusts in the country, finding new ways to do more for less is a constant challenge for Guy's and St Thomas'. The logistical task of handling in excess of 20,000 calls a day had started to expose the limitations of its ageing technology and disparate systems. Faced with duplication of resource and increased frustration from customers incurring time and cost in trying to contact the hospital, the Trust chose to take decisive action.

Recognising the Trust's unique needs, BT and Nortel worked with Guy's and St Thomas' to develop a bespoke solution providing a unified communications platform to support a mixture of technologies – including 7,200 TDM-based extensions, 1,200 IP Phones. In addition, the Trust was able to benefit from computer telephony integration (CTI) and interactive voice response (IVR) capabilities, all integrated within a brand new contact centre.

The results have been spectacular. With 92 per cent of total calls – internal and external – being automatically dealt with

by IVR, customers now have fast access to healthcare services. Rather than downsize, the contact centre is offering new services yet still removing £92,000 in annual cost and generating valuable revenue that can be used to refresh its technology in the future. With improved capabilities, in 2005 the Trust was awarded Best Telephony Project at the Communications In Business awards in recognition of its achievements.

Marketplace

One of the largest hospital Trusts in the country, Guy's and St Thomas' NHS Foundation Trust has 9,000 staff dealing with more than 750,000 patient contacts a year. The Trust acts as a general hospital in addition to offering specialist services such as cardiothoracic, cancer, renal, vascular, and critical care. It also provides world-renowned teaching and training facilities and is a leading centre for research and development. The constant challenge for healthcare providers is to do more for less – finding new ways to improve service efficiency and quality of patient care, while driving down costs.

Case study

Guy's and St Thomas' NHS Foundation Trust

“We expected an initial ‘bow wave’ of calls hitting the switchboard as people become familiar with new DDI numbers. Working with BT and Nortel we were able to plan ahead to effectively manage this situation. This also included the provision of training to bring our own engineers up to speed with the latest technology.”

Bobbie Lawrence
Head of IT Service Delivery
Guy's and St Thomas' NHS Foundation Trust

Business opportunity

Even though Guy's and St Thomas' had been amalgamated into one single organisation for some time, from a networked IT and communication services perspective it still operated as two separate entities, each with its own switchboard and operators. The hospital campus was geographically spread across the two main sites at London Bridge and Westminster – each with different public telephone numbers and separate dial plans – as well as various smaller satellite sites. This presented many challenges.

Bobbie Lawrence, Head of IT Service Delivery for the Trust, explains: “Our disparate phone systems caused confusion for the general public who tended to incorrectly pre-fix extension numbers, resulting in calls being misrouted at all times of the day and night to other local numbers. This led to complaints from inconvenienced residents and businesses, as well as frustration from the people who were incurring unnecessary time and cost in trying to contact the hospital.”

The logistical task of handling in excess of 20,000 calls a day had also started to expose the limitations of the ageing TDM-based technology. For example, the systems only offered ‘behind the switchboard’ extensions that the public were unable to dial into directly. Moreover, the inability to effectively transfer calls between sites meant that operators wasted time trying to track personnel down.

Lack of scalability and capacity meant that the legacy systems were unable to support future growth and – fast approaching obsolescence – maintenance was starting to become a problem. With the planned opening of the new Evelina Children's Hospital on the horizon, and the unwelcome prospect of having to add a third separate switch, the Trust decided the time was right to consider other technology options.

Solution

As part of a formal tender process, the Trust wanted to not only refresh its technology but also to forge a long-term relationship with a partner that could help it identify ways to innovate and improve the hospital's performance.

“We were definitely not trying to find a quick fix,” Bobbie Lawrence continues. “Nevertheless, we saw vendors trying to shoehorn our requirements into ‘off-the-shelf’ enterprise-type solutions. Only BT and Nortel were prepared to listen to us and work together to develop a solution specific to the unique needs of our hospital.”

High on this list was to find a hybrid solution that fused together the best of both options – traditional switchboard capabilities with feature-rich contact centre flexibility. Bobbie Lawrence explains why: “The contact centre mind set will typically look to deal with calls and add value, rather than simply pass them on. This works well in many industries but in the healthcare context it is not practical all of the time. For example, with regard to emergency services, cardiac arrests or major incidents.”

Other key requirements included the need to support existing TDM-based services, the roll out of IP telephony and the eventual deployment of wireless LAN communications. Working closely with BT Professional Services personnel the hospital was able to design, build, and extensively test a Nortel-based proposition. The Trust only moved into the implementation phase once it was satisfied that a tick had been placed in every box.

Over 100 BT engineers worked on-site over one weekend to deal with changing part of the environment from analogue to digital or IP requirements, before completing the actual changeover in just 15 minutes.

Case study

Guy's and St Thomas' NHS Foundation Trust

Bobbie Lawrence says: "As part of our migration to the new solution, we expected an initial 'bow wave' of calls hitting the switchboard as people become familiar with new DDI numbers. Working with BT and Nortel we were able to plan ahead to effectively manage this situation. This also included the provision of training to bring our own engineers up to speed with the latest technology."

The solution delivers unified communications via two Nortel Communication Server 1000s – individually sited at Guy's Hospital and St Thomas' Hospital, and connected via a MegaStream circuit and Sig Servers– with an additional resilient link to ensure high availability. This campus-wide platform integrates with the hospitals WAN to support legacy voice services – some 7,200 analogue and digital extensions – plus IP telephony currently for around 1,200 users. Built using open standards, the converged solution also supports the hospital's existing paging application.

Moreover, by using the Nortel Media Processing Server 500 (MPS 500) the Trust has become one of the first in the UK to deploy Interactive Voice Response (IVR) within its front office operation and, by doing so, has dramatically improved call handling through automation. The MPS 500 SpeechDial application makes this possible by using Nortel's advanced voice recognition technology allowing callers to request connection to any person or department without the need for operator assistance. The flexibility of the system means callers can ask to be routed to the desk phone of the person they are trying to reach and multiple choices are offered when, for example, there is duplication of surname.

Released from the task of answering incoming calls, the Nortel Contact Center has enabled the Trust to move its operators into a new, centralised contact centre at its St Thomas' site. With instant access to a suite of intelligent applications, including Nortel CallPilot Unified Messaging, agents can now handle multiple new tasks with consummate ease. Other benefits of this new IP environment include computer telephony integration (CTI) that guides the handling of calls using uniquely scripted pop-up screens – with retained capability to forward calls where necessary. In addition, voice-recording features ensure that the hospital meets its statutory legal requirements and also assists with the training of new contact centre staff.

Results

IP voice and call centre innovation has helped Guy's and St Thomas' NHS Foundation Trust to transform the caller's experience by providing fast access to healthcare services. Routine tasks, such as appointment scheduling, patient transport and other general enquiries have been streamlined and automated. Combined with the ability to dial directly into hospital extensions that has dramatically reduced call volumes. With 92 per cent of total calls – internal and external – being automatically dealt with by Nortel IVR SpeechDial, the Trust has raised the bar on customer service.

For example, of the remaining calls that come through to the contact centre, 95% are answered within just five rings, with a below-industry-average abandonment rate of four per cent.

Now handling a daily average of around 5,000 calls, the contact centre has used this as an opportunity to focus on growth and areas where it can provide the Trust with increased value – through revenue generation and cost avoidance. For example, whereas the hospital was going to have to spend out on external recruitment services, contact centre staff now process applications and send out job packs within 24 hours. Providing an internal directory enquiries point, using BT-supplied software, has delivered further annual savings of £12,000. The Trust intends to use the proceeds from these new services to refresh its technology in the future.

With a more interesting and varied job, staff satisfaction and retention has also improved. In many ways, however, the most important change is the adaptability and flexibility provided by unified communications. In 2005, the Trust was awarded Best Telephony Project at the Communications In Business awards in recognition of its achievements, and is currently exploring mobility and virtualised contact centre technology options.

Why BT and Nortel?

- Other vendors tried to shoehorn the Trust into taking an off-the-shelf enterprise-type solution rather than address the hospital's unique needs
- Only BT and Nortel were willing to listen to the Trust's unique requirements and work with them to develop a bespoke solution
- The Trust wanted a long-term partnership: BT and Nortel were able to provide broad and deep technical skills, backed with comprehensive support and service management
- BT and Nortel offered a robust IP-based converged solution that would take the Trust forward for the foreseeable future

Case study

Guy's and St Thomas' NHS Foundation Trust

Technology blueprint

Two Nortel Communication Server 1000s provide IP telephony capability with capacity to serve all 9,000 voice extensions across the multi-site hospital campus. Communication Server 1000 is a server-based, full-featured IP PBX, providing the benefits of a converged network plus advanced applications and over 450 world-class telephony features. With in-built reliability and survivability it supports business critical applications including unified messaging, customer contact centre, IVR, wireless VoIP and IP Phones.

Nortel Contact Center supports both IP telephony and conventional TDM agents and provides skill-based routing, call treatment flexibility, real time displays, multimedia routing, and comprehensive management and reporting functionality – empowering contact centre managers with the tools and agility to deliver unprecedented care to customers.

The Nortel Media Processing Server 500 provides an advanced suite of capabilities including a full portfolio of Advanced Speech solutions, VoiceXML, and Session Initiation Protocol (SIP). Designed to seamlessly integrate with numerous CTI applications, the Media Processing Server 500 improves contact centre efficiency by providing fast, intelligent call routing and automating routine requests.

Nortel CallPilot is a unified messaging application that combines voicemail, e-mail and fax messages into a single mailbox — accessible by phone, any desktop PC, or mobile e-mail enabled devices (PDAs). The Trust's in-house IT & T team delivers maintenance of the system, with BT providing 2nd line support for diagnostics and fault resolution.

BT and Nortel products and services

- Nortel Communication Server 1000
- Nortel Contact Center
- Nortel Media Processing Server 500
- Nortel CallPilot Unified Messaging application
- BT Professional Services including project management, implementation, proactive support and in-life management

The BT Nortel value proposition

BT and Nortel have worked in partnership since 1990, delivering market leading converged communications solutions to businesses in all sectors and of all sizes across the UK and beyond. Together we have enabled six million desktops and empowered one million call centre agents, and those numbers continue to rise.

Today, BT is Nortel's biggest EMEA enterprise partner and one of its three largest global partners, and is fully accredited as a Nortel Gold partner with over 1,000 Nortel-trained technicians. The enduring success of the relationship comes from our intense focus on designing and supporting transformational approaches to clients' needs: fashioned by people who care from the strength of our combined products and services portfolios.

Offices worldwide

The services described in this publication are subject to availability and may be modified from time to time. Services and equipment are provided subject to British Telecommunications plc's respective standard conditions of contract. Nothing in this publication forms any part of any contract.

© British Telecommunications plc 2007.
Registered office: 81 Newgate Street, London EC1A 7AJ
Registered in England No: 1800000

