Gwent Healthcare
Delivering quality services

Gwent Healthcare NHS Trust
The Gwent Healthcare NHS Trust is one of the largest NHS Trusts in Wales providing high-quality healthcare to more than 600,000 people

Business Challenge
To ensure the highest quality of care while balancing expenditures in providing health services

Network Challenge
To implement a converged voice and data network

Preparing for the future

Gwent employs over 12,000 staff and provides a full range of surgical and medical services through its three acute hospitals. It is supported by twenty community hospitals, health centres, clinics, and extensive mental health and learning disabilities facilities.

Its major challenge is balancing between increasing demands and spiralling costs. For help Gwent turned to technology to achieve greater efficiencies and to control cost.

"We needed to upgrade several telephone systems and we also determined that the existing data network could not support the future applications we had in mind. So, we wrote a five-year strategy that covered both the voice and data," began Steven Harding, Head of IT Operations, GCS, at Gwent Healthcare NHS Trust.

Gwent wanted seamless integration with its existing systems, carrier-grade capacity with 99.999% reliability, easy systems management, backward compatibility, and good ongoing support. Gwent also wanted the flexibility to scale cost-effectively and to incorporate new technologies as they became available.

Concerned with interoperability issues Gwent decided to single source the project and began to survey the marketplace for a supplier that could meet all its voice and data requirements.

Roadmap to success

"It seemed sensible to me to look for a supplier who had a clear roadmap for convergence and a clear roadmap for our legacy systems," reports Andrew Bond, Telecommunications Manager at Gwent Healthcare NHS Trust. "I believe that Nortel Networks has the experience to ensure that voice traffic would fit on a data network better than the other supplier at that time," said Bond.

Harding added, "We liked the Nortel Networks future vision, the future product set and the easy transition from one to the other. Nortel Networks can provide a low cost – sometimes no cost – transition from today's technology to tomorrow's technology. For me this is a significant benefit."

Nortel Networks chosen as the standard for voice and data

Gwent selected Nortel Networks as the standard for voice and data based on an overall lower cost, lower risk for product obsolescence and superior service and support. Gwent subsequently installed a Succession IP-enabled Meridian 1 Option 61C with carrier-grade reliability, supporting both traditional voice and Voice over IP (VoIP) communications. For the existing Meridian systems Gwent is upgrading them to VoIP over time with the Meridian Internet Trunk Gateway.

For smaller locations Gwent selected the Business Communications Manager (BCM), the only industry-wide converged voice/data solution, providing customers a choice of either an IP-enabled or pure-IP strategy.

Optivity Telephony Manager provides a single point of connectivity to the voice systems and includes legacy Meridian support – all from a central location. In addition, Optivity

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Telephony Manager will be easily integrated with the Optivity Network Management System (NMS) that manages data networks to provide a complete management view of an entire converged voice and data network infrastructure.

Harding feels that, by having a common handset with standardised features across Gwent's locations, clinicians can move more easily between sites. Furthermore, the new 4-digit dialling plan has smoothed communications and led to the first phase of automated publishing of a Gwent Trust telephone directory. This is helping the Trust's staff cope better with the increasing demands on their time.

As a networking standard, Gwent also chose Nortel Networks data products. Following detailed discussions with ITS Technology Services Ltd (ITS), a Nortel Networks partner and integration specialist, Gwent selected Passport 8600 routing switches, Business Policy switches, and BayStack 450 switches for the Local Area Network (LAN). Over time, it will upgrade the remaining legacy Nortel Networks ASN and ARN routers on the Wide Area Network (WAN).

Immediate results

Immediate improvement has been seen with lower costs in the areas of training and spare-parts inventory.

Following the deployment of Optivity Telephone Manager and the Optivity Network Management System, Gwent is doing more with the same IT resources. Previously, six technicians managed four telephone systems (1,500 extension ports); the Wide Area Network (WAN) to 20 sites; and upwards of 1,100 LAN ports. Today, the same team manages 22 telephone systems (8,500 extension ports), the WAN to 40 sites, and over 3,000 LAN ports.

"The common interfaces have enabled Gwent to reshape its training budget," reports Bond. "Key staff members are now trained to a higher level and are able to pass on the skills more readily. Engineers now focus on the technical demands of the job rather than fighting to understand multiple GUIs (Graphical User Interfaces). The engineers find the on-line Meridian Documentation in OTM very helpful."

Bond also reports that since moving to Nortel Networks LAN switches the spare-parts inventory has been reduced by 60-75%. This has been achieved in part through network design and partly through the deployment of standard sets of scalable, resilient and fault-tolerant hardware components.

"Customer focused and a good partner"

The new solution, deployed in conjunction with Nortel Networks channel 'partners' ITS Technology Services and BT has proven to be very reliable, and robust.

"We recommend Nortel Networks because the products are engineered well," said Andy McCathie, Business Development Director at ITS. "They are absolutely reliable – the quality of software and hardware is exceptional, and the support we get from Nortel Networks is excellent. I feel confident that with Nortel Networks products my customers will get a good return on their investment."

Bond added, "Andy McCathie has been supporting Gwent for a number of years and has a very good team. ITS has proven to be flexible, knowledgeable, very customer focused, and a good partner."

Preparing for the future

Gwent is currently looking closely at Picture Archiving and Communications System (PACS) and image management for the many image-capture devices such as, MRI scanners, ultrasound, X-rays, retinal scanners, and even microscopes for improved consultant reporting on patient examinations and faster access to medical records.

"The investment in the Nortel Networks data network gives us the capacity to grow to meet such future demands. I am now well placed to deal with the bandwidth expansion that the acute hospitals will require for image transmission over the next 10-15 years. That's a good investment," said Harding.

In the next 10 years Gwent also envisions the creation of an electronic patient record system accessible electronically from any point of healthcare, from GP offices to hospitals or clinics, and potentially even to pharmacies and dentists covering every man, woman and child in Wales – about 3.5 million people.

"We are very impressed with the Nortel Networks equipment and we believe that it is a technology that will support the one patient record system, reducing queuing and providing more accurate information, immediately available to the clinical staff, thus speeding the delivery of service and improving the quality of healthcare to the population of Wales."