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CASE STUDY

Leeds Teaching Hospitals NHS Trust



**GHX**<sup>®</sup>

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## GHX - Pioneering e-Commerce in UK Healthcare

### Working with Leeds Teaching Hospitals NHS Trust to deliver success and further innovation as part of Scan4Safety

Leeds Teaching Hospitals NHS Trust is one of the largest and busiest acute hospital trusts in the UK. Over 17,000 staff provide local and specialist services for the immediate population of 770,000 and regional specialist care for up to 5.4 million people. Despite its size and complexity Leeds has stayed at the cutting edge of e-Commerce in healthcare since beginning its partnership with GHX over 15 years ago. Then, as now, Leeds' over-arching focus has been to provide high quality care to all its patients, all of the time. To enable this the trust recognised the need to focus not only on point of care processes, but also evaluate and refine other activities, constantly striving for greater efficiencies, improved patient safety and lower costs through the adoption of technology.

### GHX – Leeds preferred healthcare e-Commerce solution

GHX and Leeds began working together in 2002, when Leeds became the first UK hospital site to integrate GHX Exchange Services, which has since evolved into the largest and most sophisticated purchase-to-pay platform in healthcare globally. GHX Exchange provides hospitals and their suppliers a single electronic data interchange (EDI) connection for all orders and invoices, processing over £65bn worth of healthcare transactions every year.

Today, Leeds also utilise GHX NEXUS and GHX PowerGate. NEXUS is a cloud-based catalogue system, which facilitates the sharing of standardised data. It features an online data repository containing catalogue information with secured shared access for both Leeds and its suppliers. Now containing over two million clean catalogue items from over 350 healthcare suppliers across Europe, NEXUS covers 80% of the healthcare consumables and devices market.

GHX PowerGate is an inventory control system using barcodes and scanners to track where stock is currently sitting, what stock needs to be used for which procedure and what stock needs replenishment. PowerGate has also facilitated the track, trace and recall of care-critical items. Using PowerGate, Leeds has become one of the largest users of inventory management in the NHS.

Stuart MacMillan, Programme Lead, Leeds Teaching Hospitals NHS Trust commented: "GHX were, and still are, a great choice for Leeds in terms of healthcare e-Commerce technology. Their exclusive healthcare industry focus and specifically their expertise in delivering healthcare supply chain technology means they know the market inside out and understand how to build solutions that can handle the complexities of the healthcare supply chain. In addition, GHX have worked hard to not only establish a critical mass of both hospitals - like Leeds - in the UK, but importantly thousands of suppliers locally, nationally and internationally, enabling us to plug directly into this resource without having to reinvent an infrastructure for collaboration."



# 350 healthcare suppliers

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## Scan4Safety

### A solid relationship created an ideal test opportunity

Leeds is the largest of six demonstrator sites to start England's National Health Service Scan4Safety programme. Each site was tasked with showcasing the benefits of adopting GS1 and PEPOL standards in the implementation of three primary use cases covering - inventory management, purchase-to-pay processing and product recall, and three core enablers, namely – patient, product and place.

While GHX provided its technology in four out of the six demonstrator sites, Leeds was unique in that it was the only site choosing to use a single technology provider across all key areas of the Scan4Safety initiative – a fantastic showcase, not only for the optimal use of GHX products and the relationship between Leeds and GHX, but also a good test-bed for Scan4Safety, since, if you can make it work at Leeds, given its complexity, you can make it work anywhere.

Stuart MacMillan added: "Leeds have been on the e-Commerce journey since 2002, working collaboratively with GHX throughout. While we had already adopted many of the standards and were utilising technology for greater efficiency, Scan4Safety has pushed us, and GHX, to really build on these solid foundations and expand upon them. Our vision, at Leeds, was to completely disrupt the healthcare industry through the utilisation of standards and interoperability and I believe we have made positive steps towards achieving that vision."

GHX share the view that Scan4Safety has been an important step in taking its solid, collaborative relationship with Leeds further forward. Phil Thurlby, Technical Account Manager, GHX said: "GHX has supported Leeds throughout the Scan4Safety programme, working collaboratively on solution delivery, bespoke developments, data enrichment and process consulting. Together we have formed a strong relationship that has delivered the best outcomes for all."

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## **GHX, Leeds and suppliers worked collaboratively to push the boundaries in the key areas**

### **Improved Data Management:**

In early 2016, in coordination with Leeds, Plymouth and Salisbury hospitals (additional Scan4Safety demonstrator sites where GHX has a presence), GHX undertook an exercise to enrich catalogue data with more than 100,000 additional GTINs (Global Trade Item Numbers – the GS1 standard for identifying products). This data was added to GHX’s NEXUS Repository making it immediately available to all NEXUS customers throughout the NHS. For Leeds, having a singular, transparent source of product information for all products purchased by the Trust has been key to achieving success in other areas of Scan4Safety.

Stuart MacMillan commented of the exercise: “As a direct result of this initiative, our catalogue now holds over 130,000 GTINs and the data has been integrated across all points in our demand systems. This enables us to scan products efficiently at the point of care and automate the process of re-ordering products, using the GTINs referenced on suppliers’ packages.”

GHX has taken this a step further still - providing the only master data management (MDM) solution in the UK linked to an actively used GDSN data pool — via GHX NEXUS. Smith & Nephew, a global medical technology business, adopted GDSN practices, which in turn instantaneously enriches Leeds own data management. In a proactive move towards future strategic development, Smith & Nephew has now also adopted the use of a GDSN data pool (GHX Health ConneXionSM) to ensure they are ready to satisfy the evolving demands of multiple markets.

Phil Thurlby commented: “GHX’s connections, both with suppliers such as Smith & Nephew and the large number of healthcare providers, means that any advances in this area creates an almost immediate benefit to a large proportion of the healthcare industry. GHX’s volume of connections, on both sides, when coupled with our technology makes us an obvious choice for those doing business within the healthcare sector.”

### **Leading the way in electronic data interchange (EDI)**

Bringing together nearly two decades of EDI experience in the UK healthcare market, GHX has provided a PEPPOL-certified Access Point via the GHX Exchange. As a result, Leeds, having been among the first wave of users to adopt the Exchange in 2002 now see 86% of all purchase orders (POs) and 13% of all invoices going through their PEPPOL Access Point.

Whilst the advent of PEPPOL within the NHS has opened the door for new access points within the UK, many are still struggling with issues associated with fundamental EDI processes and practices in healthcare, such as use of the UBL structured message format. This is not a format that is commonplace in healthcare, particularly in the NHS.

To help alleviate issues like this, GHX and Leeds pooled their combined experience, and along with members of the Department of Health, formed the PEPPOL Implementation Workgroup. This group has held national workshops, produced the Data Dictionaries for NHS PEPPOL use and continues to steer the development of a robust and reliable PEPPOL network in the UK.

“The results speak for themselves. Using the GS1 compliant GHX PowerGate allowed us to reduce on-hand inventory in our theatres, wards and pharmacy by more than £1.5million and gave our clinical staff more time to care for patients.”

### GS1 Compliant Inventory Management

Constant innovation is at the heart of what GHX does. GHX PowerGate is an excellent example of this approach. PowerGate provides a GS1-compliant and enabled inventory solution and version 5 of the technology was developed specifically with GS1 and PEPPOL requirements in mind. Bringing Leeds into the development and testing process ensured provider requirements were kept at the forefront. The resulting technology allows for the intelligent collection, sorting and population of various product identifiers, including GTINs, batches and serial numbers, as well as the collection of patient identification data, which can be used to link each product administered or used on the patient. Using PowerGate, Leeds has been able to reduce the time it takes to locate products for a safety recall from days to minutes.

GHX and Leeds went on to collaboratively develop a mobile application of PowerGate, which works in the Trusts operating theatres, allowing clinical staff to scan patient's GSRN from the barcode on their wristband, the theatre's GLN to identify its location, and the barcodes on products issued at the point of care.

Phil Thurlby said: “Combining this information with other systems throughout the Trust has blown open a world of opportunity regarding the combining of data from inventory, ward systems, patient records, estates systems and many more sources to garner a holistic view of the organisation and its people. This has really allowed Leeds to make better, more informed long-term strategic decisions.”

Stuart MacMillan added: “The results speak for themselves. Using the GS1 compliant GHX PowerGate allowed us to reduce on-hand inventory in our theatres, wards and pharmacy by more than £1.5million and gave our clinical staff more time to care for patients.”



# £1.5million

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**98.7%**

compliant following the audit  
by the Department of Health  
and Social Care

### **Further innovation and development**

Leeds appetite for innovation and development continues. The Trust has used the implementation of Scan4Safety with GS1 standards to develop a successful prototype that allows real-time patient tracking. Nursing staff can now scan a patient's barcode on the wristband and either open the record or pinpoint the location down to the bed level. The electronic whiteboard on a ward is then updated with this information, showing the exact location of the patient.

Stuart MacMillan believes the Trust is leading the way in the NHS to implement this solution. He added: "The implementation of real-time patient tracking has led to a host of benefits, including reduced calls from the patient's family; an improvement in the information that can be shared with them (which leads to their increased satisfaction); clinical time saved when locating patients and improved management and efficiency of our theatres and beds."

### **Scan4Safety success at Leeds**

In February, following the submission of evidence declaring the completion of the three core enablers and three primary use cases, a thorough audit by the Department of Health and Social Care (DHSC) took place.

Leeds was found to be 98.7% compliant with the control points; an incredible feat for a Trust of this size and validation of the e-Commerce journey the Trust has been on with GHX.

Compliance was made up of 140 (94%) of the 149 control points in the audit being signed off, with a further seven control points (4.7%) being deemed not applicable, and two minor control points (1.3%) requiring plans for future roll outs.

The audit found Leeds to have operationally deployed the core enablers and have a sustainable model for the future, including breaking new ground on patient tracking using GS1 standards.

Stuart MacMillan concluded: "This is a great result which demonstrates that by taking a joined-up approach to e-Commerce, even the most complex of healthcare providers can address these complexities and see some huge patient and financial benefits. At Leeds we feel we are still very much on the journey – there is so much more we can do with the fundamental building

blocks of patient identifier (GSRN), place (GLN) and product (GTIN) to significantly expand the use of real-time, point-of-care data capture. In the not too distant future I can see data capture allowing clinical variance to be fully addressed, improving the patient journey and reducing the cost to the NHS. However, to do this successfully we need the right partners by our side, like GHX, who not only have the right solutions but also the right knowledge and experience to ensure we are working at an optimal level."

Phil Thurlby added: "From a GHX perspective we are delighted to see Leeds achieve a great result in their Department of Health Scan4Safety audit. We are very proud that our technology has played a significant role in underpinning this success. The relationship we have with Leeds is critical to GHX - it allows us to stay close to the action, understanding the needs of a very complex healthcare provider. As our existing products develop and new products are created, we can take what we continue to learn from Leeds and other trusts to ensure we continue delivering solutions that robustly and comprehensively deliver against the ever-evolving demands of healthcare e-Commerce in the NHS and beyond."

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GHX connects thousands of healthcare suppliers, manufacturers and distributors with hospitals and GPOs - as well as working with Governments to advise on eCommerce legislation for healthcare. Our technology enables the right devices, equipment, services and medicines to flow efficiently through the European healthcare supply chain.

## KEY FACTS FROM THIS CASE STUDY:

- A more than £1.5million reduction in on-hand inventory in Leeds' theatres, wards and pharmacy.
- Reduction in the time it takes to locate products for a safety recall from days to minutes.
- Efficiencies have enabled clinical staff to focus more time on patient care.



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HEALTHCARE  
eCOMMERCE**



**ACCURATE  
INSIGHTFUL  
HEALTHCARE DATA**



**GLOBAL  
HEALTHCARE  
COMMUNITY**



**FUTURE-PROOFED  
HEALTHCARE  
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