

# Helping NHS organisations better manage non-pay spend: the benefits of the collaborative approach

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## Introduction

The impact of an efficient healthcare supply chain and purchase to pay (P2P) process expands far beyond the ability to successfully process and pay for orders transacted across the National Health Service (NHS). It is not just about the finance process but ultimately has a direct impact on patient care.

Having a streamlined process that engages all stakeholders means that a fully traceable, cohesive system is in place. This serves to ensure that there are fewer delays to product deliveries and payment processing, products are available when needed – preventing delays to patient care, and that items can be tracked and traced in the event of a product recall to uphold patient safety measures.

In 2014 [the NHS eProcurement Strategy](#) mandated the adoption of GS1 and PEPPOL standards to support the P2P process – a strategy which is underpinned by the accurate and unique identification of products and locations involved in the healthcare supply chain.

Following on from the release of the eProcurement strategy, the Department of Health and Social Care (DHSC) introduced the Scan4Safety programme in 2016 which centred on the implementation of these standards within NHS trusts.

Six NHS Trusts (covering a range of sizes, services offered, and complexity of patients treated) were funded by the DHSC to adopt both GS1 and PEPPOL standards. These six sites, as well as other NHS organisations who have since followed, have implemented these standards as part of their journey towards improving P2P processes by enabling more efficient electronic transacting.

The two-year programme has now successfully reached completion. The benefits and outcomes achieved were published in a full evidence report in July 2020 which can be found [here](#).

The need for wide-spread adoption of both these standards, will also prove even more critical to healthcare with the amendment to the [Medicines and Medical Devices Bill](#).

A fundamental part of this change is also underpinned by accurate product and location information. The intention is for these product and location details to feed into a [national patient-identifiable database](#) so that medicines and medical devices can be tracked and traced throughout the supply chain and directly to any individual patients. Eventually, this will replace the compliance requirements for the EU Medical Device Regulation (EU MDR) and Falsified Medicines Directive (FMD) in the UK.

In anticipation of the changes to come, [NHS Supply Chain have also reaffirmed their commitment](#) to the adoption of GS1 standards to ensure its national rollout is delivered successfully.

In order to support NHS organisations and suppliers with adoption in preparation for the upcoming changes, GS1 UK have collaborated with NEP Shared Systems Group (NEP), B. Braun Medical Ltd. (B. Braun) and York Teaching Hospital NHS Foundation Trust (York NHS FT), to work together on driving adoption of GS1 and PEPPOL standards for Trusts and suppliers.

This case study highlights first-hand accounts of the process, steps taken, challenges and benefits

from the perspective of each of the organisations involved and provides a well-rounded view of how this applies to all stakeholders, and why it is so critical for healthcare.

## The P2P process

P2P encompasses master data management, inventory management and sourcing. For most organisations, it is largely a manually driven process.

However, much like any manual process, it is left vulnerable to errors including inaccurate orders, delayed invoicing and payments, and an overarching lack of traceability and visibility due to the heavy reliance on paper-based record logs. This makes the P2P process inefficient.

The inability to manage this process effectively consequently has a negative impact on patient safety. Fortunately, using PEPPOL standards enables machine-to-machine transaction processing to facilitate the electronic transfer of information between every trust and supplier.

Used in sync with GS1 standards to uniquely identify products – using GS1 Global Trade Item Numbers (GTINs), and locations – using Global Location Numbers (GLNs), PEPPOL enables the automated matching of orders, invoices and delivery notifications thus speeding up subsequent payment while reducing direct requisition, ordering and payment costs.

GS1 UK, York NHS FT, B. Braun and NEP have been working together to digitise the P2P process for trusts and suppliers in order to improve efficiency across the system.

## The collaborative workflow

Each individual supplier and NHS organisation is uniquely identified throughout the entire P2P process, as each uploads their ship-to and bill-to GLNs into LocationManager<sup>1</sup> (the National GLN Registry), to provide a single source of truth for trust and supplier GLN information.

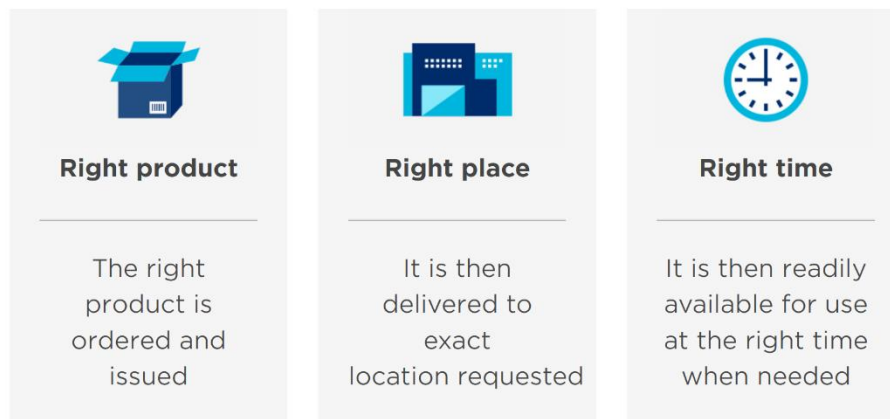
As a starting point, GS1 UK worked with York NHS FT and B. Braun to ensure that their GLNs were allocated and available to be shared via LocationManager. NEP began to ensure that each of the NHS Trusts and suppliers they support, had their GLNs allocated and available in the registry. This enabled them to provide assurances to both parties that the correct ship-to and bill-to locations were loaded and could be shared seamlessly across multiple organisations.

The GLNs are used to identify bill-to and ship-to locations on purchase orders (POs), while GTINs are used to identify the products. The use of GLNs and GTINs ensures that trusts and suppliers have access to accurate and up to date product and delivery information so the right products, are delivered to the right place, at the right time – every time.

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<sup>1</sup> LocationManager is a central database registry for GLNs. Further information about LocationManager can be found on the GS1 UK website at: <https://www.gs1uk.org/our-industries/healthcare/location-management/locationmanager>. Additional details can be found in the supporting information section of this case study.

**Figure 1.** The benefits of using GTINs and GLNs through the supply chain



## Motivations behind adoption for York NHS FT, B. Braun, and NEP

### York NHS FT

For Michael Davison, finance project lead for e-enablement at York NHS FT, the starting point was not necessarily straightforward.

“It would be a big lie if I started this briefing by saying we had a strategic plan about how to implement PEPPOL compliant e-trading York NHS FT – we didn’t. We didn’t have a grand plan, or even a tactical plan, but we did have a willingness and curiosity to embrace a new way of working.”

Prior to the PEPPOL e-trading project, the team had worked with NEP on a migration to Oracle Cloud. The project had proved challenging but they knew that once the initial hurdle had been overcome, there would be opportunities to bring process improvements with the support of Pagero and NEP.

“At first, we didn’t fully appreciate the benefits that PEPPOL compliant trading could bring, but we knew that any solution that prevented POs and payables invoices from disappearing into ‘black holes’ had to be a good thing.”

In simple terms, PO transactions were securely delivered into their supplier billing systems and they received payables invoices directly into their accounts payable system.

Additionally, the benefit of having access to a portal, provided by Pagero, was able to give the Trust complete visibility of all transactions moving to and from their suppliers. The portal also includes a reporting suite that presents the user with the last 90 days of transactions for a further audit trail.

In January 2020, York NHS FT’s initial success with the project was recognised with an award for technology and innovation by the Healthcare Financial Management Association (HFMA).

At the same time they began working more closely with more of their key suppliers, including Boston Scientific and B. Braun. The close collaboration with their suppliers improved their understanding of

the challenges faced by suppliers and accelerated the pace of supplier migration to PEPPOL trading. The lessons they learned during this phase of the project were translated into the next round of their supplier engagement plan.

## B. Braun

B. Braun were one of the first suppliers to engage with the DHSC's Scan4Safety programme. Since 2014, B. Braun have made significant progress in their ability to trade electronically with the NHS and are sharing information and master data about our products to enable the NHS to make accurate purchasing decisions.

When the opportunity to work with York Teaching Hospitals presented itself B. Braun were in a position to use their advanced skill set to engage with all required partners, both inside and outside their own organisation, to deliver a truly collaborative approach to the challenge.

The first thing they did was open a dialogue with the right people at York NHS FT. This was vital as both the trust and B. Braun needed to understand what they both wanted to get out of the project and pre-empt any potential issues they may have encountered.

Malcolm Dobson, process manager at B.Braun describes: "Once we had established the project goals, it was time to engage the appropriate stakeholders. From the outside, the PEPPOL four corner model looks simple: two access points (APs), a customer (the NHS provider organisation) and a vendor (the supplier). However, like a lot of things, we soon realised that things were much more complicated."

B. Braun started by mapping out and engaging with all their stakeholders, which from B. Braun's perspective meant working with several contacts from various organisations. In fact, their engagement network consisted of:

- York NHS FT – one point of contact
- NEP – one point of contact
- GHX (their AP provider) – multiple contact points
- B. Braun internal departments including:
  - Finance
  - IT development
  - Customer services
  - Master data management

It was evident that the organisation and effective communication between parties would be key to the project's success.

However, before they even began to talk about exchanging PEPPOL documents, they needed to align all their master data. So, all data relating to materials, pricing and locations was checked, validated and agreed by involved parties. "This is in my opinion the most important of the whole process. Ensuring that accurate master data is available means that we could focus on the process knowing we would not have data issues" explained Malcolm.

## Exploring the challenges

Once the master data was in both parties' systems testing began however despite assurances, PEPPOL is not 'plug and play' and this posed some initial challenges. As with any new connection, the flow and content of documents must be checked and validated. Even with the extensive preparation work they had done, small issues with the documents exchanged between systems we unveiled.

Throughout the testing phase, they were able to narrow down and solve each of the problems one at a time. They followed a systematic process of test and re-test until 'perfect' documents were flowing back and forth through the test system.

Once satisfied that documents were being exchanged without error, all parties were informed of the 'go live' date. It then became a case of monitoring and reviewing in and outbound documents. And for a short time after this period of 'hyper care', the process was established as business as usual.

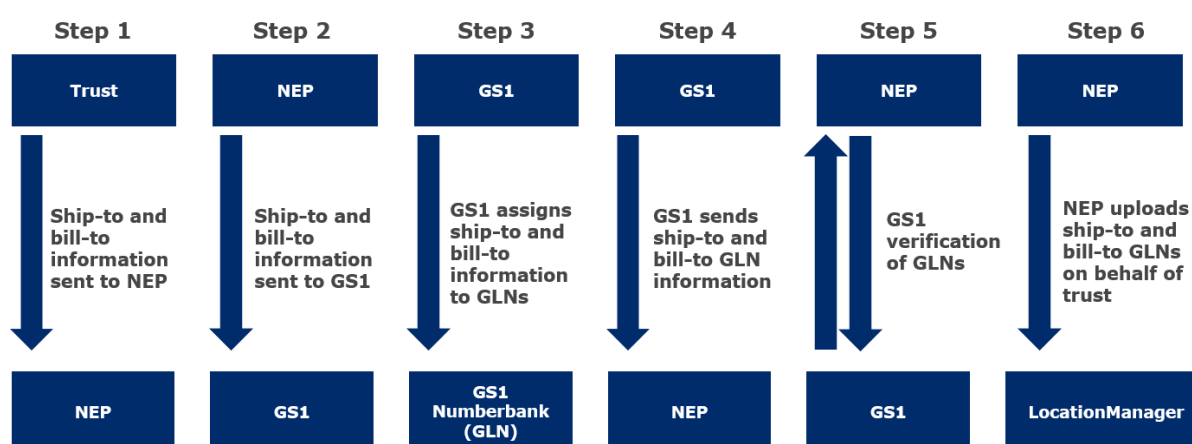
For B. Braun, the whole process was made easier by the collaborative and open relationship built with York NHS FT and their point of contact there. As Malcolm validates: "without this honest relationship, the process could have been a lot harder and taken much longer but has provided us with a template for future PEPPOL implementations."

## Widespread adoption for trusts and suppliers with NEP

The transaction of electronic POs and electronic invoices across the PEPPOL network is a key directive within the NHS eProcurement strategy. By collaborating with partners Pagero and GS1 UK, NEP has enabled this directive for its member organisations.

NEP and GS1 UK are working in collaboration to help NHS organisations allocate GLNs to their locations. So, for both suppliers and NHS organisations, this means that the bulk of the implementation is done on their behalf and they can go on to realise the benefits of electronic P2P quicker. The figure below demonstrates what this workflow looks like in practice.

**Figure 2.** Flow of GLN information for suppliers and NHS organisations



They also work closely with their client organisations to provide support with GS1 adoption and

assist with the end-to-end change management process. Collaboration across the Purchasing and Payables applications is actively encouraged throughout in order to streamline the P2P process while the NEP Cloud solution enables organisations to improve processes and move away from manual processing towards a paperless office.

Victoria Sleath, account manager at NEP reiterates: “Supplier engagement is absolutely key to streamlining the purchase to pay process in line with government directives. The benefit is clear to the supplier and buyer relationships, and the process is economically viable to all parties.”

As Victoria continues to explain: “To achieve this, we firstly need GLN registration as without accurate location information, products are susceptible to being lost and deliveries are at risk of being missed, resulting in unwarranted delays to vital patient care. And in the absence of accurate billing information, NHS organisations and suppliers could result in having troublesome invoice queries and delayed payments.

The introduction of GLNs has mitigated these risks to benefit the healthcare supply chain. It has introduced control within each of the stakeholder organisations and highlights the importance of keeping the GLNs updated.

A fundamental element of this success has been the close engagement with Pagero – NEP’s contracted PEPPOL access point for NEP organisations. This integrated PEPPOL solution serves to support in reducing the cost per transaction for each supplier and provides better value for NHS organisations.

Introducing automatic electronic POs and invoices through this transmission ensures that no manual intervention is required at either touchpoint. As a result, this reduces the risk of transcription errors and mistakes caused by manual invoice and PO matching. This allows staff to focus on other value-added tasks to further support the P2P process.

Now, from the NEP master file of suppliers, circa 400 key suppliers are already transacting via PEPPOL with several more currently in the testing phase as part of the on-boarding process.

Collaboration is the most important enabler, and together NEP and GS1 UK have developed a seamless initiative to support stakeholders with delivering the objectives of the strategy, which has proven to be successful.

## Benefits

### York NHS FT

At the present time, York NHS FT have in excess of 100 suppliers enabled for PEPPOL trading with a firm ongoing plan to engage other key suppliers.

As Michael explains: “We are also starting to understand the wider benefits of PEPPOL and how it can add value within our Consortia by supporting inter-company trading across the NHS. Going forward we will be able to send and receive invoices between NHS organisations reducing paper and improving accuracy ensuring we get it ‘right first time’.”

## B. Braun

A fully automated P2P system offers many benefits both in terms of accuracy, financial costs, and the level of service that can be offered to customers and partners. Agreement of material data up front (material GTIN, unit of measure and price to the customer), ensures orders and invoices pass through the system untouched. Less manual intervention means a reduced chance of errors. Plus, time freed during the P2P process can be used to add value in other areas of the business.

B. Braun have seen with a recent implementation, that automated approval of invoices leads to improved payment times by the trusts involved and an almost 100 per cent acceptance rate – their query rate over three months was less than 1 per cent.

Malcolm notes: “For suppliers to see significant benefits from the implementation of PEPPOL, there has to be greater uptake by the NHS. The only way to ensure PEPPOL is implemented across the NHS is for all parties to work in a collaborative manner. No one benefits from partial implementation as savings and efficiencies are linked to uptake and usage”.

## NEP

The benefits this initiative has brought to NHS organisations is very simple – it streamlines processes and enables the transition of P2P documents without any intervention to support the digitalisation of back office services in the NHS.

Those NEP organisations already using the process are seeing clear benefits from the increased accuracy and efficiency that comes with electronic data interchange. Invoices are automatically processed and matched to the PO upon receipt with a 99.9 per cent accuracy rate. And with fewer incidences of missing POs, this significantly reduces payment times and queries associated with traditional order and payment methods.

## Lessons learned

As with any project with multiple stakeholders, the programme of work presented its challenges and there are always lessons to be learned along the way.

### York NHS FT

For York NHS FT the insights gained throughout the process serve to help others embarking on their own journeys. Mike Davison explains:

- “Early communication with suppliers outlining our plans was key. And following up with phone calls to clarify the supplier’s readiness and understand any obstacles they may be facing was of equal importance. This helps to set expectations early as to which suppliers can make more rapid progress and allows us to prioritise accordingly.
- “Investing time and energy to engage with suppliers has paid dividends and delivered a more rapid transition to PEPPOL. This reflects our experience with Boston Scientific and B. Braun.



- “We are also starting to understand that the transition to PEPPOL won’t necessarily be a rapid process due to the volume of suppliers we are trading with. Some suppliers won’t necessarily have started down the road of adopting PEPPOL. We need to continue to communicate and work with those suppliers who may be later adopters to PEPPOL trading, such as catering suppliers.
- “Approaching the supplier engagement process with other NHS Trusts should help to improve the rate of supplier adoption as suppliers start to see the potential volumes that can be processed via PEPPOL trading with a larger number of NHS Trusts. This approach is evolving at the current time.”

## Summary

The adoption of GS1 and PEPPOL standards for the P2P process brings about some adoption challenges for trusts and suppliers, mainly those centring around the time taken for the process to be implemented and the validation required of the data. However, there are three overarching clear benefits for all once implemented:

1. Getting it right first time means a reduced risk of error caused by manual invoicing, PO matching and transcription errors thus improving accuracy of information
2. More accurate deliveries with the use of correct delivery details from the outset, particularly critical for time or temperature sensitive products
3. Less manual intervention so valuable time is released for other tasks as well as reducing paper

The key message from all these organisations is that suppliers, trusts and organisations such as NEP need to collaborate to ensure an efficient P2P process. The adoption of PEPPOL and GS1 standards using resources including LocationManager are integral to patient care, to ensure that the right product gets delivered to the right place at the right time, first time.

For more information on how to start the adoption of GS1 standards, please contact [healthcare@gs1uk.org](mailto:healthcare@gs1uk.org).

## Supporting information

### About LocationManager

What is the functionality of LocationManager for a supplier?

- Define and manage your own account and location information
- Add GLNs individually or through bulk upload and APIs
- Access and search for any GLN information you require 24/7
- Maintain and manage your users or direct contacts
- Subscribe to locations and receive real-time notifications as locations change within a given organisation

### Benefits of LocationManager

The benefits of using GS1 standards and using LocationManager:

- Reduced transaction costs
- Ease of compliance to regulatory requirements
- Single point of access to trust location information
- Access to up-to-date manufacturer, wholesaler or distributor information
- Certainty of shipping and billing to the right location
- Greater accuracy around product orders, pricing and payment
- Improved patient safety as products are delivered to the right place when needed
- Efficient product recalls
- Fewer invoice and payment queries
- Saves time

### About the organisations involved



#### **York Teaching Hospital**

**NHS Foundation Trust**

York Teaching Hospital NHS Foundation Trust – Michael Davison

York Teaching Hospital NHS Foundation Trust provides a comprehensive range of acute hospital and specialist healthcare services for approximately 800,000 people living in and around York, North Yorkshire, North East Yorkshire and Ryedale – an area covering 3,400 square miles. There are eight hospital sites and a workforce of around 9,000 staff working across the hospitals and in the community.



B. Braun Medical Ltd – Malcolm Dobson

B. Braun is one of the world's leading providers and manufacturers of healthcare solutions. With its

constantly growing portfolio of effective medical care solutions, B. Braun makes a substantial contribution towards protecting and improving people's health.

The B. Braun product range comprises 5,000 different products – 95 per cent of which are manufactured by the company. In addition to their extensive product portfolio, B. Braun also offer supplementary services and consulting. B. Braun is a system supplier that develops the best solution for patients in close partnership with their customers, making a significant contribution to medical advancements.



NEP Shared System Group – Victoria Sleath

NEP is the largest NHS not for profit consortium within the NHS in England. NEP provides a centrally serviced, shared finance and procurement system that supports the NHS national agenda. NEP is a strong, well established non-commercial organisation run by NHS employees who really understand and care about the NHS, making a difference, and encouraging collaboration between its clients. The NEP Cloud Oracle Solution and services have been designed specifically for the NHS by the NHS and drives efficiencies across the procurement and finance functions.



GS1 UK – George Lawton

GS1 is a not for profit membership-based standards organisation which provides globally unique identifiers for people, products, and places in healthcare. GS1 standards provide the common language needed for information to be shared between different healthcare systems, improving patient safety, operational efficiency and reducing unwarranted clinical variation.