GS1 and PEPPOL Adoption

Case study:

PEPPOL Demonstration of Technology

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Introduction

In its quest to increase efficiency in order to release resources to the front line, the NHS is embracing electronic procurement as an important part of its procurement efficiency programme. With the successful completion of a project demonstrating the use of PEPPOL (Pan European Public Procurement Online) messaging standards and exchange mechanism within the NHS environment, the NHS has moved an important step closer to creating a modern 'world-class' procurement capability.

eProcurement in the NHS

Previous efforts to improve eProcurement have met with limited success. Many procurement processes within acute NHS providers remain fragmented across multiple supply functions. While pharmacy purchase orders are largely integrated with their suppliers' systems, less than half of non-pharmacy purchase orders are integrated. The majority reach the supplier as a PDF file that must be re-keyed into the supplier's sales order processing system. Little progress has been made on adoption of electronic invoicing throughout the NHS.

By moving towards the adoption of the GS1 standards (for product and location coding and data synchronisation), and PEPPOL messaging standards (for purchase order, despatch advice and invoicing), together with common business processes and business rules, NHS providers and their suppliers can exchange data automatically without changing their existing IT systems. Standardisation will result in significant cost savings, greater efficiency and higher data quality.

A commitment to PEPPOL standards was made in the NHS eProcurement strategy published in May 2014. To comply with the strategy, NHS acute foundation and non-foundation trusts are required to develop and submit a GS1 & PEPPOL strategic outline plan to the Department of Health. A number of trusts will be selected as demonstrator to commence implementation of their plans in early 2016.

The use of PEPPOL will ensure compliance with the European Union mandate that public authorities must adopt eInvoicing in public procurement using a common European standard by November 2018. The eInvoicing standard (EN) is largely based on Business Interoperability Interfaces for Public Procurement in Europe. Therefore, NHS trusts and suppliers implementing eInvoicing through PEPPOL will be aligned with the requirements set out in the EU Directive.

What is PEPPOL?

PEPPOL is the culmination of a multi-year project co-funded by the European Commission and 11 Member States. It aims to harmonise and simplify procurement processes, reducing 'digital' barriers of trade across the EU.

OpenPEPPOL is a not for profit organisation funded by its members. It maintains a set of standards that enable business documents (such as purchase orders and invoices) to be electronically exchanged without manual intervention between buying and selling organisations through interoperable commercial PEPPOL access points.
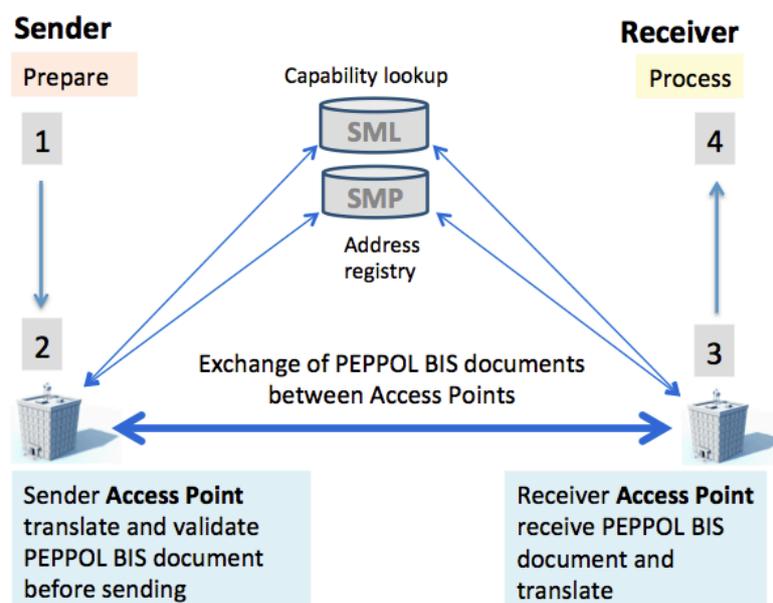

Figure 1 - PEPPOL four-corner model

The PEPPOL 4-corner model allows each NHS buyer and supplier to select their own preferred access point provider for messaging all participants in the network (with no fees payable between access points) ensuring that the process remains open, transparent and secure.

The core underlying principle of the 4-corner model is that a supplier or buyer should connect once to trade with any EU public sector buyer or supplier in the network.

PEPPOL Access Point providers offer a range of service packages to facilitate the connection to the PEPPOL network. These services are tailored to the maturity of the organisation, ranging from low cost 'portals' for SMEs to advanced integration services for multinationals. This enables both buyers and sellers, particularly SMEs, to choose an appropriate solution based on their own requirements and resources.

Demonstration of Technology

In April and May of 2015, an exercise was commissioned to demonstrate the PEPPOL technology and processes within the NHS acute setting. The following NHS trusts, suppliers, access points, and European test partners took part:

NHS Trusts	Suppliers	Access Points	Infrastructure providers
ELFS Shared Services	Abbott Medical Optics	Basware	Gefeg FX
Leeds Teaching Hospitals	Bard Medical	Cloudtrade	Midran Validex
Staffordshire and Stoke Partnership	Hays Specialist Recruitment	Data Interchange	Tickstar
University Hospitals of Leicester	Heraeus Medical	GHX UK	
	NHS Supply Chain	IBX – Capgemini	
	Reed Specialist Recruitment	IBM	
	Thermo Fisher Scientific	Tradeshift	

The exercise involved an end-to-end exchange of documents between the buyers and suppliers using the PEPPOL access points.

Following confirmation that the test orders and invoices to be used were in conformance with PEPPOL BIS specifications, the documents were then exchanged between the NHS trusts and suppliers.

As in a live situation, the access point providers converted the messages to the PEPPOL BIS specifications and enabled the exchange. Both buyers and sellers then confirmed that they received the documents in their required form.
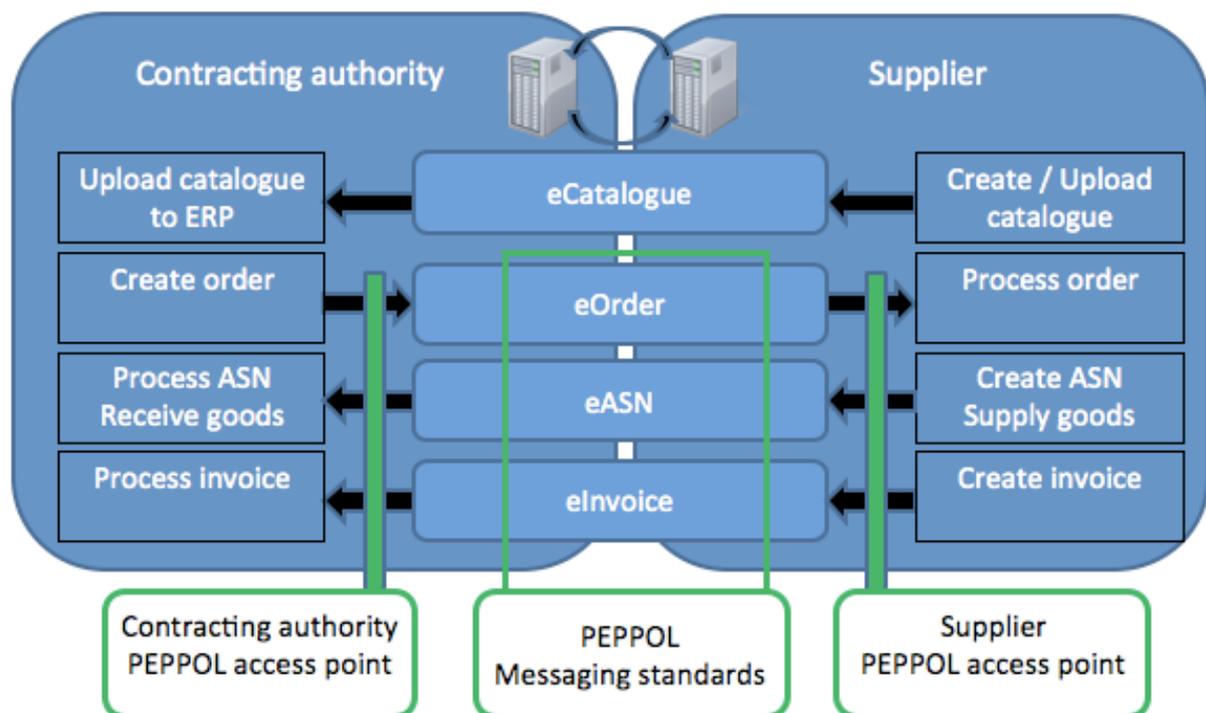

Figure 2 - PEPPOL messages flow within NHS

Figure 2 sets out the flow of electronic documents using the messaging standards. The Demonstration of Technology was focused on eOrders and eInvoices.

Results

"*The demonstration was an overwhelming success*", said Nigel Ransom, who oversaw the project for Data Interchange. "*We faced only the normal challenge of engaging at pace with new test partners who are not current customers*". While a few minor issues were uncovered with AS2 communications protocols, these have now been addressed and will pose no problems in the future.

Because PEPPOL is already a mature production environment in other European countries, many of the participating service providers already had experience with live data exchanges between buyers and sellers. "*Our experience with PEPPOL in Norway has shown that it makes interoperability with other service providers throughout Europe much easier*", said Christian Druschke of IBX-Capgemini. "*This project paves the way for the Department of Health to streamline eProcurement in the NHS using proven standards*".

Leeds Teaching Hospitals Trust has been in the forefront of efforts to cut costs through eProcurement and has a wealth of experience in successfully implementing new technology and practices. "*From the hospital's perspective, this demonstration was very easy since the service providers did the work and we just had to raise the purchase orders and verify the results, including invoice matching*", said Graham Medwell, eBusiness manager at Leeds. "*We have about 3,000 suppliers and believe the adoption of standards-based eProcurement will hasten the efforts of all of them to exchange documents with us electronically. Many of our largest suppliers already do so because they understand the benefits, but full participation will help us to achieve our aggressive savings goals*".

"*We already provide PEPPOL services to medium to large clients doing business with public authorities in Scandinavia, but see a lot of potential supporting a wider variety of clients*", said Ger Clancy of IBM. "*I believe there will be a snowball effect in the market; while it may now be only an ice cube, it is rolling and picking up momentum*".

"*Chosen by over 50% of NHS acute hospitals, we are well positioned to drive adoption of these standards*", said Steve Wyatt, Head of UK Operations for GHX. "*We fully support the NHS eProcurement strategy, and are actively engaged with NHS Trusts in their planning and with ERP system providers to advance our established connectivity with them to include PEPPOL and GS1*".

"*This project provided us with valuable insight into the business capabilities that can be realised with the rollout of PEPPOL in the NHS*", said Richard Manson of Cloudtrade. "*This knowledge will help us support our NHS customers and the thousands of suppliers who currently transact with them across our network*".

"*This trial has shown that suppliers all over Europe will be able to exchange electronic business documents with the NHS as easily as we do emails*", said Mikkel Hippe Brun, Co-founder and SVP of APAC for Tradeshift. "*We look forward to interoperating with other service providers to benefit the NHS and its suppliers*".

"*The use of the PEPPOL open network ensures that the NHS is accessible to all suppliers, offers greater choice to Trusts and enables smarter buying processes*", said Stephen Carter of Basware. "*We are delighted to support this project by sharing our knowledge of PEPPOL and making eInvoicing a reality in the NHS over the coming years*".

Moving towards full implementation

"*Implementing the PEPPOL standards is an integral part of our NHS eProcurement strategy and will create significant efficiency and quality gains that will benefit patients,*" said Steve Graham, eProcurement Lead, Department of Health. "*We have collaborated with European colleagues to demonstrate that PEPPOL will work in the NHS environment, and we can now move ahead in our plan for wide adoption. We are currently working through a selection process to award central funding to six GS1 and PEPPOL demonstrator trusts who will begin live implementation of the PEPPOL standards in January 2016. I would like to thank the*

NHS trusts, suppliers, access points and infrastructure providers involved in the demonstration for their dedication in ensuring a successful outcome. I would also like to thank Celeris Ltd for their considerable efforts in coordinating the Demonstration."

The demonstrator sites will produce valuable detailed case studies including returns on investment, useful to other NHS Trusts' implementation efforts. Progress on the adoption of PEPPOL will be monitored through the reporting of transaction volumes exchanged by access point providers.

In addition, the Department of Health will implement the following actions:

1. Commission a second demonstration of technology for the NHS in 2015;
2. Set up a centralised PEPPOL SMP, listing all NHS Trusts and suppliers capable of receiving PEPPOL messages;
3. Launch a procurement framework for the provision of PEPPOL Access Point services, from which NHS trusts can select their access point provider;
4. Establish a PEPPOL Authority, taking responsibility for the governance of the PEPPOL network in its domain and ensuring compliance with the PEPPOL legal framework for access point providers offering services to NHS England.

"*The use of PEPPOL by the NHS will be a significant boost to market adoption across Europe",* said Sven Rasmussen, OpenPEPPOL Transport Infrastructure Leader. *"We look forward to further cooperation with the NHS in providing a sustainable path for governance and interoperability to reap the benefits of electronic procurement".*