

Health Corporate Network leverages the GS1 System for eProcurement success

ABSTRACT

Health Corporate Network (HCN), an organisation that delivers shared services, including supply, to the West Australian Department of Health identified an increase in the volume of paper procurement transactions being processed, placing a significant burden on staff. A decision was made to implement eProcurement using the NEHTA eProcurement Solution to automate some of the manual processing. The basis for NEHTA's eProcurement Solution is GS1's eMessaging Standard, GS1 XML combined with the Australian Standard (AS) 5023, which defines message data set and business rules for Healthcare. HCN was conscious that eProcurement processes must be based on accurate and complete product data, and so made the decision to mandate population of the National Product Catalogue (NPC) as a pre-requisite for implementing eProcurement with any supplier. A range of benefits have been realised since eProcurement implementation commenced and these will increase as the number of suppliers involved grows.



By **David Melbourne**,
Health Corporate Network

Background

WA Health is the state of Western Australia's public health system, providing services to around 2.3 million people across an area of almost 2.5 million square kilometres (approximately five times the size of Texas) from the capital city Perth, to rural centres and some of Australia's most remote Outback areas. Facilities run by WA Health include public hospitals, community and mental health services, drug and alcohol prevention and treatment services, dental health services and Aboriginal health services. In 2009, WA Health handled more than 837,000 emergency department visits, completed more than 75,000 elective surgery cases, delivered 22,330 babies and performed more than 91,000 breast cancer screens.

Health Corporate Network (HCN) is a shared-service entity that provides Human Resources, Supply, Finance and Business Systems services to WA Health. HCN's primary role in the WA Health community is to help clinical staff to provide the best service they can to the patient whether through supply chain efficiencies or improved business and administration processes. Its strategy is aligned with the Federal Government's National eHealth Strategy which is being implemented by the National eHealth Transition Authority (NEHTA). The Strategy outlines four priorities:

- Urgently develop the essential foundations required to enable eHealth
- Coordinate the progression of the priority eHealth solutions and processes
- Accelerate the adoption of eHealth
- Lead the progression of eHealth in Australia

Each of the state and territory health jurisdictions have (by their presence on the board of NEHTA) committed to driving and implementation of NEHTA's strategy.

Amongst the foundation work areas identified by NEHTA was supply chain. This work effort was one of the first commenced, given it was seen as a key focus area that would drive efficiency, savings and improved patient safety in Australia's public hospital sector. The supply chain work effort has three areas:

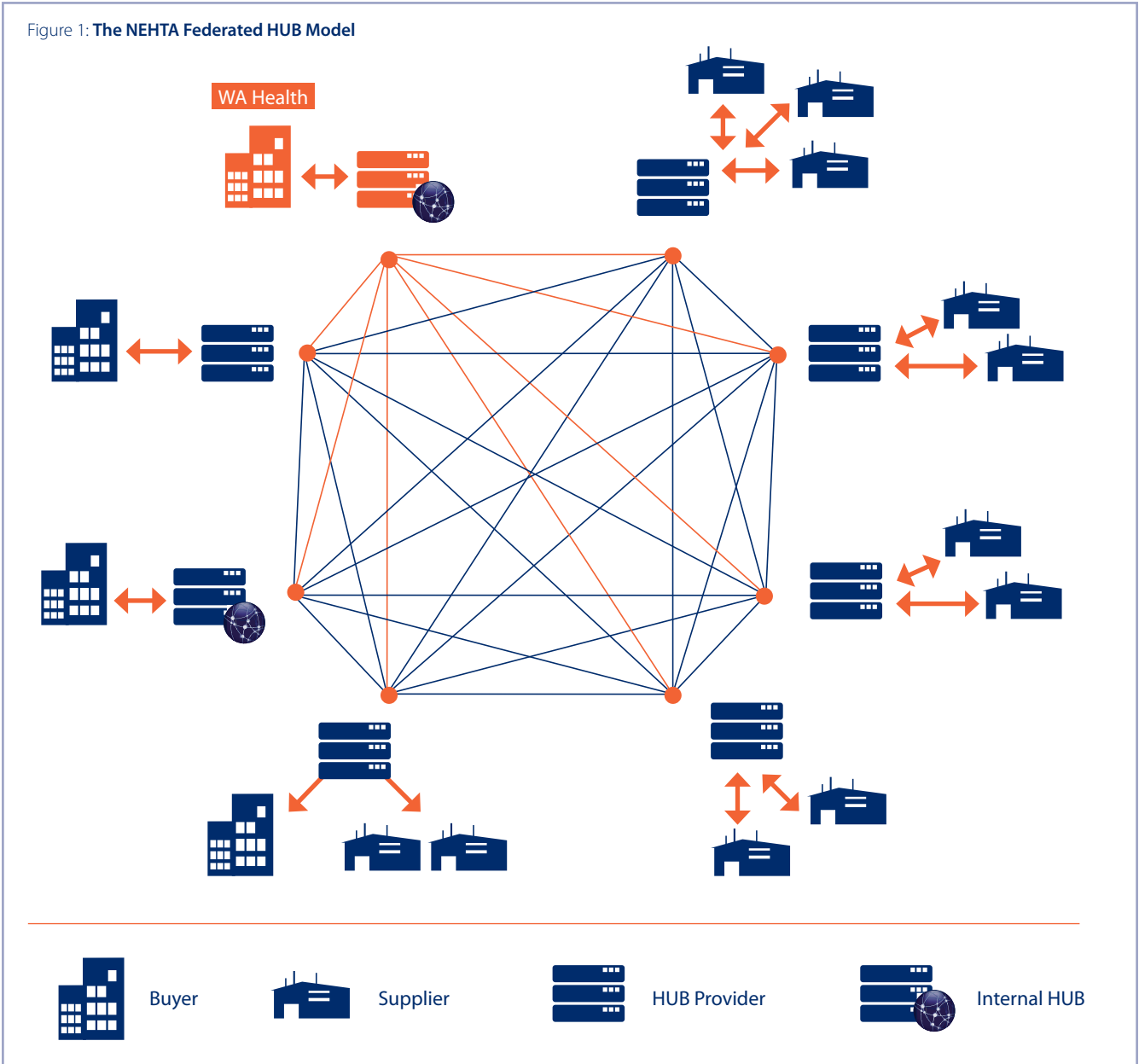
- Creation of a National Product Catalogue (NPC)
- Development and roll out of an eProcurement / eMessaging solution
- Documentation of business intelligence tools and references

eProcurement and the Australian Public Health Sector

Across all Australian states and territories procurement processes have been predominantly manual and lacked standards.

In 2007 NEHTA announced its selection of GS1 XML as the eProcurement format and structure that would form the backbone of its eProcurement solution. The data set to be transacted within the GS1 XML structure has been specified using Australian Standard (AS) 5023. Combined, the use of GS1 XML and AS 5023 provide a strongly standards-based solution, laying the foundation for development of long-term electronic transaction capabilities by all of Australia's states and territories.

Figure 1: The NEHTA Federated HUB Model



The foundation of the eProcurement solution is four transactional messages, the Purchase Order (incorporating the Purchase Order Change), Purchase Order Response, Despatch Advice (also called Advanced Shipping Notice – ASN), and Invoice.

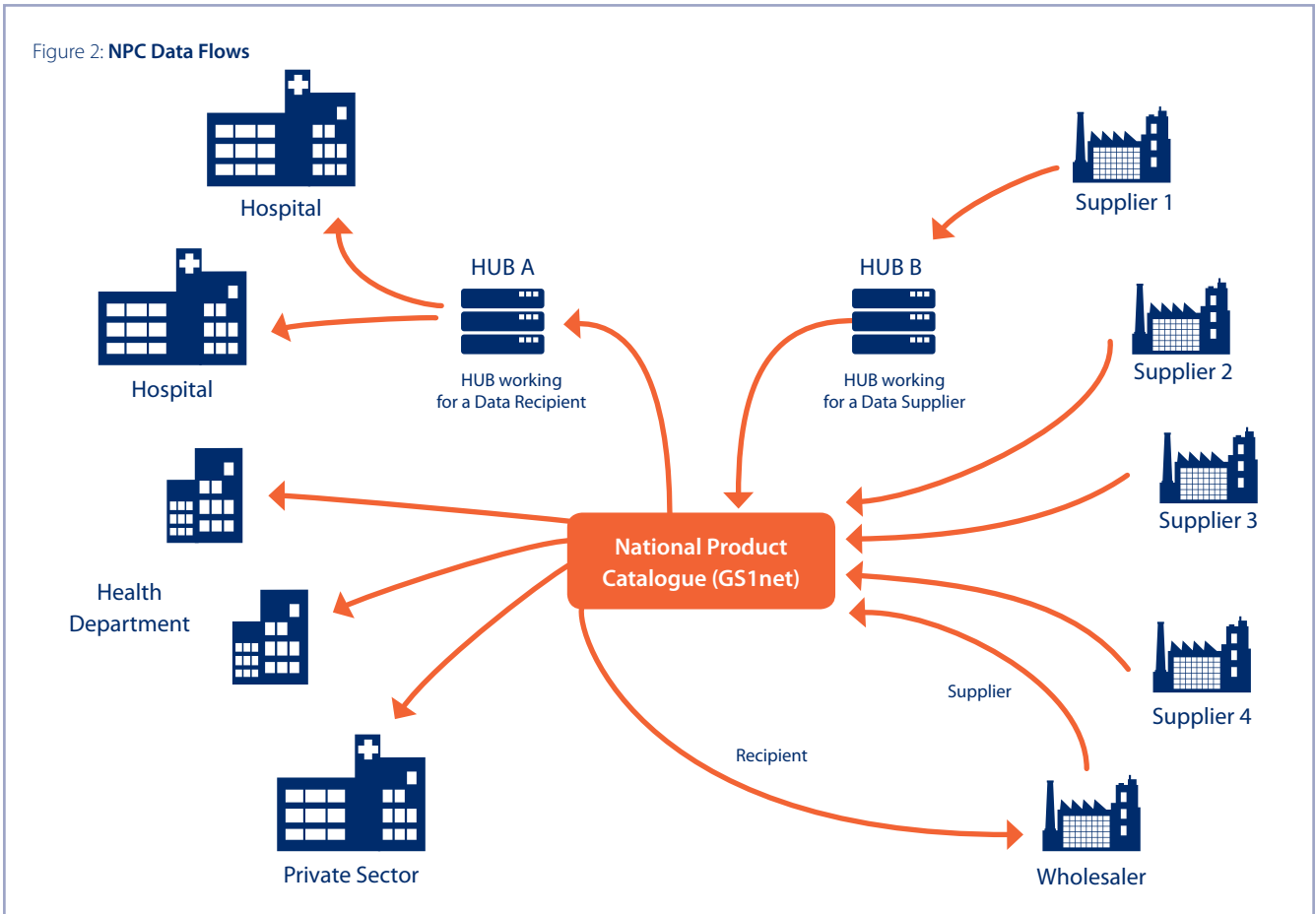
Also within the NEHTA eProcurement solution is the specification that EDI Service Providers (HUBs) – organisations that provide EDI messaging services to suppliers and buyers – must operate in a federated HUB structure, refer to Figure 1. This means that a supplier and buyer can choose to engage their HUBs based on their own business partner selection criteria and own commercial negotiations. If the supplier and buyer then choose to exchange messages electronically and the messages meet the NEHTA specifications, there is no expectation that the supplier or buyer will pay each other’s HUBs any fees, nor will either trading partner’s HUB pay for the interconnection fees (connectivity and movement of messages) between the HUBs.

eProcurement in Western Australia

After HCN’s formation in 2006, it was identified that there was an increasing trend in the volume of paper transactions being processed by WA Health and this was placing a significant burden on procurement staff. HCN was processing up to 1500 purchase order lines and 3500 invoice lines daily for WA Health. To efficiently and effectively manage all transactions it was identified that HCN would need to change existing processes.

In 2008 a business improvement decision was made to implement eProcurement, in line with NEHTA’s eProcurement Solution, to automate as much of the manual processing as possible. A further driver was government budget cuts and subsequent organisational restructuring. Automation was seen as a way to free up employees to focus on value-added tasks. With electronic purchase orders, invoices and other documents, the accounts payable department would have less manual work. HCN was the first health jurisdiction to move down this path.

Figure 2: NPC Data Flows



The importance of accurate master data

To implement eProcurement successfully HCN realised that they had to ensure both their own data and their suppliers' data was 100 per cent accurate and kept up to date. It was very clear early in the eProcurement implementation process that using inaccurate data in electronic messages simply added to the work effort of staff. eProcurement without accurate master data causes more work than paper processing.

To achieve synchronised and accurate data HCN turned to the National Product Catalogue (NPC), which has been developed as the 'single source' of item master data for Australian health organisations seeking to purchase medicines, medical devices and other necessary Healthcare items. Figure 2 details the NPC data flow process.

The NPC has been endorsed by all state, territory and federal health departments in Australia as a single repository of product, pricing and Healthcare data and is hosted by GS1 Australia on the GS1net data synchronisation platform. Used by an ever increasing number of suppliers, this solution contains built-in data validation checks that aim to prevent suppliers loading incomplete or inaccurate records.

HCN has mandated that suppliers must have published their data on the NPC as a pre-requisite to implementing eProcurement. HCN tells all suppliers that if they do not have their information on the NPC they cannot provide their trading partners, including

HCN, validated and complete data. Secondly they cannot maintain synchronised data. That means HCN cannot engage in eProcurement with them.

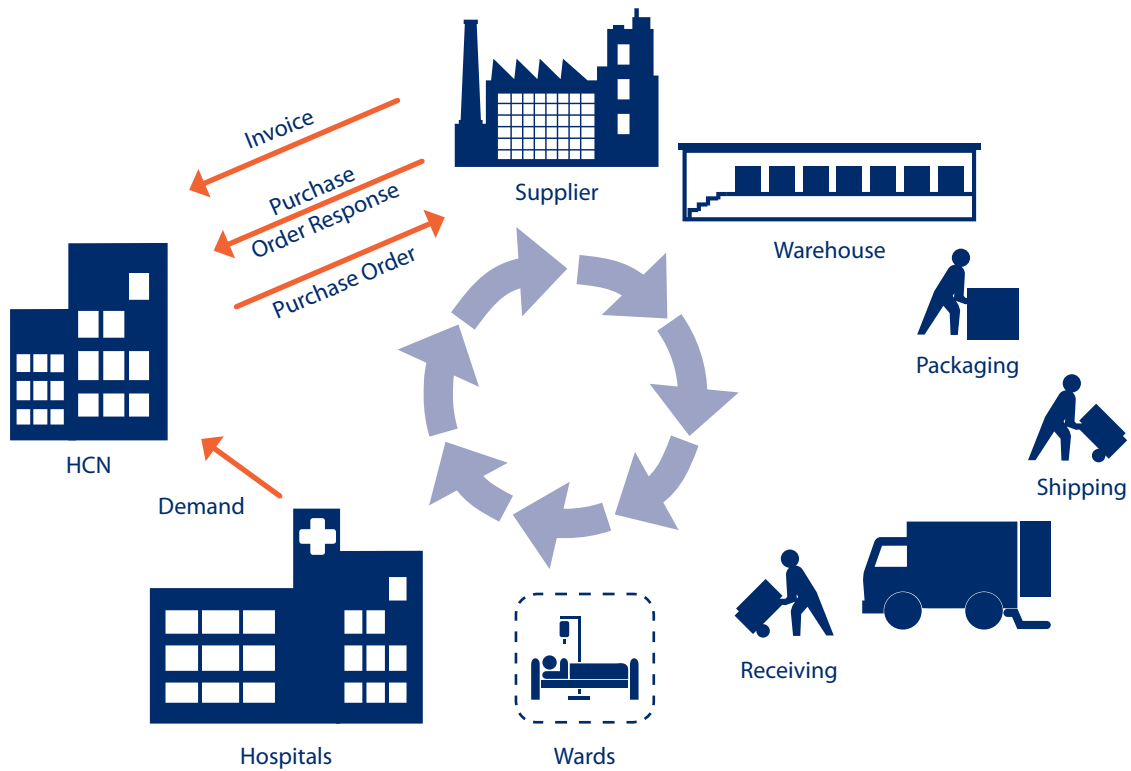
By requiring suppliers to populate the NPC with their data before implementing eMessaging, HCN has put in place a contingency to minimise the risk of incorrect data and therefore increased work effort.

Definition and documentation of business process: The Message Implementation Guideline

For HCN, the next step towards eProcurement implementation with suppliers was to document their business rules, requirements and processes, including data set. The output of this process is called a Message Implementation Guideline (MIG). HCN worked closely with NEHTA throughout this process.

The MIG is an essential part of eProcurement documentation, it provides a set of requirements for all trading partners providing explanations of which GS1 XML messages are used, and how a given jurisdiction's software applications and business processes work. The HCN MIG provides suppliers a guideline for electronic trading using the NEHTA Specifications for the Purchase Order, Purchase Order Response and Invoice messages. HCN intend to move to a full complement of messages, with the Despatch Advice currently being developed.

Figure 3: The HCN eProcurement Process Overview



WA is the first Australian jurisdiction to have a MIG and this has ensured that it is simpler for HCN to communicate to their suppliers exactly what is required when implementing eProcurement. This MIG has been subject to self assessment by HCN using the NEHTA Compliance, Conformance and Accreditation (CCA) scheme.

With the development of the MIG, HCN have mapped their business process against best-practice specifications. Leveraging off the successful HCN MIG outcome, South Australia and the Australian Capital Territory (ACT) have also successfully completed the NEHTA compliance process. NEHTA will continue this work effort with all health jurisdictions and the private health sector Australia-wide. All business processes across jurisdictions are to be documented in a single national reference which means suppliers will have a single eProcurement implementation guideline for Australian public Healthcare. Figure 3 details the HCN eProcurement process, highlighting the collaborative and cyclical relationship between the parties involved.

Current HCN status

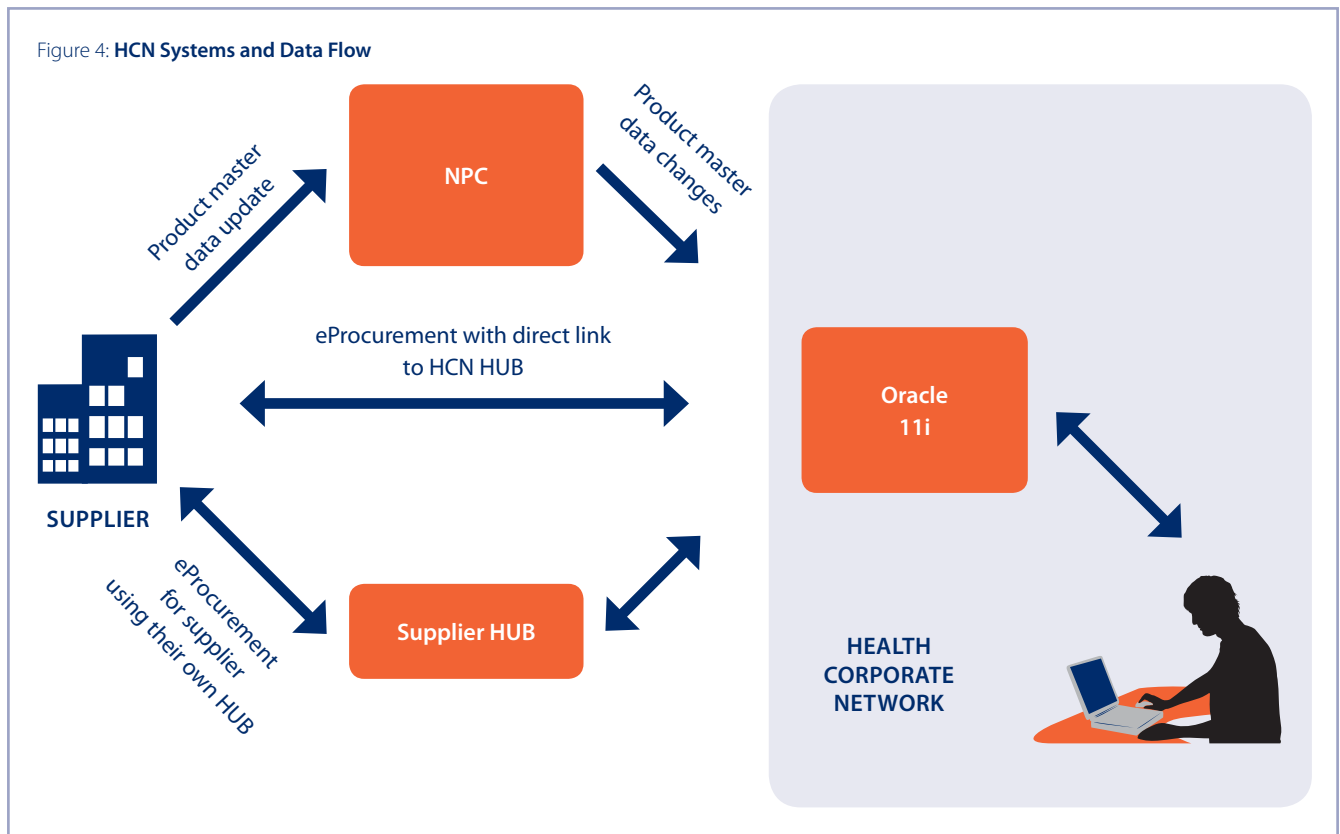
Since 2008 HCN has commenced eProcurement implementation with a number of companies including Baxter Healthcare, B.Braun Australia, Bunzl Australasia and KCI Medical. Discussions are continuing with a number of other suppliers including Western Biomedical, Becton Dickinson and Medical Sales and Service.

As detailed in Figure 4, HCN have decided to function as their own HUB giving them the flexibility to manage their messaging flows and simply and easily connect with the HUBs selected by their trading partners and move data into their ERP System.

Benefits seen since implementation are:

- More accurate identification of ordered products due to the use of GTINs. There is no confusion as to what pack size, colour, etc is being ordered. When using internal part numbers such confusion is common.
- With prompt receipt of a purchase order response, problems can be resolved more quickly. For example, if an item is out of stock, this can subsequently be sourced from an alternative supplier.
- Prompt notification of any price discrepancies means issues can be identified and addressed immediately.
- When electronic invoice and purchase order details are matched, the invoice is validated immediately. This means no intervention is required by Accounts Payable staff, decreasing workload.
- Payments are usually made more quickly. When paper invoices are used, these can often be mislaid or not sent to the Accounts Payable team, which delays payment.

HCN is continually working collaboratively with suppliers to help them become ready to be involved in eProcurement implementation with purchase order, purchase order response



and invoice messages. Suppliers must have published data to the NPC to be considered, but also have the implementation of eProcurement in their own business objectives.

For suppliers who have published their product data to the NPC but are not ready to move down the eProcurement path, HCN have started providing GTIN and Global Location Number (GLN) information on their paper purchase orders, thus creating familiarity and awareness of their reliance of data from the NPC. Most importantly, these references ensure even suppliers processing orders manually know exactly which items and levels of packaging are being ordered by HCN and the correct locations to which the goods should be shipped. It further enhances the message that if suppliers publish their data to the NPC, HCN will access it and incorporate it into their procurement systems.

HCN's ultimate aim is to send and receive as many procurement transactions electronically as possible. Current targets are to have up to 15 suppliers live with purchase order, purchase order response and invoice messages by the end of 2011. Global Standards and National Healthcare specifications are crucial to this. If everyone is talking the same language, development of solutions for the Australian eHealth Supply Chain sector becomes extremely efficient.

ABOUT THE AUTHOR

David Melbourne, Senior Business Analyst,
Health Corporate Network

David Melbourne is currently employed as a Business Analyst by Health Corporate Network and co-ordinates their eCommerce project. He started his working life as a Pharmacist in South Australia before heading to Perth in 1987. In 2006 he was seconded to assist with data mapping for a Pharmacy project which became a career changing move as he is now working closely with NEHTA and GS1 Australia to implement the National Product Catalogue and eProcurement for WA Health.