

case study

#1/2008

SUPPLY CHAIN MANAGEMENT

GS1 integration along the meat supply chain at Nolan Meats

Key points

There are significant benefits to the meat industry in moving to an e-business environment, however there are different coding and communications standards in place between companies and the levels of the supply chain. The project demonstrates the implemented of internationally accepted standards and the benefits of a standard system.

The benefits included:

- Reduction in labour for National Vendor Declaration (NVD) preparation at the feedlot
- Reduction in labour for kill agenda preparation
- Reduction in labour at lairage
- Reduction in record keeping costs
- Less manual data entry errors
- Reduction in labour for Meat Transfer Certificate (MTC) preparation
- Improved reconciliation between shipment and paperwork
- Reduction in labour for filing paper forms
- Increased inventory accuracy
- Increased traceability

This project demonstrates the benefits of e-business using internationally accepted standards.

Implementing GS1 coding and EANCOM messaging moved the company to the use of global standards, reduced costs and errors and improved traceability of product.

Case study

MLA has worked with industry in a number of projects aimed at endorsing the use of open standards in the meat industry and endorsing the uptake of the GS1 system. Collectively these projects cover cattle production, meat processing, transport, processing, domestic and export distribution. The following case study is based on the results of a partnership project involving MLA, AMPC and Nolan Meats.

Project coordinator Timothy Discher said the GS1 integration at Nolan Meats, which was preceded by an audit of the company's system (largely paper based with basic communication between trading partners), identified areas which needed improvement, particularly the double entry of data.

"The GS1 system demonstrated the potential to significantly reduce the number of documents through combining National Vendor Declarations, Meat Standard Australia declarations and National Feedlot Accreditation Scheme declarations into one electronic format," Mr Discher said.

"It can also notify consignors of the receipt of cattle electronically, send producer feedback, generate electronic Meat Transfer Certificates, send consignment information to major customers and distributors, and receive notification of receipt of goods by customers."

Background

GS1 standards provide reliable, unique and globally consistent product identification which supports best practice through procurement, replenishment and

logistics, reduces supply chain costs and improves traceability.

The benefits derived include the timely arrival of accurate data, standard descriptions and numbering between organisations, reduction in data input errors and the reduction in the use of paperwork and forms.

Description of Project

This e-business project allows a number of scenarios in the e-business model to be implemented. Nolan's is to a certain extent an integrated operation with the company owning feedlots, a processing plant and off site cold storage.

To carry out the project Nolan's needed to implement GS1 coding and implement EANCOM compliant messaging systems both within its own operations as well as with its business associates, to provide a fully compliant GS1 system. The project was based on three linked stages:

- A review of the company's systems and determination of benchmarks
- The implementation of existing systems and equipment to use GS1 compliant numbering systems
- The implementation of EANCOM compliant messaging systems

Installation and Evaluation

An audit of the present systems identified areas which needed improvement particularly in the double entry of data.

As part of the process the time and costs that would be saved at each data point were identified to give a framework to the expected improvements that may be expected using the GS1 system.

It was identified that the new barcodes would be significantly larger than the existing non-GS1 bar codes and that the new and old codes would need to co-exist in the system for a period of time necessitating the need for equipment and data systems to be able to handle both codes simultaneously. Consequently a number of issues needed to be addressed:

- Labels needed to be redesigned to provide for the larger bar code

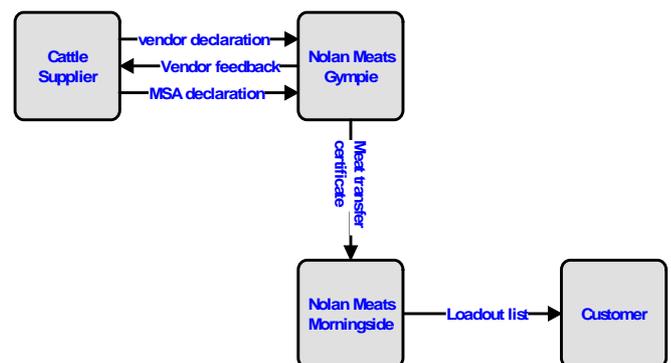
- New labels would be required for both slaughter floor (hanging labels) and boning room (carton labels)
- New GS1 suitable product codes needed to be determined
- Software needed to be modified and upgraded to handle the new codes and the co-existence of the original and new codes
- New printers required to print the new labels
- Staff training in the new systems and codes would be required to ensure a smooth implementation.

The change in the bar codes on the labels was significant. The new GS1 bar codes had 44 numbers compared with the 16 numbers requiring finer lines to fit onto the labels. There was some concern it would be difficult to read the codes without error in the same time as the old bar codes. On this basis the barcodes were made wider, new printers installed and an extensive program of testing undertaken.

With the new GS1 bar codes, systems and labels in place the company was ready to move on to implementing EANCOM systems for messaging and communicating between systems on different sites and with other companies.

The ultimate goal of the new system was to allow Nolan Meats to replace the paper based system with a wholly electronic system and to do this a number of the documents needed to be redesigned to fit the new systems and provide traceability for the product through the supply chain.

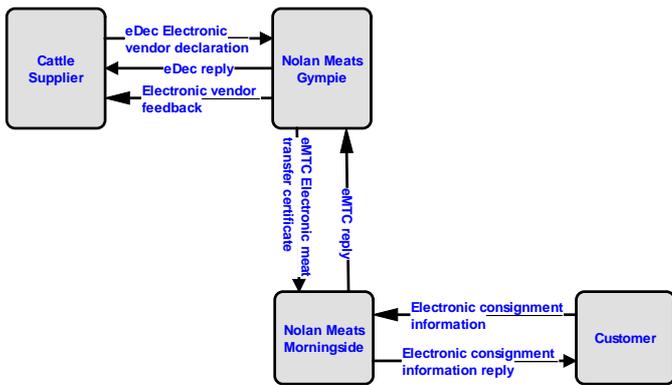
Typically the paper based system was as shown below.



With the implementation of electronic messaging at Nolans the flow of information is much faster, allowing

data to be sent ahead of loads and removing double data entry from the supply chain.

Typically the new data links are as shown below.



Summary

The implementation of GS1 coding systems and bar codes along with EANCOM messaging systems provides Nolan Meats with a globally recognised system of coding products while reducing operating cost by reducing labour and eliminating paper documents. This improved the accuracy and timeliness of data internally and with its interaction with suppliers and customers.

The EANCOM messaging system is based on simple e-mail systems giving it a simple and universal interface while requiring very little bandwidth making suitable for communication with producers on dial-up lines.

Results

Cattle Dispatch & Receiving (for 100 head of cattle)

Task	Time Spent		\$
	Without GS1	Actual With GS1	
1. Record induction of cattle with weights, vendor's NVDs, market access and drugs used for individual animals	(100 × 40 sec) 67 Mins	(100 × 30 sec) 50 Mins	\$20
2. Produce waybill, NVD, MSA, NFAS Declarations. Records kept & filed for required period	20 Mins (per lot)	5 Mins (per lot)	\$5
3. Reconcile load and acknowledge receipt	10 Mins (per lot)	5 Mins (per lot)	\$5

Transferring Between Abattoir and Coldstore (for 672 cartons)

Task	Associated Cost		\$
	Without GS1	Actual With GS1	
1. Scan cartons to truck from Abattoir	(672 × 0.12) \$80.64	(672 × 0.12) \$80.64	\$0
2. Prepare MTC for Coldstore	\$5	\$2	\$3
3. Scan cartons into Coldstore	(672 × 0.12) \$80.64	(672 × 0.12) \$80.64	\$0
4. Complete MTC and return to Abattoir	\$5	\$0	\$5
5. Reconcile MTC and File	\$5	\$2	\$3

For more information on utilising the GS1 system along the red meat supply chain please refer to the following documents available from MLA:

- *Guide to Information Standards – Numbering, bar coding and eMessaging for the Australian Red Meat Industry*
- *Australian Red Meat Industry Technical Fact Sheet – Variable Weight Carcase Label*
- *Australian Red Meat Industry Technical Fact Sheet – Variable Weight Carton Label*
- *Australian Red Meat Industry Technical Fact Sheet – Pallet Label*
- *Australian Red Meat Industry Technical Fact Sheet – the electronic Meat Transfer Certificate (eMTC)*
- *Australian Red Meat Industry Technical Fact Sheet – the electronic Messaging for Cattle and Sheep National Vendor Declaration (eDEC) System*
- *Australian Red Meat Industry supply chain information standards projects example cost benefits*

For more information

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