



**ENZA
Implementation Case Study**





CHRONICLE OF NEW ZEALAND PIPFRUIT INDUSTRY

The New Zealand Apple & Pear Marketing Board was established in 1948 to control the marketing of Pipfruit¹, as well as to represent growers of New Zealand Apples & Pears. In 1991 they introduced the brand ENZA for the export of Pipfruit from New Zealand.

The Apple & Pear Industry Restructuring Act of 1999 brought about changes in the industry, which included the following:

- Corporatisation of the New Zealand Apple and Pear Marketing Board into a limited liability company registered under the Companies Act 1993, which was to be known as ENZA Limited. This Act helped commercialise the New Zealand Apple & Pear Marketing Board in terms of ownership (capital). Growers were issued shares based on the average number of cartons they exported over the past 5 years.
- Regulations for the control of apple and pear exports.

The following Apple & Pear Industry Restructuring Act Repeal Bill of 2001 included the following changes to the regulation above:

- Removal of regulatory barriers for the export of apples and pears from New Zealand
- Ability for growers to determine exporters who will compete for pipfruit supply on an equitable basis
- Disestablishment of the New Zealand Apple & Pear Board and the Apple & Pear Export Permits Committee (both bodies were established under the Apple & Pear Export Regulations of 1999)

HISTORY OF ENZA AND TURNERS & GROWERS

In 2003, Turners & Growers Limited acquired 100% of the share capital of ENZA Limited, merging two of New Zealand's oldest and largest produce companies creating a produce marketer of global significance. This new group boasts over 150 years of combined experience in the produce business. ENZA is the brand name under which Turners & Growers Ltd exports an extensive and unique range of apples and pears grown in New Zealand to over 50 countries around the world. For the season of 2003, Turners & Growers made a pre-tax profit of \$14.3 million New Zealand dollars, at the peak of the year employed over 1,400 staff and exported 6.9 million cartons.

¹ New Zealand/Industry specific definition for apples and pears



SELECTING A STANDARD

ENZA realized there was a clear benefit in using standardised identifiers for labelling products and materials traded between businesses. It was also important to include a record keeping system to collect and collate the information, linking places (e.g. orchard, packhouse, coolstore), processes and products. Traceability records needed to be accurate, complete as well as quickly and easily accessible in the event of any problem, such as recall.

The Fresh Produce Traceability Project (FPTP), which began in Europe in 1999, recommended the carton bar coding standard (UCC/EAN-128) for all fresh produce. Previously, the EAN International Meat Supply Chain Task Force recommended the use of the UCC/EAN-128 bar code format which used a standard code to uniquely identify the product and a batch code to provide the required level of product traceability. Some of ENZA's largest European customers were involved with the FPTP project, including Safeway, Sainsbury, Tesco and Waitrose, Spar Austria, GB, GHD, and COOP Italia. It was clear that these companies would demand EAN.UCC Standards.

TRACKING AND TRACING

Frequently, ENZA would receive queries from customers questioning product origin, or where it was packed, or which sprays were applied to the product. Suppliers were also often asking questions about where the product has gone, to meet their own internal requirements, for example, to ensure that the product they packed meets the phytosanitary requirements of the importing country(s) or satisfied grower queries with regards to payments, or product quality. It was necessary for ENZA to be able to identify both pallet (using the SSCC) and carton (using the UCC/EAN-128) movements, so that they could build a complete picture of the product's history within 24 hours.

ENZA recognised the need to increase the supply of quality product as a critical element in successful exporting. In addition to this, ENZA needed to provide a level of service back to their supplier that out-performed their competitors. An important part of these services included the seamless transport of information both up and down the supply chain. Today, tracking and tracing, using the EAN.UCC system assists ENZA and their suppliers to ensure that they meet the ever increasing market requirements such as the British Retail Consortium (BRC) and the International Food Safety (IFS) as well as New Zealand's own regulations with respect to fresh produce.



LOGISTIC EFFICIENCIES

The second and most immediate gain with implementing the EAN.UCC System is the realisation of an immediate improvement in logistic efficiencies. In terms of exporting Pipfruit, ENZA needs to deliver the right product, to the right place, at the right time, thus enabling them to match dealing with a crop that is very variable with customers who are very discerning. They do this by using e-commerce, radio frequency (RF) scanning and the EAN.UCC system to ensure that as soon as they know that the product is available, they can plan and move it safely to market. These technologies offer ENZA significant savings in the reduction of data re-entry, and along with an accurate real-time stock picture, they are able to satisfy customer requirements.

Those within the New Zealand Pipfruit industry who have adopted industry standards and the EAN.UCC Standards have found it very easy to gain business along the supply chain. ENZA coolstores have been able to secure business storing product for other organisations, whose products require temperature controlled conditions, and this additional business now makes up a reasonable part of their business.

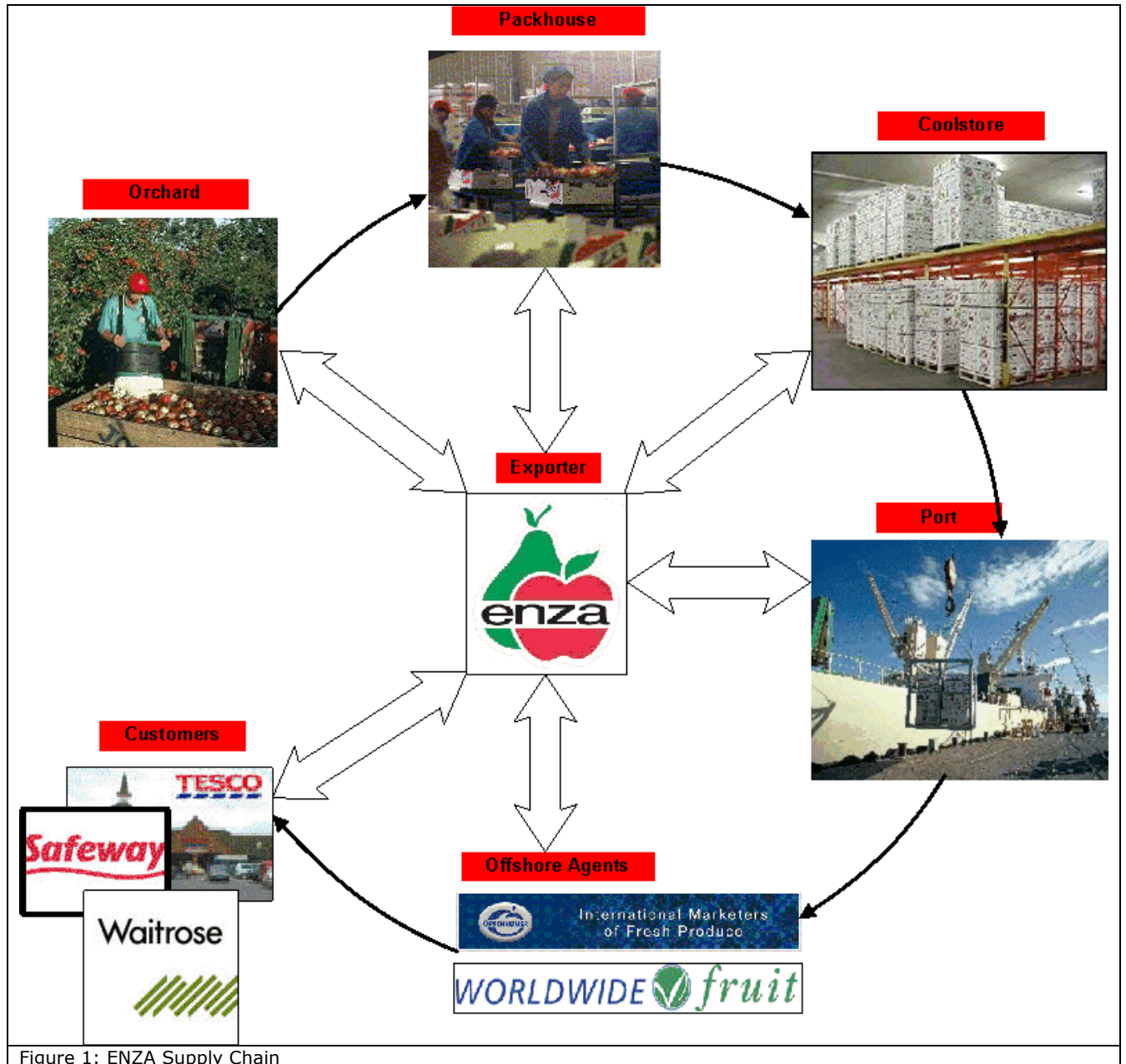
ADOPTION

In order to adopt the EAN/UCC System, Enza realized that they needed to review internal processes, make changes if necessary, define and gain approval for the new system, and lastly, implement the system nationally. The following issues encouraged ENZA to adopt the UCC/EAN-128 bar code:

- Compatibility worldwide, including America, Europe and Asia.
- Application Identifiers allow a range of information to be displayed on the carton
- Provides greater flexibility for expansion and automation in future. Information within the bar code can be changed or new information can be added without changing the bar coding standard or the labelling equipment.
- To meet customer's requirements for carton bar coding



IMPLEMENTATION OF THE EAN.UCC SYSTEM THROUGHOUT THE SUPPLY CHAIN





Tracing the supply chain for apples and pears begins at the orchard where the fruit is harvested and placed into field bins of which, a manual consignment note is attached. The bins are then transported to the pack house where they are matched to orders, in order to satisfy exporter requirements. The remaining flow of the supply chain and use of the EAN.UCC System is highlighted in the following steps:

- In order to uniquely identify every bin coming from the orchard, most of the larger packhouses apply the Serial Shipping Container Code (SSCC) to each bin on arrival.
- The SSCC on each bin is scanned, and the contents are placed into a water dump, where the fruit is graded and packed into cartons. Each carton is labelled with an UCC/EAN-128 barcode.
- The cartons are then scanned and placed on a pallet where the SSCC is applied.
- Completed pallets are then aggregated into a load, which is directed to a coolstore.
- The coolstore scans the SSCC on each pallet to confirm receipt from the packhouse. Each pallet is then, assigned to a specific location in the coolstore.
- When an export order is ready, pallets are sourced and scanned via radio frequency (RF) to ensure they meet the order. When a truck or container arrives, these pallets are then loaded and sent to the port.
- From 2005, the stevedore² will scan the SSCC on the pallets off the trucks, which then go into the vessel, ready for port departure.
- Once the vessel arrives to its destination, the SSCC on each pallet is scanned and directed to a location within a coolstore, which will then be distributed to the end customer.
- For quality assurance, cartons are selected at random. Each pallet encoded with the SSCC and carton encoded with the UCC/EAN-128 is scanned to verify fruit quality.

² One who works at or is responsible for loading and unloading ships in the port.



Figure 3: Illustration of UCC/EAN-128 label on the pallet



Figure 4: Close up of the SSCC represented in the UCC/EAN-128 code on the pallet above.

LESSONS LEARNED

Through the implementation of the EAN.UCC System, ENZA has learned that pallet and carton coding are just as fundamental to supplier logistics as are food safety and consumer requirements. They also realised that suppliers must anticipate future requirements and adopt global standards so their investment in technology meets market requirements as well as their own logistical requirements. In order to ensure application of the EAN.UCC system throughout the supply chain, it was important to look for simple low-tech options to allow smaller operators (both supplier and retailers) to use hi tech systems. Implementing a standardised bar coding system along with XML standard messages was essential.

Implementing the EAN.UCC System brought benefits to both suppliers and customers of ENZA. The EAN.UCC System offers unique, non-significant numbers. Due to their non-significance, these numbers enable use in all sectors and their uniqueness permits use across all borders.



FUTURE

For generations, Turners & Growers Ltd had been a leading player in the domestic produce business, primarily focused on servicing the New Zealand market in locally grown and imported produce. This service extended across the domestic supply chain to include pre-packing, returnable containers, transport and distribution. It also developed significant export business in a range of brands and products. Enza has been a significant player in the global pipfruit trade, successfully taking on the world through exceptional quality produce from New Zealand growers, the strength of its global customer relationships and a remarkable history of innovation. Currently, Turners & Growers has set-up a project to align supply chain standards across the whole company, especially in terms of efficiencies, traceability and e-commerce. Though this is in an early phase, it makes sense for Turners & Growers to adopt EAN.UCC global standards across the board, expanding into the domestic market, using the ENZA case as a model for the entire company.

CONTACTS

The EAN.UCC System serves over 1 million companies worldwide and 1 billion shoppers each day. For more information about Fresh Produce Traceability in the New Zealand, please contact EAN New Zealand at ean.nz@ean.co.nz. For more information about ENZA, please contact info@turnersandgrowers.com.