GS1 Australia

TAKING A LONG, HARD LOOK AT
DATAQUALITY
Kimberly-Clark

A GS1 Australia Data Quality Audit at one of Australia's leading fast-moving consumer goods (FMCG) manufacturers highlighted that accurate data is critical in maintaining an efficient, cost-effective supply chain.

Kimberly-Clark Australia & New Zealand makes, markets and sells market-leading health and hygiene products that Australians come into contact with every day. They have manufacturing facilities in New South Wales and South Australia and employ more than 1,650 people. The company is a subsidiary of the US-based Kimberly-Clark Corporation and has annual sales revenue of approximately $1 billion.

Kimberly-Clark Australia has a proud record of eBusiness innovation in Australia and has been a leader in the use of the GS1 System in the supply chain. In 1991 they were early adopters of electronic data interchange (EDI) in their healthcare business as well as being one of the first companies to establish web-based Business-to-Business (B2B) trading in 1997.

They were also one of the founding manufacturers to support data synchronisation through EANnet, now GS1net, GS1 Australia's Data Synchronisation and Product Registry service. All of their products carry GS1 Bar Codes and they have significant Collaborative Planning (CPFR), Efficient Consumer Response (ECR) and supply chain management capability which they are continuously improving.

In 2009 Kimberly-Clark embarked on a distribution centre (DC) automation project, establishing three new DCs with automated pallet building and handling. These processes, and the multiple systems which enable them (manufacturing control, WMS and ERP), depend on accurate synchronised material records including units of measure (inners, outers, pallets).

Kimberly-Clark approached GS1 Australia's Professional Services team to deliver a data quality solution to achieve this aim and to undertake the planning and execution of the project.

The objective of this audit was to assess and rectify errors with bar code numbers (GTINs), product dimensions, weights, contents, item descriptions and physical packaging descriptions across all levels of packaging on approximately 1,193 imported items.

Additionally, the project included the physical review of a number of data attributes and the comparison of this data against internal systems to ensure accuracy and completeness of information.

The project (including all set-up, checking, data analysis and reporting, etc.) was completed in just over 12 weeks. The company decided to focus on externally procured stock-keeping units (SKUs) as in the past these had not been as rigorously controlled as internally manufactured SKUs: they were not handled robotically, conveyed or scanned, and typically were not ranged by customers with disciplined data requirements. The company suspected that the bar coding and data on these SKUs was not meeting GS1 standards.

All healthcare products as well as some professional products were delivered to the testing facility at Warwick Farm, including products not held at the facility.

GS1 Australia Professional Services Advisors set up testing and measuring equipment including measuring tables, callipers and scales (both large and small), scanners and laptop computers. They developed a convention for the measurement for non-retail items, the process flow, data capture and conducted the testing and data audit.

In scope were:

- Some 50 SKUs in the retail range (Shippers and Pallets)
- About 1,000 SKUs in the healthcare range (Shippers + Consumer Units, i.e. approximately 1,500 GTINs to be audited)
- Some 100 SKUs in the professional range (Shippers + some Consumer Units and Pallets).

Of these

- 10 SKUs across all ranges had three levels of packaging
- 40 SKUs across all ranges had one level of packaging (this may be understated)
- 80 SKUs were picked at the inner level

During the physical audit the products' bar codes were scanned, the packaging levels opened and pack quantities counted and recorded. In addition the team measured all the dimensions and recorded gross and net weight. The actual audit covered 907 products comprising 1,526 packaging levels.

The key attributes that were checked included:

- That the GTIN had been assigned, and aligned with the bar code number stated in the back-office application and across internal systems
- Product descriptions matched descriptions in the back-office application and across internal systems
- Dimensions – to be captured based on GS1net conventions and matched against back-office application values

- Weights – to be measured based on GS1net tolerances and compared against back-office application values
- Packaging configurations
- Scan quality – to be captured at a high level i.e. Good, Poor, No-Scan

In preparing for the project due consideration was given to:

- The type of items, inner and outer packaging to be measured, which included rigid and flexible packaging, large and small packages, light and heavy packages, regular and irregular-shaped items, loose and fitting packaging (whose size or shape is defined by contents)
- The degree of accuracy required in accordance with the Global Data Synchronisation Network (GDSN) Package Measurement Rules for Trade Units (non-consumer) and Consumer Units, where all dimensions are recorded in millimetres and all weights in kilograms
- The standard tolerances (or allowable variations between the stated and measured weights and dimensions) in accordance with the GDSN Standard Package Measurement Tolerances Best Practice Guide
- The measuring devices to be used to obtain dimensional and weight attributes and their interface with the laptop computers
- The calibration of all measuring equipment
- The audit purposely focused on products where it was suspected the data may be inaccurate. It found that
- 36 per cent (323 products) had the wrong GTIN in SAP for the Case unit
- 39 per cent (354 products) had the wrong GTIN in SAP for the Consumer (Base) unit
- 5 per cent (46 products) physically had intermediate pack levels that were not defined in SAP, and were also missing their GTINs and dimensions
- 8 products physically had Consumer (Base) unit pack levels that were not defined in SAP, and were also missing their GTINs and dimensions
- Dimensions for almost 100 per cent of Consumer (Base) units and Intermediate units, and a high percentage of Case units, were missing or wrong in SAP
- Weights for almost 100 per cent of all units were missing or wrong in SAP
- The contents of some Cases, Intermediate and Consumer (Base) units for a few materials were wrong in SAP

General Manager – GS1 Australia Services Group, John Hearn, said the outcomes of the audit illustrated the need for quality, accurate data in the supply chain. "The project demonstrated its effectiveness in identifying the data quality issues in their systems through the GS1 Data Audit Service and the use of appropriate audit procedures with the application of global data quality standards in measurements and tolerances."

Mario Carniato, eSupply Chain Manager, Kimberly-Clark Australia, said much of the data audited was critical to a range of business processes. "Having incorrect data would impact particularly our ability to support the GS1net/National Product Catalogue (NPC) initiative, project DANE, and freight costing.

"In summary, the decision to conduct the audit was very wise, and money well spent. Now we need our marketing department to work with the teams in packaging and supply chain to ensure that in future new products do not fall into the same trap," he said.