



Case Study



Take a Closer Look

Getting **bottom-line results** with quality data

Executive Summary

The ability of retailers and suppliers to streamline operations, cut costs and squeeze out productivity gains from already lean operations will define who leads in this challenging economy. Synchronizing accurate data presents an ideal process for driving improvements along the entire supply chain, leading to real business opportunities for bottom-line results.

GS1 US collaborated with a leading hardlines retailer and several of its suppliers to examine opportunities in the industry. Its findings confirmed the potential for any company, regardless of size, to realize significant business impact when accurate data is synchronized, including **lower freight costs, increased productivity levels, and improved asset utilization.**

Both the retailer and suppliers recognized the critical need to work closely together for mutual gains, supported by GS1 US expertise and solutions that help discover untapped supply-chain savings.

The Ripple Effect

When a hardlines retailer decided to assess the quality of data coming from eight of its primary suppliers, they weren't exactly sure what they would find. "Today, more than ever, we recognize the importance of accurate data provided by our suppliers to drive efficiencies in our supply chain," explains the retailer's vendor compliance manager. "When merchandising and replenishing the many thousands of products across our stores, we strive for 100 percent accurate product information. Receiving inaccurate data on just a few products from a few suppliers can have a ripple effect throughout our operations – introducing a host of disruptions and costs."

The retailer had made a strategic decision to electronically exchange supply-chain product data with its suppliers, using the GS1 Global Data Synchronization Network® (GDSN®). "All of us in the hardlines industry basically face the same market pressures – intense competition, increasing costs, and unpredictable demand. We decided to be proactive and synchronize data with our suppliers; we knew this would help us and them reduce costs and improve productivity levels," says the manager. Prior to implementing data synchronization, the retailer had relied on manual methods of collecting data – a combination of paper forms and Web-based methodologies from suppliers as well as physical measurements of products in its distribution centers.

Get the Facts

Following are common myths about assessing and achieving quality data with the actual facts confirmed by GS1 US, retailers and suppliers alike:

Myth: My data is accurate; after all, my company is large/small.

Fact: Company size does not have a direct impact on the accuracy of the company's data. With a data quality assessment, a supplier or retailer is able to confirm or dispel its unique data accuracy assumptions and take actions for bottom-line impact.

Myth: Even if our data is slightly inaccurate, it can't cause that big of a problem.

Fact: Slight weight and/or dimension inaccuracies – for even one item – can cause supply-chain disruptions and add unnecessary costs. Consider the volume of products shipped to realize just how quickly the costs add up for your business.

Myth: It is expensive to fix data, taking significant time and resources.

Fact: The costs associated with data inaccuracies can far outweigh the costs of fixing the inaccuracies. GS1 US helps suppliers and retailers develop business cases to fully understand the ROI associated with improving data quality.

With data synchronization in place, the retailer's next step was to better understand the accuracy of data being exchanged – its data quality – and determine specifically how to make any improvements. For the retailer to benefit, its suppliers needed to keep their product data up-to-date while continuing to synchronize the accurate data with the retailer.

When GS1 US suggested the retailer perform an assessment of data from key suppliers, they welcomed the opportunity. In 2006, GS1 US had co-sponsored a study conducted by Accenture, "Synchronization - The Next Generation of Business Partnering." Findings from the study revealed that the area of logistics offered the greatest opportunity for benefits by synchronizing accurate data between retailers and suppliers. Data showed that inbound and outbound freight costs could be reduced by 6.5 percent for retailers and between 2 - 8 percent for suppliers, translating into millions of dollars in savings. (To learn more, download the complete study at www.1sync.org/data_accuracy.html.)

"Based on our prior experience, we understood the potential for our customers. They [the retailer] wanted to get an objective view of their suppliers' product-weight and – dimension data accuracy based on industry standards – what data was either over- or under-stated. Our role was to help the retailer and suppliers alike pinpoint the areas for improved data quality," says Steve Vazzano, director of GS1 US Data Quality.

The Business Impact

Standards experts from GS1 US visited the retailer's distribution centers and physically measured a sample size of 56 warehouse-level cases (cases) and 90 consumer-level items (items), including products such as cleaners, gloves, toilet seats, masking tape, nails, screws, tools, paint, trash units, and electronic timers. The samples were measured

using industry-defined GDSN Package Measurement Standards. To identify rates of misalignment, the data gathered through physical inspection was compared to data in the retailer's systems and data provided by suppliers through the GDSN. (GDSN accuracy tolerances for the products in the study are ± 4 percent for case weight and dimensions; $\pm \frac{1}{4}$ inch for item dimensions.)

The results of the study revealed that the retailer and its suppliers all had opportunities to improve their data quality for greater supply-chain efficiencies. For example, the retailer and suppliers had different weight and dimension data for 80 percent of the cases and 60 percent of the items. It was also interesting to note that while the size of participating

Major Opportunity: New Item Introductions

To find out how inaccuracies end up ultimately hitting the bottom line, both retailers and suppliers must go back to the beginning of the product development process and through the supply chain. Frequently, during the development of new items, prototypes are developed by the supplier's R&D organization and shared with retailers based on the new product's theoretical or estimated specifications – weight, dimensions and other pertinent data. Case dimensions and weights are often estimated during the initial item set-up. From the time the prototype is shared to when it is shipped, changes, most likely, will be made. Yet, the retailer may continue to use original – now inaccurate – “spec data” while the supplier may not verify the new, accurate production data – adding up to supply-chain inefficiencies and needless costs. Data synchronization enables the suppliers to seamlessly provide retailers with updated product information – from prototype through final production – that previously has been extremely difficult and costly to provide.

suppliers varied – ranging from \$5 million to \$25 billion in annual sales – there was no correlation between data quality results and size.

“Large suppliers are traditionally global, have multiple product-development centers, complex supply chains and have more items than smaller suppliers. However, the results showed us that the size of company does not have a significant impact on data quality. Sustainable data-quality improvements require changes to existing processes. A company doesn't necessarily need deep pockets or vast resources to achieve data accuracy.

“Accurate data has always been important to us as a manufacturer. We thoroughly check our data to make sure there won't be any glitches in the supply chain through to consumer purchase.”

– Hardlines Supplier

Once a supplier determines what poor data quality is costing the business, making improvements usually becomes a priority,” explains Vazzano.

The business impact for the retailer and suppliers is easily illustrated in the following example: One supplier's item was found to be 1.2 pounds lighter than what it had sent via GDSN. Based on the item's annual sales volume, this one discrepancy translates into a 260,000-pound opportunity for the supplier with the potential to eliminate *six unnecessary truckload shipments per year*. For the retailer, inaccurate item-weight data means potential disruptions in receiving, warehousing, distribution and on-shelf availability of this item. For the supplier, this inaccuracy leads to inefficiencies in shipping and higher-than-necessary transportation costs.

One supplier organization that is synchronizing highly accurate data with its retailer partners is currently implementing load-optimization software to help maximize the volume on truckload shipments. “This software depends on accurate case dimensions and product weights to work effectively,” notes the logistics vice president. “So it's essential that this data is precise.”

Another major supplier explains, “With the results of the GS1 US study, it was great to confirm the accuracy of our data; at the same time, it [the study] gave us insight about making tangible changes to our processes now and how to sustain this advantage in the future. We are now re-measuring and re-weighing all of our products. We expect the transportation savings to far exceed our investment in maintaining quality data.”

Making data quality improvements could immediately deliver bottom-line benefits for both suppliers and the retailer. With the study details in hand, they could now collaborate to achieve these cost benefits and more. “The GS1 US team helped us thoroughly understand our current data quality situation. And, more important, they provided guidance about how we could work with our suppliers to make improvements and mutually benefit,” comments the manager. “It's not ‘us versus them;’ rather, we are interconnected and need to work together.”

Data Quality and Business Impact

Data Quality Results		Business Opportunities	
Criteria	Results	Suppliers	Retailer
Case Dimensions	Suppliers' GDSN data is 14% more accurate than retailer's data	<ul style="list-style-type: none"> - Higher trailer load utilization - Fewer warehouse disruptions - Lower freight costs 	<ul style="list-style-type: none"> - Higher trailer load utilization - Fewer warehouse disruptions - Lower freight costs
Case Weight	Retailer's data is 4% more accurate than suppliers' GDSN data	<ul style="list-style-type: none"> - Higher trailer load utilization - Fewer warehouse disruptions - Lower freight costs 	<ul style="list-style-type: none"> - Higher trailer load utilization - Fewer warehouse disruptions
Item Dimensions	Suppliers' GDSN data is 19% more accurate than retailer's data	<ul style="list-style-type: none"> - Not applicable 	<ul style="list-style-type: none"> - Accurate shelf planning - Higher space efficiencies when shipping in totes
Case Identifier (barcode number)	9% of retailer's case barcode numbers did not match numbers printed on the cases	<ul style="list-style-type: none"> - Improved communications with retailer - Supports use of EPC (RFID) 	<ul style="list-style-type: none"> - Improved communications with suppliers - Supports use of EPC (RFID) - Increased accuracy of warehouse scans

Case dimensions: The case dimensions (height, width, depth) were evaluated individually. The study also compared the (calculated) cubic volume in order to eliminate errors caused by "transposing" measurements (e.g. recording "width" dimension as "depth"). Results revealed that 15 percent of the retailer's cubic volume data was over- or under-stated by more than 10 percent. Improving the accuracy of case dimensions provides an opportunity for improved storage and distribution for both the retailer and the suppliers. *Benchmark:* The best-in-study supplier had accurate case dimensions for 95 percent of its measurements.

Case weight: The study found that over 30 percent of supplier-provided case weights were under- or over-stated by more than one pound; improving the accuracy of these case weights provided the greatest business opportunity for suppliers. *Benchmark:* The best-in-study supplier had 100 percent accurate case-weight data.

Item dimensions: The item dimensions (height, width, depth) were evaluated individually. Data provided by suppliers was more accurate than the data in the retailer's system by an overall rate of 19 percent. *Benchmark:* The best-in-study supplier had accurate item dimension data for 97 percent of its measurements.

Case pack and net content: The quantity per case and net content data provided by suppliers were 100 percent accurate.

The Bottom Line

Ultimately, the analysis revealed a very clear message for both retailers and suppliers: Improving data quality at any one point along the supply chain is not enough. To realize true business benefits, accurate data must be continuously synchronized between trading partners throughout the entire product lifecycle.

- ▶ Retailers can significantly improve product-information quality by synchronizing accurate data with suppliers.
- ▶ Suppliers that have invested in data quality are reaping benefits, even in these challenging economic times.
- ▶ Significant untapped savings opportunities await both retailers and suppliers that are willing to invest in data quality.
- ▶ Data synchronization turns a spotlight on and helps improve what is potentially a very error-prone process – the new item development process and the product-information changes made between prototype and final production.

Armed with these insights, the potential for retailers and suppliers to make measurable improvements is undeniable.

Practical Advice – Real Solutions

The GS1 US team provides valuable expertise to both retailers and their suppliers, translating the results of the study into actionable plans for better data quality. “Supplier and retailer collaboration is key. And, it’s important to note that each supplier’s plan and roadmap will be different based on its unique business model,” explains Vazzano.

While each company’s approach may be different, GS1 US recommends some common steps that retailers and suppliers can take to assess, plan and implement improved data quality practices.

- 1. Assess your data and processes.** Whether you lead or work in a retailer or supplier organization, it’s critical to fully understand your company’s current data quality situation.

The GS1 US team of experts can provide on-site assessments, verifying weight and dimension data for an appropriate-sized sample of products, and review your current business processes, including your entire data management process, to identify root causes related to significant errors.

- 2. Quantify the business opportunity.** Whether it’s savings associated with transportation, distribution, receiving, inventory management, or the new-item introduction process, data quality improvements mean measureable, bottom-line benefits.

Armed with results and analysis from the assessment, GS1 US experts can help you develop a business case that quantifies the potential business opportunities associated with data quality improvements. Based on identified areas of opportunity, you can then take the steps outlined in 3 and 4.

- 3. Develop a plan and roadmap.** To transform your organization’s business opportunity into reality, create a plan that delivers quick-win benefits in the short-term and addresses sustainable processes for data accuracy for the long-term.

GS1 US can help you develop the business strategies and steps for action – internally and/or in concert with your retailers or suppliers. Components of a successful plan include: gaining executive-level sponsorship,

training employees, developing master data-management processes, streamlining the new-item introduction process and ongoing data governance. GS1 US can deliver onsite workshops and training to instill best practices.

GS1 US can also support you when considering the industry-led initiative, “New Ways of Working Together” – a new approach for retailers and suppliers to effectively collaborate for improved supply-chain efficiencies. (To learn more, visit <http://www.GS1US.org>.)

- 4. Plan for ongoing monitoring and feedback.** As new items are introduced, steps should be taken to monitor and test for ongoing data accuracy.

GS1 US can suggest the strategies, techniques and common measurements for ongoing data management governance. For retailers, this means establishing a process that provides suppliers with consistent feedback about data quality. Some retailers provide their suppliers with a “scorecard” that outlines the supplier’s position based on a desired data quality target along with supporting details and recommendations. Suppliers can also take steps to develop their own scorecards for retailers as they monitor data quality.

Using the Trading Partner Performance Management (TPPM) GS1 standard, trading partners can establish and use common metrics that help measure the effectiveness of their joint strategic initiatives. (To learn more about TPPM, visit the New Ways of Working Together page at <http://www.GS1US.org>.)

Contact Us

GS1 US offers retailers and suppliers a range of solutions to choose from when synchronizing data and improving data quality. No other standards-based organization offers the breadth of solutions and level of expertise that GS1 US offers its customers. To learn more about how GS1 US can help you and your organization synchronize quality data for tangible business benefits, contact your GS1 US account manager or GS1 US customer service at **+1 937.435.3870**.

About the Retailer and Suppliers

The hardlines retailer and suppliers featured in this case study chose to remain anonymous, yet wanted to provide their insights about the business benefits associated with data quality and the value of partnering with GS1 US. All quotes represent the true opinions of the participants.

About GS1 US™

GS1 US is a not-for-profit organization dedicated to the adoption and implementation of standards-based, global supply-chain solutions. More than 200,000 businesses in 25 industries rely on GS1 US for trading partner collaboration and for maximizing the cost effectiveness, speed, visibility, and traceability of their goods moving around the world. They achieve these benefits through GS1 US solutions based on GS1 global unique-numbering and identification systems, bar codes, Electronic Product Code-based RFID, data synchronization, and electronic information exchange. GS1 US operates the subsidiaries and brands 1SYNC™; BarCodes and eCom™; EPCglobal US™; GS1 Healthcare US; and RosettaNet. It also manages the United Nations Standard Products and Services Code (UNSPSC®) for the UNDP. To learn more, visit www.GS1US.org.

“Data synchronization technology and data quality best practices have made it possible for us to seize control of important fundamentals that power the retail engine: inventory and customer satisfaction. For retailers and suppliers, our formula for success is about getting the right product to the right place at the right time for our customers.”

– Hardlines Retailer



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