



Leveraging GDS to Automate Data Synchronization



Lessons Learned at The Clorox Company



Executive Summary

Clorox demonstrates how a manufacturer can streamline business processes, reduce costs and improve agility through automated collaboration with trading partners.

In recent years, several key customers and manufacturers have begun migrating toward product data synchronization using Global Data Synchronization (GDS) technology. For Clorox, integrating this technology has led to improved efficiencies throughout the order-to-cash¹ process. Clorox is now positioned to benefit greatly from future global trading initiatives.

This paper describes the lessons learned and benefits gained from a product data synchronization initiative at Clorox that began in 2001. Four key take-aways from the Clorox experience are:

- Regardless of the method used – electronic or manual – data synchronization between trading partners is a business imperative.
- There are significant quantifiable benefits to moving quickly to a standards-based electronic GDS process.
- Significant benefits can be realized immediately, even in the absence of more advanced GDS features such as price and promotion synchronization.
- For Clorox, GDS has proven to be the only realistic, sustainable alternative to manual data synchronization.

The data synchronization initiative is one example of how technology-assisted collaboration can benefit manufacturers and retailers. GDS is a foundation for future advances in collaborative initiatives.

¹ Order-to-cash refers to the time from receipt of purchase order to realization of payment.



Case Study

Founded in 1913 with a focus on liquid bleach, The Clorox Company has grown into a worldwide manufacturer of industry leading brands such as Clorox® laundry additives, Glad® bags and wraps, Kingsford® charcoal, Hidden Valley® dressing, and other consumer products ranging from home and auto care to water filtration products. With 7,600 employees worldwide, the company manufactures products in 25 countries and markets them in more than 100 countries.

Like other global manufacturing companies, Clorox faces the challenge of keeping customer-facing product and pricing information in sync with their trading partners. For Clorox, the challenge was compounded by acquisitions in the late 1990s that added to the organization's diverse product portfolio. Clorox was faced with frequent and costly invoice deductions related to pricing discrepancies. In response, Clorox set out to address this problem once and for all.

The process they followed led to adoption of GDS as a foundation for sustainable data synchronization. Those seeking to achieve the same benefits can take a shorter route to GDS by skipping the manual steps in the process, but lessons learned at Clorox illustrate the payoff for a systematic approach to this critical business issue.

DISCOVERING THE ROOT CAUSE OF INVOICE DEDUCTIONS

To stem the rising cost of pricing deductions, Clorox began by carefully scrutinizing and scrubbing internal pricing information. Then they met with trading partners one by one to synchronize pricing tables. Once pricing tables were accurate and in sync they expected to see a reduction in pricing deductions, but that was not the source of the problem.

Next they looked at physical product attributes. While pricing tables were highly accurate and consistent with information in trading partners' systems, they discovered that key product attributes such as height, weight, length, net weight, gross weight, and ti-hi were inconsistent in multiple instances. They realized that these attributes were critical to accurate pricing – and that a discrepancy in product weight or dimension could impact the pricing bracket. (See Figure 1.) For example, when a shipment of bleach is delivered to a retailer, the invoice is often based on shipment quantity expressed as weight and/or cube. If the data elements (height, width, length, etc.) are not in sync prior to processing the order, the effective price and invoice tend to be in dispute, leading to a higher rate of deductions.

Figure 1. Price Deduction Due to Non-Sync Attribute Tables*

How a discrepancy in the weight attribute affects unit pricing and ultimately leads to a pricing deduction.

Product A Attributes (per unit)				
	Manufacturer's Table		Retailer's Table	
<i>Length (in)</i>	10.1		10.1	
<i>Width (in)</i>	6.5		6.5	
<i>Height (in)</i>	18.3		18.3	
<i>Weight (lbs)</i>	14.3		15.0	
Truckload Bracket Pricing (by weight)				
	4	3	2	1
Min	10,000	20,000	42,000	
9,999 lbs	19,999 lbs	41,999 lbs	Max	
	\$18.30	\$17.60	\$17.00	\$16.40 /lb
Trading Partner (Retailer) Ordered: 2,900 Units of Product A				
	Manufacturer's Invoice		Retailer's PO	
<i>Weight (lbs)</i>	41,470		43,500	
<i>Bracket Price</i>	TL2		TL1	
<i>Price per lb</i>	17.00		16.40	
<i>Price per unit</i>	1.19		1.22	
<i>TL Price</i>	49,300.00		47,560.00	
Price Deduction for Product A				
PRICING DEDUCTION	\$1,740.00			
Average Orders per year Retailer A:	200			
Average Price Deduction per year:	\$348,000			

With this insight, Clorox was able to re-engage with trading partners to bring physical product attributes in sync and that's where they saw the dramatic reduction in pricing deductions. Following is a description of the steps Clorox took to bring internal and external systems in sync and to sustain the accuracy of pricing and product information.

STEP 1: SCRUB INTERNAL PRODUCT SPECIFICATIONS

Once Clorox understood the source of the invoice discrepancies, they set out to ensure that these critical attributes were accurate in all Clorox systems. This involved re-weighing and measuring every product at the unit, case and pallet level, accurately capturing that data and entering the clean data into all relevant internal systems. Of the 200-plus attributes associated with each product, only about 5% affect pricing. These were the focus of the data synchronization initiative.

*Product A and its attributes are fictitious. The data is exemplary only.



STEP 2: SYNCHRONIZE PRODUCT INFORMATION WITH RETAILERS

The next step was to communicate accurate product and pricing specifications to trading partners. This was an all-hands initiative, sponsored by the Senior VP of Sales and involving representatives from the field sales, supply chain and customer support organizations. Participants in the table maintenance initiative were told to get out to their customers and to look not only at price but all the physical attributes. Clorox did not see this as the trading partner’s responsibility but as Clorox’s responsibility to ensure data integrity between trading partners.

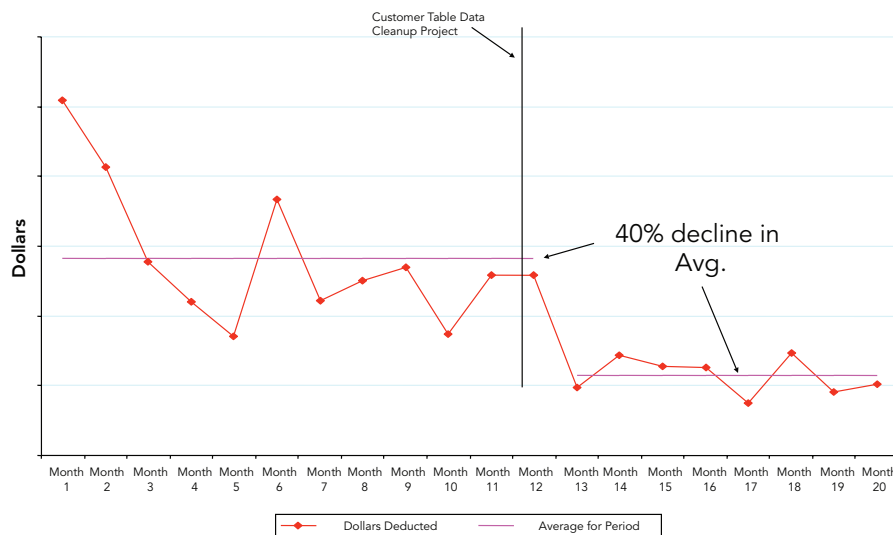
STEP 3: IMPLEMENT PRICE VARIANCE MANAGEMENT PROCESS

To catch discrepancies before they resulted in invoice deductions, Clorox instituted a process of checking incoming purchase orders for pricing variances. The field was provided with spreadsheets on a daily basis showing which SKUs had incorrect pricing so they could meet with customers to correct the product specifications that were creating the price variance.

Recognizing that it was ultimately more costly to resolve issues relating to invoice deductions than to delay an order, POs exceeding a designated variance were cancelled and pushed back to the customer and the assigned Clorox customer team for correction. Program managers expected resistance to canceling POs, but found that many leading retailers have the stipulation written into their customer agreements – they don’t want vendors processing orders with known errors because of the administrative costs to resolve them.

Figure 2.
Pricing Deduction Trends

Within 3 months of initiating manual table maintenance, Clorox saw a 46% decline in invoice deductions.





Clorox immediately began to see fewer pricing deductions and within three months of initiating this manual table maintenance effort Clorox saw a 46% decline in invoice deductions. (See Figure 2.) The next challenge was sustaining the improvement.

STEP 4: SUSTAIN DATA SYNCHRONIZATION THROUGH AUTOMATION

Although they had identified the source of the problem, and understood how to correct it, maintaining data synchronization manually was not a sustainable solution. It was time-consuming, labor intensive, and took sales staff away from core priorities.

Over time, invoice deductions began to creep back to their previous levels. This was due to the lack of repeatable processes to ensure that the data remained in sync. Before data synchronization can scale, an effort must be in place to ensure that the business stakeholders who create, maintain, and communicate the customer-facing product information work in tandem during key activities such as new product introductions, product modifications, product sunsets, etc. Data management processes are essential to sustainable data synchronization. Clorox recognized that they needed to automate the process to ensure scalable and sustainable data synchronization.

Clorox embraced the GDS network and adopted the GS1 data standards in 2002. Recognizing that data synchronization is both a business and IT issue, their GDS initiative was staffed by a cross functional team of business and IT owners. In addition to the team participating actively in GDS standards committees, a decision was made to adopt off-the-shelf GDS technology from Velosel Corporation (acquired by TIBCO in October 2005). Two key drivers for adopting off-the-shelf technology were:

- Ability for the vendor to maintain and update their product as GDS technology standards evolved.
- Time to value. The TIBCO solution was available as a hosted (on-demand) offering, enabling Clorox to get up and running rapidly without the need for valuable internal IT resources.

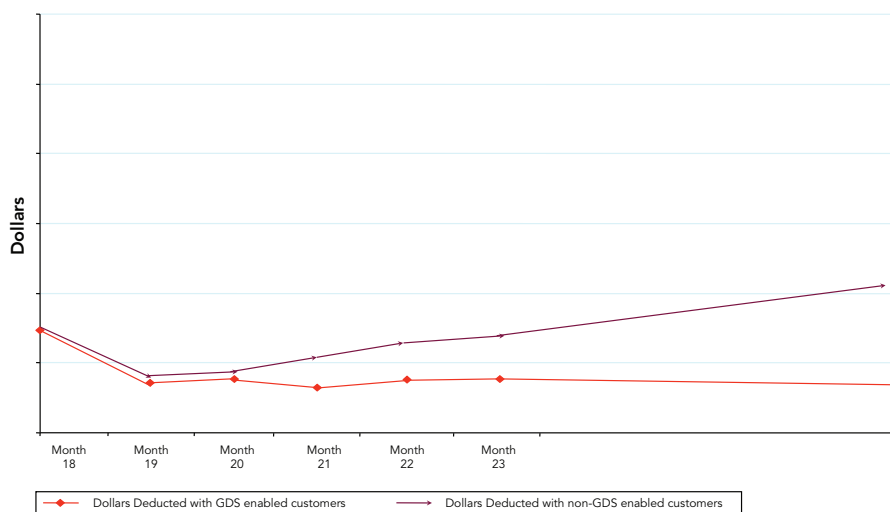
The move to GDS required another round of data rationalization to comply with GDS standards for attribute specification, but the payoff was dramatic and sustainable. Within 30 days of communicating the product specifications to customers, the rate of invoice deductions decreased by 20%. One year following GDS adoption, invoice deductions had decreased by 40%.



THE NEXT STEP

With GDS in place, changes in Clorox product specifications can be replicated in partner systems automatically. As more retailers adopt GDS, and use it for transactional purposes, invoice deductions will stabilize at current levels without manual synchronization. Among retailers that are engaging in electronic GDS, Clorox experiences relatively few and minimal pricing deductions. Those not choosing the GDS strategy are creeping back up due to the lack of sustainable results using manual synchronization. (See Figure 3.)

Figure 3.
Pricing Deduction
Trends in GDS vs. Non-GDS
Enabled Customers



Stabilizing current levels of invoice deductions is just the beginning. The same process and technology can be applied to change improvements in warehouse operations, transportation operations and other areas that depend on data synchronization.

The next step is to further drive GDS adoption and usage for transactional purposes among trading partners, paving the way for additional benefits to manufacturers and retailers who do business in the GDS environment.



BENEFITS TO MANUFACTURERS*

Industry studies have shown these benefits for manufacturers who do business in a GDS environment:

- 3 to 5 percent reduction in shelf out-of-stocks.
- 2 week reduction in speed to market for new items by retailers receiving clean data in advance of physical shipments, they can move product faster through their distribution centers.
- 7 to 13 percent reduction in salesforce time communicating basic item information to customers, following up, resolving queries, etc.
- Reduction in call center and website queries regarding basic item information. Inaccurate product information leads to multiple queries from customers. Through superior product information management queries are reduced.
- 5 to 10 percent reduction in salesforce and accounting time dealing with invoice disputes.
- Reduction in invoice write-offs incurred as a result of data discrepancies.
- Elimination of basic item data errors, currently found in up to 8 percent of total purchase orders.
- .2 to .7 percent reduction in outbound logistics costs.
- .5 percent reduction in inventory.

BENEFITS TO RETAILERS

Benefits for retailers who do business in a GDS environment, include:

- Administrative saving resulting from fewer disputed invoices.
- Reduced time from purchase order to payment.
- Improved asset utilization, including trucks and dock time.
- Accelerated time to market and time to shelf for product introductions and changes, resulting in increased market share, faster revenue recognition, increased margins and improved "lift" factor.
- Improved same-store-sales and market share by having new products in-stock and available for purchase before the competition does.
- Higher revenue capture due to fewer price related errors.
- More effective branding and merchandising as a result of actionable information related to the requirements of specific stores or demographics.
- Increased numbers of cross-sell and up-sell sales generated by the availability of accurate, customer-specific product information.
- Higher sales and reduced returns to the store through consistent, complete and accurate product information presented to customers at the point of sale.

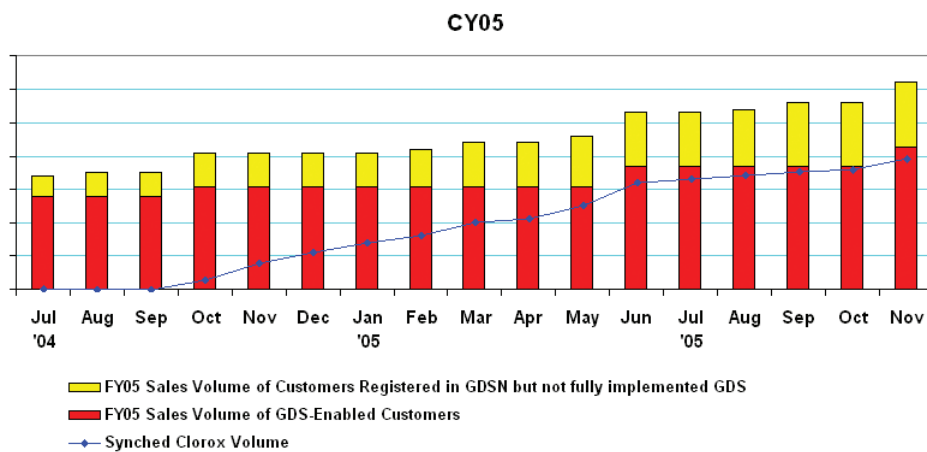
*Source: AT Kearney Study (2002)



Figure 4.
Percentage of Sales Volume
With GDS-Enabled Customers

KEY CHALLENGES

Clorox has the capability to synchronize GDS with customers so that transmitted data can be used to automatically populate POs, receive products at the dock, manage shelf resources and so on, but many of their trading partners are still using GDS as a reference system and re-entering data via manual efforts such as web portals, new item forms, etc. Figure 4 shows the volume of Clorox business synched via GDS (46%).



- Retailers are at different stages of GDS readiness.
- The majority of those who use GDS are using it for reference data vs. transactional data.

Summary

By getting product attributes in sync with trading partners and leveraging GDS to automate data synchronization, Clorox has been able to reduce pricing deductions by more than 45 percent, and sustain the improvement over time with those customers who are similarly engaged.

The Clorox strategy of implementing GDS features incrementally, as they become available, has resulted in significant benefits in the near term and positioned them to take advantage of additional GDS features quickly as they become available. Those who wait to implement GDS until more advanced features such as pricing and promotions sync are in place will be two to three years away from realizing the benefits of GDS.



BEST PRACTICES FOR SUCCESSFUL SYNCHRONIZATION OF PRODUCT INFORMATION WITH CUSTOMERS:

1. Identify the required data elements (attributes, related products, containment hierarchies, and valid values for each element), by product, by customer, by region.
2. Cleanse key data – focus on quick wins:
 - a. Start with the top selling products.
 - b. Identify the customers and regions with the highest pain – it is not necessary that the highest revenue customers or regions are the immediate candidates for data sync.
 - c. 5-10% of product attributes affect pricing. Focus synchronization efforts on those.
3. Establish processes to ensure that there is a repeatable process to managing product data across the company – once this is established, the data sync process can be scaled in phases.
4. Establish and communicate data standards and validation rules across the company – leverage the GS1 standards.
5. Communicate, communicate, and communicate! Change management across the company and with trading partners is critical – keep restating the benefits.
6. Do not oversell and over promise– this effort takes time.
7. Proactively contact customers and establish repeatable processes to address product portfolio changes and “on-board” customers.
8. Establish, measure, and benchmark key metrics (e.g. price deductions, data quality, etc.).
9. Automate the product information management processes, data validation, and electronic data synchronization capabilities.
10. Ensure that you have technology in place that is flexible and scalable on four major fronts:
 - a. Allows data element extensibility as required by evolving business needs and industry standards.
 - b. Provides flexibility to change product information management processes as the business dictates.
 - c. Ensures continuous compliance with Industry Global Data Synchronization standards (both data and collaboration standards).
 - d. Allows for collaboration with customers beyond GDS (CPFR, VMI, etc.).