Foodservice

Opportunities for GS1 Global Location Numbers (GLNs) in the Foodservice Supply Chain

White Paper

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1   Introduction

Today, each unique business relationship between two foodservice trading partners produces a set of proprietary account/location numbers specific to that relationship. Because each foodservice member has numerous trading partners in their supply chain, this practice can result in multiple identifiers for the same account/location. This is a high-maintenance approach to account/location identification that is further complicated by variations in the data format of location identifiers, variations in how location identifiers are assigned, and variations in change management policies for location information. Moreover, it can create an error-prone environment that undermines the accuracy of business transactions and the effectiveness of supply chain management efforts.

The foodservice industry has an opportunity to address these problems by adopting the GS1 Global Location Number (GLN). GLNs are standards-based identifiers in a standardized data format based on standardized assignment and change management rules. Adoption of the GLN would standardize account/location numbers so that each foodservice location would have one, globally-unique identifier that all trading partners can use to identify that location in all supply chain transactions and communications. Use of the GLN can help improve foodservice business processes like contract management, procure-to-pay and recall, and support the industry's on-going efforts to improve the efficiency and safety of its supply chain.

The Foodservice GS1 US Standards Initiative created this document to support adoption of GLNs across the U.S. foodservice industry in order to promote greater efficiency and traceability in its supply chain. To that end, this document contrasts the problems associated with the current approach to account/location identification with the benefits and opportunities associated with using the GLN in order to underscore the importance of widespread GLN adoption in the foodservice industry. This document is intended to assist companies in:

- realizing the problems with the current approach to account/location identification,

- understanding how the adoption of GLN can help to resolve those problems, and

- recognizing how GLNs can help improve foodservice business processes like contract management, procure-to-pay, recall and reporting.

2   Current Approach to Account/Location Identification

Often, foodservice account/location identifiers are created and maintained by individual trading partners. Each unique business relationship between two foodservice trading partners produces a set of proprietary account/location numbers specific to that relationship. In addition, contract management companies also assign their own proprietary numbers to the customers they service. And beyond all of the account/location identifiers assigned by trading partners, many foodservice companies also assign their own internal numbers to their locations for use within their IT systems. These practices can result in numerous identifiers for the same account/location, which is an error-prone environment.

Compounding the problem, there is no standard format for these account/location identifiers (e.g., standard length, standard alpha-numeric format, etc.). Without formatting standards, proprietary numbers are in proprietary formats that complicate the storage and use of those identifiers in IT systems. For example, a common method used by trading partners to create identifiers is DUNS plus 4 numbers, in which the DUNS number of the intended party is suffixed by a 4-digit code. However, the suffix is usually generated by an internal process and therefore its definition remains local to the party who assigned the suffix.

With numerous identifiers for the same account/location, trading partners need to create and manage cross-references and data maps to align account/location information with one another. For example, operators often map the multitude of "customer numbers" assigned by their trading partners to a single internal number they assigned. Not only is this high-maintenance, but variations in identifier format (like proprietary system values and arbitrary field sizes) further complicates the effort.

3 Resulting Problems & Issues

The current approach to account/location identification has had a negative impact on the foodservice supply chain, undermining the accuracy of business transactions and the effectiveness of supply chain management efforts. Some of the most pressing problems caused by the current approach are described below.

3.1 Imprecise Account/Location Identification

The process for how identifiers are assigned varies by trading partner. For example, some trading partners may assign one identifier to an entire building complex without consideration for or differentiation of the different delivery or pick-up locations at that complex. Other trading partners may assign identifiers based on internal processing activities, causing them to assign multiple identifiers to a single shipping location. As these examples illustrate, variations in how identifiers are assigned can cause confusion in the very same supply chain business processes and transactions that the identifiers were created to support.

3.2 Inaccurate/Inconsistent Master Data

Change management policies are at the discretion of the company that assigned the identifier, and often do not consider the needs of the trading partners using these identifiers, nor the time-sensitivity associated with the changes. For example: if an operator closes one location and opens at another, is the address for the existing account/location number updated, or is that number retired and a new identifier issued for the new location? In addition, the lack of automation in the communication of account/location information (and changes thereto) compounds the problems. A good example of this is mergers and acquisitions where the transfer of ownership has not been timely communicated to all trading partners.

3.3 Inhibits Optimization of IT Systems

Having multiple identifiers in varying formats for each account/location impedes optimization of IT systems, which can impair the procure-to-pay cycle and the bottom line. For example, contract management companies process bill-backs or rebates when proof-of-performance reports are received. Because of the numerous identifiers and all of the variations in identifier format, they are unable to leverage IT systems to quickly and easily apply those incentives. Instead, they must first reconcile customer/operator identifiers by manually comparing names and addresses, which is a slow and tedious process.

4 GS1 Global Location Number (GLN)

The GS1 System provides globally accepted identifiers, standards and a common language for the communication of supply chain information. The GS1 identifier for supply chain parties and locations is the Global Location Number (GLN). The GLN is a GS1 standards-based, globally unique identification number that can be used to identify a *functional entity* (like an operator or accounting department), a *physical entity* (like a warehouse or a farm), or a *legal entity* (like a manufacturing corporation). For decades, this GS1 identifier has facilitated the sharing and communication of party/location information among supply chain partners in twenty-three industry sectors across the globe.

Each company is responsible for assigning its own GLNs (a process known as *allocation*). The GS1 System provides clear, structured data standards and GLN Allocation Rules that companies follow when allocating GLNs in order to assure that their GLNs are globally unique and in a consistent format. When a user assigns a GLN, they define a prescribed set of data about the party/location to which that GLN relates (e.g., street address, floor, etc.). These GLN attributes define master data about the party/location (e.g., name, address, class of trade, etc.), which help to assure that each GLN is specific to one, very precise location within the world. The GLN and its associated attributes are then saved in a database (like GS1 US Data Hub® │ Location) and shared among supply chain partners so that they can be used in supply chain transactions.

5 Advantages of Using GLN Instead of the Current Approach

Adoption of the GLN would standardize account/location numbers so that each foodservice location would have one, standards-based identifier in a standardized data format based on standardized assignment and change management rules. The same identifier could then be used by all trading partners to identify that location in all supply chain transactions, supply chain communications, and internal systems. This could help resolve the problems associated with the current approach to account/location identification, thereby improving foodservice business processes like contract management, procure-to-pay and recall.

6 Snapshot of the Benefits of GLN Adoption

Use of the GLN can help improve contract management, order management, inventory reporting, and sales tracking. It can also promote accurate and rapid recalls, bill-backs / rebates and claims. The table below provides a snapshot of the stakeholders and transaction types that can benefit from the adoption of GLN.

Table 6-1 Stakeholders & Transactions Types that Benefit from the Adoption of GLN

TRANSACTION TYPE	Manufacturer	Distributor & Re-Distributor	Operator	3rd Party Company	Broker	Distributor Buying Group	Operator Buying Group	Food Service Exchange	Data Pools
GDSN Publish	✓	✓			✓				✓
GDSN – Subscribe	✓	✓	✓	✓	✓	✓	✓	✓	✓
Product Catalog	✓	✓	✓	✓	✓	✓	✓	✓	
Purchase Order	✓	✓	✓	✓	✓	✓	✓	✓	
Functional Acknowledgment	✓	✓	✓	✓	✓	✓	✓	✓	
Purchase Order Confirmation	✓	✓	✓	✓	✓	✓	✓	✓	
Advance Ship Notice	✓	✓	✓	✓	✓	✓	✓	✓	
Invoice	✓	✓	✓	✓	✓	✓	✓	✓	
Remittance Advice	✓	✓	✓	✓	✓	✓	✓	✓	
Organizational Transaction	✓	✓	✓	✓	✓	✓	✓	✓	
Sales Tracing & Bill-Back	✓	✓	✓	✓	✓	✓	✓	✓	
Contracts	✓	✓	✓	✓	✓	✓	✓	✓	
Inventory Reporting	✓	✓	✓	✓	✓	✓		✓	

Stakeholders that touch the product

7 Benefit: Fewer Disputes & Exception Processes

There are many exception processes today in the foodservice industry that exist because location master data is not consistent across trading partner systems. The fundamental problem exists because required location information is not standardized, and therefore must be cross-referenced between foodservice trading partners. Lack of automation in communicating location information (and changes thereto) only

compounds the problem because it inhibits timely and efficient updating. There are a variety of costly transaction discrepancies that can be attributed to this lack of alignment, including:

- Invoice Errors

- Incorrect or Inaccurate Orders Placed

- Product Delivery Issues to Recipient

- Rebate and Program Reconciliations

- Deductions and Charge-Backs

- Employee Productivity:

  - Resources required for order and item administration

  - Resources required for adjustments and accounting reconciliation

- Sales and Proof of Performance Reporting

The use of GLN identifiers with the relevant hierarchical attributes can increase the accuracy of location information among supply chain partners, and eliminate the need to cross-reference and/or manually re-key information. This can reduce exception processes as well as the number of upstream and downstream disputes that may occur. In addition, the standardized data format and standardized data set for GLNs can also help improve information accuracy because they support electronic communication and sharing of location information to facilitate timely and efficient updating.

Note: There are several options available today for how to automate the sharing of location information among foodservice trading partners. One option is a point-to-point solution that leverages existing Electronic Data Interchange (EDI) documents, such as the 816 Organizational Information or the 838 Trading Partner Profile transactions.

Another option is to leverage _GS1 US Data Hub | Location_ to share trading partner GLN attributes without the need for individual set-up and maintenance. GS1 US Data Hub | Location is an on-line tool that provides a single source for information about supply chain locations and how they are related. GS1 US Data Hub | Location enables subscribers to view, create, manage, and share up-to-date, reliable location information, validated by the U.S. Postal Service. Whether you are an operator, distributor, manufacturer, or other foodservice organization, you can use GS1 US Data Hub | Location to view accurate location information that is created and maintained by your trading partners.

8   Benefit: Less Confusion When Locations Undergo Changes

Today, change management policies for location identifiers are at the discretion of the company that assigned the identifier. This introduces uncertainty whenever supply chain locations undergo a change like new ownership or new address. In contrast, using GLNs offers predictability and certainty in such circumstances because GLN Allocation Rules define standardized change management policies for how to handle those situations.

For example, the general rule is that a separate GLN is required to identify each physical location. However, from time-to-time, supply chain locations can undergo changes like the ones described above. When that happens, GLN users may need guidance about whether they need to assign a new GLN or simply update the GLN attributes. The GLN Allocation Rules provide that guidance for various scenarios based on business practices. The table below provides examples of GLN Allocation Rules that require new GLNs to be assigned in order to demonstrate the importance of following standardized practices regarding changes to locations.

Table 8-1 Examples of GLN Allocation Rules where a location change requires the assignment of a new GLN

Example	Description
Change of physical address	▪ Examples: new city, new town, new country ▪ It is critical to know the exact location where orders need to be picked up and delivered. It is also important to know the correct address to send an invoice or payment. ▪ Without a new GLN, it is not possible for trading partners to distinguish one location from another.
Major change to party/location that impacts trading partners and/or traceability requirements	▪ Examples: frozen warehouse/depot changes to accept dry products only, or a food store changes to a pharmacy store ▪ Without a new GLN, it would be very difficult to efficiently track and log the movement of products, and it could lead to failures in meeting requirements.
Legal status change following a partial merger or acquisition	▪ Example: a specific hotel that is purchased. The new GLN would identify a change in the hotel's ownership to its trading partners. ▪ GLNs must be changed to reflect the purchasing organization's GS1 Company Prefix if the sale did not include the transfer of the existing GS1 Company Prefix.
Re-using a GLN that was previously used or has become obsolete	▪ GLNs must not be reused for another location until a timeframe to be determined has elapsed (not less than 48 months). ▪ If GLNs are reused sooner, it creates problems with reporting historical data since one GLN can be associated with multiple locations. ▪ This period allows time for all references of the old GLN to be removed from trading partners' files.

9 Benefit: Improved Accuracy & Efficiency in Contract Management

The contract and rebate management lifecycle begins when the final negotiations between the party offering the incentive and the party receiving the incentive (through reduced price, off-invoice allowances, or after-the-fact rebates) are documented. Downstream, the final stage is when the bill-back, rebate or volume allowance is settled between trading partners. Throughout this cycle, it is critical to have all parties to the contract[1] correctly identified.

Today, party identification is most frequently accomplished using the company's DUNS number or an internal customer number assigned by the party offering the incentive. However, this approach lacks consistency and precision due to the existence of multiple identifiers and the lack of precise assignment rules. A key opportunity for improving efficiency and accuracy in this area is to use the GLN as the single source of the information about the parties. GLN adoption offers a variety of benefits to contract and rebate management processes.

9.1 Clear distinction of parties

Clear distinction of all parties named in the contract is essential. This can be a challenge in certain scenarios. For example:

▪ A manufacturer may have multiple business segments, but the contract is only offered on certain product lines.

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[1] The term "contract" as used in this document refers to the documentation of foodservice pricing incentives between trading partners (i.e., bill-back; rebate; reduced price; off-invoice allowances; etc.). The information about contracts contained herein is not intended as legal advice, nor is it a substitute for legal counsel.

- A distributor must honor contract pricing to their customer. To do that, they need to be able to identify the operator correctly in order to validate that their claim to the manufacturer is eligible for reimbursement. This is an important issue for distributors because inaccurate recipient information can have a significant impact on profitability.

- An operator unit is a member of several Group Purchasing Organizations (GPOs) so they can take advantage of the best pricing for each product category. However, changes to GPO membership can occur as frequently as every week.

Adoption of the GLN can help reduce confusion in the identification of parties in the contract. GLNs can be used from the parent company level down to a specific operating location. Using GLNs to identify parties to the contract promotes accuracy when party roles in the contract (i.e., Contractor, Contractee, Claimant) do not completely align with supply chain roles (i.e., manufacturer, distributor or operator). For example, the recipient may be a distributor, and the party receiving the incentive may be an operator or a distributor. GLNs also support precise party identification when specific price deviations and rebates are only being offered to certain parts of a Contractee's organization.

Use of GLNs promote accurate and precise party/location identification to support contracts. This is important for all members of the foodservice supply chain -- manufacturers, distributors and operators alike. Although all will benefit from GLN identification, using GLNs to identify operator unit locations offers the greatest opportunity due to the complexity involved in identifying Contractees.

9.2   Reduction in effort to implement contract changes

Parties to a contract may undergo various changes during the lifetime of the contract. Nonetheless, it is essential that the information in the contract remains accurate and up-to-date in order for the contract to be properly executed. For example, a foodservice operator gains and loses locations over the lifetime of a contract. These changes have to be reflected in the contract in order for new locations to gain the benefits of the contract and to remove old locations. Under current practices, the effort to implement such contractual changes often requires significant resources. Using GLNs can simplify this process. A separate GLN is used to identify each physical location and the GLN Allocation Rules define standardized change management policies for how to handle changes. This can reduce the complexity and minimizes the effort to implement contract changes.

10   Benefit: Less Complexity in the Procure-to-Pay Cycle

Procurement is not only the act of purchasing, but it is an art of acquiring goods and services at the right time, the right place, the right quantity and the right price. Perfection of this process reduces supply chain costs and the cost of acquiring goods and services. At the highest level, the procure-to-pay cycle involves the following activities:

1. Placing a purchase order

2. Pricing a purchase order

3. Receiving the purchased items/services

4. Authorizing the payment or making the payment

There are other activities that can also be part of this process. These other activities can either be complementary to or a variation of the above-listed activities. For example:

- *Drop Ship Order Process:* A variation of purchase order used in the circumstances when a distributor cannot fulfill an order from their inventory, and places the order with a manufacturer or other supplier to make the shipment directly to customer.

- *Discount Claims:* Sometimes the manufacturer allows discounts as per terms of the contract. Claiming the discount and settlement of discount is an additional task when making payment to seller. This may be complex if eligibility is not clearly defined.

All of the activities in the procure-to-pay process require accurate identification of certain locations (e.g., shipping address; billing location; remittance location; etc.). Therefore, accuracy of location identification and alignment of location information is essential to procurement.

Adoption of the GLN supports procurement because it provides a common framework that all parties involved in the procure-to-pay process can use in supply chain transactions from the purchase order to the delivery to the payment. With the GLN, each location is identified by a unique number that all stakeholders in the procure-to-pay process use to identify that location in all supply chain transactions and communications. This clarifies and streamlines the process, promotes the correctness of the transactions, and minimizes costly errors like re-shipment and loss of shipment.

11   Benefit: Simplified Processing & Improved Reporting

Often, contract management companies assign proprietary numbers to customers they service. If those customers change to a different contract management company, yet another proprietary number is assigned to that customer by the new contract management company. This results in numerous identifiers for the same location, which complicates processing for all trading partners.

With each operator having several different identifiers, proprietary customer/operator identifiers must be reconciled when proof-of-performance reports are received and bill-backs or rebates are processed. And because those identifiers are in different data formats, the identifiers must be reconciled manually by comparing names and addresses, which can be both time-consuming and error prone.

Using GLNs can significantly simplify processing for supply chain parties. All accounts/locations would have one, unique identifier that every trading partner can use to identify that account/location in supply chain transactions and communications. Distributors and redistributors could all use GLNs to identify themselves and operators when delivering product, transmitting invoices and providing proof-of-performance reports. This would facilitate the easy exchange of information and streamline the reconciliation process.

Reporting and payment processing could be greatly improved, as could resale data and sales reporting accuracy for distributors, manufacturers, and contract management companies. For companies that currently have teams devoted primarily to reconciliation, using GLNs could lead to increased productivity. Plus, operators would no longer have to map the multitude of customer numbers given to a single location to a single internal number.

12   Benefit: Improved Responsiveness for Product Tracking

The existence of numerous identifiers for the same account/location requires trading partners to manage cross-references and data mappings to align party and location information with one another. In the event of a product recall, stock trace or market withdrawal, each trading partner would have to rely on manual alignment of party/location information between trading partners to find a suspect product. This slows responsiveness to market withdrawals, product recalls, or any other trace-back situation where time is of the essence.

Improving food safety processes is one of the key objectives for the GS1 US Foodservice Standards Initiative GLN, and GLN adoption is a fundamental part of that effort. Using GLNs for each foodservice location provides one, standards-based identifier that can be used by all trading partners to identify that location in all supply chain transactions, supply chain communications, and internal systems. This can enhance the speed and accuracy of food safety processes for the industry, and enable responsive and accurate product tracing. Using GLNs supports manufacturers, distributors, and operators in quickly and accurately determining where a suspect product has been shipped and/or received. For example:

Manufacturers will be able to identify:

- Production plant(s) associated with the products
- Customers, distributors, redistributors and/or operators where the products were shipped

- Third-party logistics providers involved in shipping the products

Distributors/Redistributors will be able to determine:

- Manufacturer of received products
- Distributors and/or operators where products were shipped

Operators will be able to determine:

- Distributors/Redistributors of received product
- Restaurants where product was shipped

Note: For more information about foodservice traceability and the essential role of GLN in that process, see the *Foodservice Implementation Guideline for Case-Level Traceability Using GS1 Standards*.

13   Conclusion

Adoption of the GLN in the foodservice supply chain can significantly improve party/location identification, as well as the alignment of location information among supply chain partners. This can improve foodservice business processes like contract management, procure-to-pay and recall. Economic and regulatory pressures on the foodservice industry demand new levels of collaboration on cost-savings opportunities and product traceability.   It is the recommendation of this industry-driven group that the GLN should be adopted to support the industry's on-going efforts to improve the efficiency and safety of its supply chain.

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