

GDS Implementation

On a Global Scale

November 2003



Introduction

Realism is creeping into the plans of companies adopting item synch. To date, most companies have been watching the developments of the Global Data Synchronization Network (GDSN) externally waiting to see who the players will be, who will work with whom and what will be the role of the global registry. In the meantime, companies who got involved early have key learnings from their projects and know they must look inward at their IT systems and business process to enable their company to take advantage of this new industry phenomenon of data synch. There is a growing understanding that there are still many years worth of work and still many questions unanswered. But, those companies starting now will continue to make progress.

There are several challenges being faced with the implementation of data synch today. These challenges range from a lack of consistent standards compliance to many regions not having all the 'pieces' of the Global Data Synchronization (GDS) vision available for them to adopt, such as solution providers to enable standardization and a global registry. We continue to expect challenges, and despite them, are in a good position to move forward across regions.

"How can we move forward to implement data synch without all the pieces available?"

The answer to the above question lies in a defined plan to enable companies across all regions globally to begin the process of standardizing. The place to begin for most trading partners is to first align data with key partners and then standardize item maintenance business process. As we enable these steps, regardless of our starting point, the GDSN will be the result. What are some of the pieces needed for Data Synch?

Global Standards <ul style="list-style-type: none"> ✓ GTIN ✓ GLN ✓ Global Product Classification (GPC) Global Data Dictionary (GDD) ✓ Product Hierarchy ✓ GDSN process standards 	Target Market <ul style="list-style-type: none"> ✓ Language ✓ Regional Attributes
Global Data Synchronization <ul style="list-style-type: none"> ✓ Interconnected Data Pools ✓ Global Registry ✓ Centrally Stored Data 	Implementation Readiness <ul style="list-style-type: none"> ✓ Standardized Item Maintenance Business Process ✓ Trading Partners Ready to Use/Leverage Data ✓ Regional Solution Providers Supporting Global Standards

Overview of GDSN

GDSN: a federation of interoperable certified data pools and a Global Registry collectively providing for the synchronization of Master Data between trading partners on a global basis. This model supports a rich network of data pools and entry points that may be manufacturer based, retailer based, or both - it requires the interoperability of all components.

Actualizing GDSN

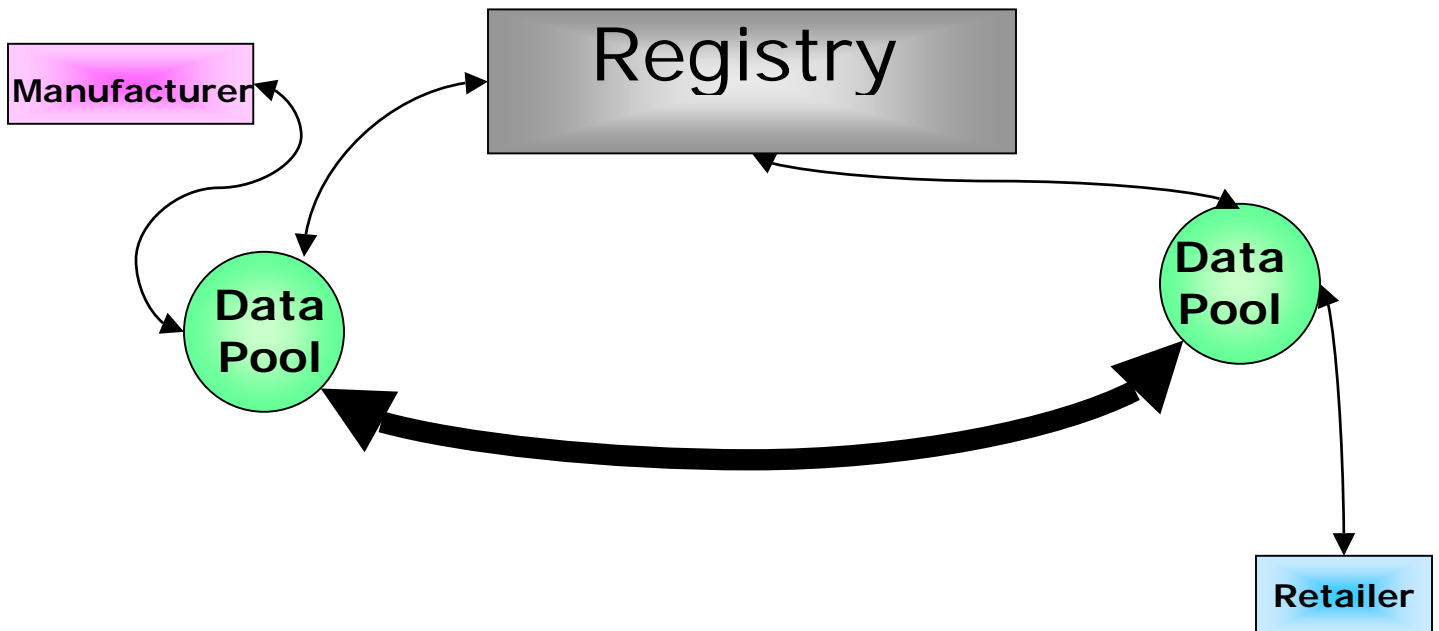
- The registry and all data pools will be EAN.UCC certified
- Interoperability among all data pools and the registry
- Single point of entry into the network by all participants
- Information recipients cannot dictate which source data pool must be used by an information provider
- Products will be uniquely identified by GTIN, Target Market and GLN identifier
- Only source and recipient data pools will communicate with registry
- Only GDS business message sets will be used within the network
- The data pools and entry points can provide individual additional services
- *Not all regions and the trading relationships and data pools within the region will become compliant to GDS standards at the same time*

Benefits of GDSN

- The GDSN accelerates global access to ***synchronized data***
- Using synchronized data speeds the adoption of ***standardized business processes*** across companies
- Having standardized business processes drives ***collaboration*** across trading relationships, producing faster savings
- Standardized, synchronized data fuel - ***powerful collaborative tools***

Benefits of Data Sync

- Improved Process
 - Time to add and change items is reduced
 - Time to resolve data discrepancies cut in half
 - Significant reduction in time to resolve invoice-purchase order miss-match and invoice deductions
 - Better allocation of time – significant increase in time spent on work process and strategic decisions and only much less time spent on administrative efforts
- Improved Margins
 - Real time data synchronization leads to faster time-to-retail
 - Less administrative resources needed to manage data



The Challenges Implementing Data Synchron

1. Many data pools are extending the standards to accommodate business data that their trading community requires to adopt Global Data Synchronization. We need a model for a data quality program for the industry that will help data being exchanged remain consistent. Data quality is not a strong enough focus within the Global Data Synchronization Network).
2. The community adopting GDS across the globe has grown and there is a need for an organization tasked with broad based communication on industry and implementation developments to ensure standards adoption is consistent across all the regions. Currently, a GCI Data Sync implementation workgroup is filling this role.
3. Working across target market boundaries and languages.
4. National data pools and solution providers are adopting standards at a slower rate than exchanges. The gap is limiting retailers' ability to receive all their required data elements for item maintenance and item setup.
5. Companies outside North America have yet to embrace the immediate need for paying additionally for a global registry - becoming standards compliant and aligning data with local trading partner(s) is the primary activity today. The global data and message standards and a data pool are therefore the first pieces of the GDSN vision that most companies are working with.
6. UCCnet has succeeded in getting a large subscriber base but is slower at achieving adoption thus far with far fewer subscribers implemented and in production.
7. There is a lack of a predictable path for how to access the GDSN. Specifically how suppliers reach all their customers through the GDSN, which customers will be ready first, and how customers will get product data from all their suppliers through the GDSN. Data pools and solution providers committed to interoperability must become transparent with their roadmaps for enabling data to 'flow' in the network.
8. Some companies not 'yet' ready to publish and leverage the larger set of product data. Internal IT projects are underway. It is hard work.

Phased GDS Implementation

While most understand the enablers of Data Synch, there's no roadmap for what's needed when the network is built. What is clear is that the network will be built only after companies and trading relationships align core data and then standardize core item maintenance business processes.

A key lesson learned through the WWRE's global implementations is that the *data inconsistencies* across trading relationships and countries are extensive. The WWRE has found that there are really no exceptions to this, all parties involved need to make adjustments in order to standardize business processes and align data. These steps must be completed in order to synchronize data. It is important that data inconsistencies be resolved as quickly as possible and that companies make the changes to their IT systems to ensure they can take advantage of the resulting aligned data.

Another key lesson learned is that the GDS *implementation time* for trading partners in North America is vastly different to that for trading partners in Europe and Asia. This is primarily due to regional differences such as different customer pressures like Wal-Mart in North America and the challenges of working with target market and language data from the onset in Europe. These timing differences highlight the need for trading partners to begin adopting GDS today with a plan tailored to the speed and priorities of their local trading communities.

The data inconsistencies and regional influences will result in GDS being adopted at different times in different regions. This is not such a surprising finding given the magnitude of what we're trying to do as an industry, however, the timing differences can be accommodated with a flexible and phased implementation plan.

Through its global GDS implementations, the WWRE has seen the following GDS implementation phases emerge across Europe, Asia and the Americas. The WWRE has experienced that the existence of 'phases' and the consistent application of standards results in faster GDS adoption and standardization. For example, when most thought Asia wasn't ready for GDS, the WWRE was able to implement global standard data and message requirements to go-live with a retail member and selected trading partner(s) in Japan.

With its GDS community growing rapidly, the WWRE has contributed significantly across regions to ensure the consistent adoption of the key ‘enablers’ of Data Synch such as data models and message set(s).

1. **Internal Synch** – internal alignment within a company’s IT systems
2. **Align Data** – consensus on specific data requirements between parties
3. **Inter-Connect** – sending and receiving aligned data without response messaging
4. **Interoperate** – sending and receiving aligned data with extensive electronic responses
5. **Expand core product data** – extending core data alignment to relationship specific

The following table describes five phases of GDS implementation. From the internal synch that an individual company is doing today to aligning product between two trading partners and then scaling this to local and global trading partners and expanded sets of product data.

Global Phase GDS Impl.	Trading Relationships	Actions	Business Process
1. Internal Synch	0 (Company)	<ul style="list-style-type: none"> • Cleanse • Align data • Review internal business process 	IM - Item maintenance
2. Align Data	1:1 (Supplier + Retailer)	<ul style="list-style-type: none"> • Align core (GDD) and Target Market data with trading partner • Align accept, reject processes 	IM - Item maintenance
3. Inter-Connect	1:1+ (Local target market and language)	<ul style="list-style-type: none"> • Scale access • Align data across target market, suppliers, categories • Registration 	IM - Item maintenance
4. Interoperate	1:n (Global, more than one target market and language)	<ul style="list-style-type: none"> • Subscribe to Registry • Global Publication 	NII -New Item Introduction
5. Expand Core Data	1:n	<ul style="list-style-type: none"> • Price • Trading Relationship Specific 	NII - New Item Introduction Supply Chain Collaboration

Global Phases of GDS Implementation

How and Why We Can Move Forward Today to Implement Data Synchronization

Despite the challenges we are aggressively moving forward in all regions to implement GDS. The WWRE and other data pools have provided sufficient standards support and solutions for meeting our goals. GDS standards have been published, and in select markets have been proven, with existing implementations across several languages and countries.

There are benefits of implementations focusing on aligning data between key trading relationships. The key is that enough of the standards and ‘enablers’ are in place to meet the needs of trading partners to begin to realize Data Synch benefits. The WWRE has been at the forefront of building this global implementation experience. The WWRE is enabling members and their trading partners to begin implementing Data Synch and in parallel begin standardizing process and aligning data with selected trading partners. The speed with which this standardization is achieved is up to the participants. *It is observed by the WWRE that in Europe and Asia data alignment and standardization will take longer than in North America, due to the additional target market, language requirements, and larger volume of smaller local suppliers.*

The following list includes some of the underlying **“GDS Enablers”**:

- **Global Standards** for Data Synch have been published
- **Data Synch Enablers** are defined (data model and classification)
- **Trading Relationship Alignment** has begun
- **Regional Community Standardization** has begun
- There is an emerging market of GDS *standards compliant* **local country catalogs** and **solution providers** who have begun to inter-connect trading partners

Global Standards

The initial standards for Data Synch have been published by EAN.UCC and define the roles and requirements for GDSN. Specific standards for Item, Party, Price, Price bracket and Global Data Synchronization (phase 1 process standards) have been published.

- Item (Data) Synchronization
- Data Pool Requirements
- Subscription and Publication
- Messaging Requirements
- Global Registry

Data Synch Enablers

The foundational enablers of the above standards are also ready to implement in specific categories. The definitions provided in the EAN.UCC data and process standards and the emerging product classification are key drivers to the data alignment activities with all GDS implementations. Today, enabling all regions across languages and country data pools to be using the same standardized data model is a key requirement and focus.

The WWRE is inter-connecting 8 country data pools in 2003 all using the same data model and product classification and is therefore driving standardization between the WWRE community, the global standards, and the specific trading communities being inter-connected.

- **Data Models** -- Item, Party, Price, Price Bracket
- **Global Product Classification (GPC)** -- Bricks, Attributes, Values

Trading Relationship Alignment

These are the activities that trading partners (suppliers and retailers) are doing in preparation for synchronization. Many of the items below will be specific to industry and target market requirements.

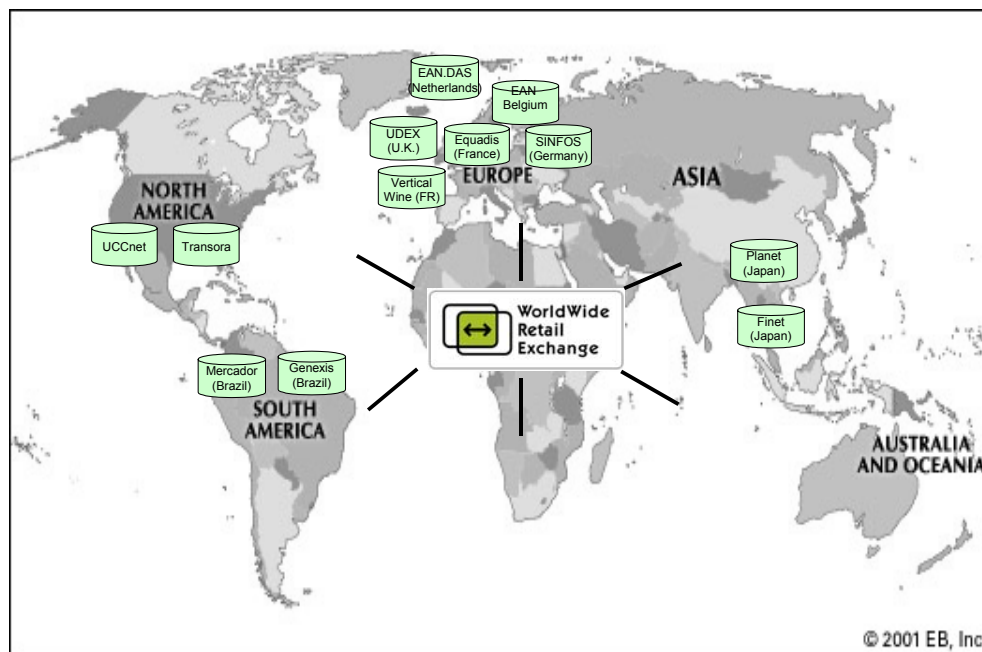
- Adopt core data standards
- Access data needs, establish access to GDSN
- Build consensus for those data needs within trading relationship
- Align data with customer
- Receive response message from customer
- Adopt product hierarchy
- Retailers ensure can use all mandatory core data requirements
- Standardize on GTIN/GLN /TM as product identifier
- Standardize GTIN allocation rules
- Identify gaps between local data needs and GDS standards

Regional Community Standardization

A goal of the GDS model is to have only one Source Data Pool per manufacturer and retailer. Outside of North America this picture is much more complicated as there are several regional data pools across several different countries. In Europe there are many countries in a small geographical region, having uniqueness in culture and language, which reflects in the products sold by country/region. There is also a larger volume of smaller suppliers who produce local products for a local market/region and retailers who want to access their product information in a standardized way. To date, GDS has been a large company problem. As large retailers have reached into their supplier lists to call for all suppliers to embrace standardization, many of these smaller suppliers are raising implementation issues that are of concern across the globe.

The industry needs a transparent roadmap for the inter-connectivity and interoperability of these interconnected data pools. While the implementation of these data pools is based on a standardized data model we're also dealing with the local realities of standardization such as language and target market and relationship dependent product data.

A local data pool or a global exchange has a role in driving their community to adopt standardization, in parallel.



Local Catalog Providers Inter-Connecting with WWRE's WIM Solution

Local Country Catalogs and Solution Providers

The below local catalogs and solution providers deliver services to individual companies to assist with standardization behind the firewall. The list is illustrative of some vendors in the market today.

Regional providers will be most effective as they can bridge the need to meet local requirements while supporting the migration to global standards. Many of these providers are building 'adapters' to support on boarding of supplier data to exchanges and the global registry.

1. Legacy - BTFW EAI

- Application integration inside an enterprise's 4 walls e.g. webMethods, SeeBeyond, Cyclone, etc.

2. Product Development (PLM)

- Product design, development applications e.g. PTC, Matrix, Agile

3. Catalogue providers (PCM)

- Internal aggregation and management, workflow, data validation, item master e.g. Velosel, Trigo, i2

4. Data / Content Management / Normalization

- Services and Apps to address data quality, format, cleansing, data schema matching e.g. ACNielsen, UDEX, consulting only (TR2, Merton3, PwC, etc)

5. System Integrators / Consultancies

- Solution providers (business process mgmt, strategy consulting, integration/software) e.g. ATK, CGE&Y, Accenture, EDS

6. B2B Integration (M2M)

- Integration of the enterprise with another platform (WWRE, UCCnet, etc.) e.g. webMethods, Cyclone, IBM

WWRE WIM Solution

WIM Product Strategy

- Be a certified global solution provider for data synchronization and enabler of inter-connectivity to the GDS network.
- The WWRE will work with other certified data pools to build out the Global Data Synchronization Network, and in parallel will drive critical mass to the Exchange through direct connections to suppliers and local catalog providers.
- The WWRE will provide value added services to these trading partners to streamline the on-boarding process and ensure the data meets the quality expectations of member retailers.
 - Be a **GDS Global Solution Provider**
 - Enable **End-to-end Data Synchronization** for WWRE Members
 - Drive standardization beyond core synchronization (e.g., price synch, target market)
 - Be a certified partner for **Interoperability**
 - Be an on-boarding agent for **Inter-Connectivity**

WIM Implementation Strategy

- To *drive alignment of data* by implementing global standards and enabling trading partners to synchronize
- To *drive standardization* by inter-connecting local catalog providers
- To *assist members with leveraging synchronized data* by driving alliances with solution providers that enhance members internal IT systems

WWRE Services

- Global Implementation Support through education and consultation
- Global Standards Support
- Training and Accreditation Services utilizing WWRE University courses and WorldSync Supplier Accreditation Academy

Summary

The WWRE's WIM strategy is to implement GDS functionality in parallel across countries to enable all members, when ready, to begin the standardization required to adopt GDS. The WWRE is implementing GDS in 8 languages in 10 countries (Japan, Korea, Italy, Belgium, UK, France, Holland, Sweden, North America, Spain) and has 12 local catalog providers that are either live or being inter-connected to the WIM solution today.

In summary, the WWRE is enabling specific trading relationship alignment. We have an industry vision today for Data Synch and regional implementations that are quite far away from realizing this vision – they are just beginning the journey. Currently, implementation across all regions is largely focused on the alignment of data and standardization of item maintenance business process between specific trading relationships. We are achieving standardization globally, however at different speeds, most notably faster in North America than in Europe or Asia.

“How can we move forward to implement data synch without all the pieces available?”

The WWRE can provide a flexible roadmap for adopting GDS that allows all regions to move forward in parallel.