# Etoile 2007: Lessons Learned

GDSN and Interoperability

**GDSN, Inc.**
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## GDSN and Interoperability

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## Executive Summary

Project Etoile is the GDSN adoption programme backed by the Boards of GCI, GS1 and GDSN, Inc. Over the course of 2007, 8 data pools, 12 retailers and 25 manufacturers in France, Germany, Netherlands, Spain, the UK and the USA participated in Etoile.

> **Etoile 2007 demonstrated that the GS1 Global Data Synchronisation Network (GDSN) Infrastructure is in place and that it works. It proved that thanks to the existence of the GS1 GDSN, businesses can achieve growth, realize efficiencies and cost savings, and see business process improvements, even from the very first synchronisation.**

The 2007 goals of Etoile were:

- Resolve interoperability challenges between data pools, and identify barriers preventing full implementation
- Improve data quality
- Focus on business process improvements necessary for data sync

Etoile 2007 successfully demonstrated that manufacturers and retailers who are internally aligned and focused on executing data synchronisation through the GDSN are seeing results. As just one example, active trading partner synchronisation connections by participants in Etoile 2007 increased from 34 to 98 in one year.

***Different lessons learned***

During Etoile 2007, participants found that companies or regions just beginning the GDS journey learned different lessons than those companies with some level of GDS experience:

***New Connectors to the GDSN learned that ...***

- Acceptance and use of GDS depends heavily on retailer commitment and readiness.
- Successful implementation of GDS projects is complex to manage and requires support from top level executives, but to be successful it must also have involvement and engagement from every level of the organization.
- Successful companies recognize that data synchronisation readiness varies greatly by geography and local presence of global manufacturers and retailers.
- Within a region or company, the first GDS connection is the hardest.
- GDS requires retraining employees and redesigning work processes in order to successfully integrate the data into everyday business transactions.
- In order to truly eliminate disruptions in data flow enabled by GDS, successful companies have changed their internal systems to integrate information from GDSN directly into back-end systems with the objective of driving supply chain activities using the synchronised data.
- Companies must carefully consider their business activities and match those activities to their implementation strategies.
- Data pools play a critical role in supporting and ensuring the success of company's data synchronisation initiatives. New 'synchronisers' or those looking to expand into new regions should rely on their Data Pool for guidance in developing and executing strategies.

***Existing Synchronisers learned that...***

- Proactive suppliers gain more GDS connections with retailers than those who wait for retailer mandates
- Sharing accurate product data is a strategic imperative.
- Etoile 2007 demonstrated business process improvements by eliminating some processes and by improving the type(s) and automation of some manual processes.

***Etoile 2007 did identify several ongoing challenges***

- Identified challenges were related to several areas, each of which are legitimate and not representative of a lack of desire or commitment to pursue GDS.
- Different levels of maturity exist across the various areas (multi-national, corporations, regions, data pools).
    - Connections:
        - Technical DP connectivity / interoperability – Has been successfully proven (which has removed DP interoperability as key inhibitor to implementation)
        - Business – 'Some' Data Pool business models / practices are not fully supporting the GDSN philosophy. While technical interoperability has been demonstrated, trading partners are still challenged to successfully complete connections via GDSN certified DPs in the network. Several issues were resolved between data pools, most significantly with GCI-facilitated meetings between data pools and key trading partners.

Overall, GDS is critical to efficient trading partner collaboration and is a core part of New Ways of Working Together (NWWT). "Connecting our Business Information" is a key pillar of NWWT and an enabler to efficient supply chain collaboration.

Whether a company is just beginning their GDS journey or connecting with their 100th trading partner, GDS brings focus, resources, and a proactive approach to trading partners.

***Etoile and GS1 Member Organisations***

The project also highlighted the important (if not, in fact, vital) role that GS1 Member Organisations (MOs) have in leading adoption and implementation in their respective countries.

GS1 MOs can help by...

- Participating in the GDSN's community Standards Development workgroups
- Educating their user community and offering GDSN implementation sessions
- Working with local retailers and manufacturers on adoption of GDSN and then sharing local success stories with all
- Finding local opportunities to bring needs to the attention of the broader community for Standards Development and adoption

***Looking Forward: Etoile 2008***

For 2008, Etoile will continue to focus on connectivity and interoperability and begin to formally address the other two project components: Data Quality KPIs, and Business Process Improvements. Etoile will also expand to include Belgium / Luxembourg and China.

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### Background

Data Synchronisation, as a focused industry initiative, began over seven years ago to help businesses more efficiently communicate with their trading partners using new technological advances in connectivity such as the internet and global communications platforms. These new technologies fit with a growing trend toward global business practices, including global sourcing, cross geography selling, and global processes and policies by multi-national organizations.

The vision for Global Data Synchronisation (GDS) was a “one to many” model that would allow a single company to universally communicate standard information with all trading partners globally, thus ensuring a “single source of the truth” on product information while still allowing individual trading partners to customize their service to the target consumer.

Four years ago, GCI and GS1 established the Global Data Synchronisation Network (GDSN), with a ‘single point of entry’ philosophy to provide a more efficient foundation and framework for the pursuit of GDS. Standards and a secure network are critical foundational elements in achieving true GDS.

GDSN’s fundamental role in supporting Global Data Synchronisation was to provide a framework to support the base levels of interoperability among data pools so that companies could implement GDS by utilizing the single point of entry concept and realize the benefits of full trading partner interoperability.

Today, the Global Data Synchronisation Network (GDSN) is comprised of a network of 23 interoperable GS1-certified data pools using the GS1 System standards for data synchronisation.

There is little debate over the value of Data Sync and the GDSN and there is agreement on the benefits and the need to engage. However, there is a tremendous amount of frustration due to the complexities and hard work associated with fully realizing the benefits. Challenges can be categorized as follows:

- Slow Adoption due to retailer readiness
    - Regional / Market readiness
    - C-Level frustrations – significant investments to date with still long way to go to realize return (i.e. mass adoption)
- Data Pool poor financial strength due to slow adoption
- Implementation Challenges not clearly understood
    - Data Pool Interoperability questioned
    - Global –vs.- Local needs

It was agreed that GDSN was in the ideal position to lead an initiative to help / gain better understanding of implementation processes, challenges and barriers while facilitating progress and resolution of identified barriers. That initiative was backed by the GCI, GS1 and GDSN Boards and named Project Etoile.

## Etoile 2007

Over the past few years, GCI and GS1 MOs have been working with the industry on global data synchronisation, but progress has not been as quick as originally anticipated. In order to help speed up the adoption of GDS and implementation of GDSN, GCI and GS1 GDSN, Inc. formed "Project Etoile" that would prove and demonstrate the base foundation for GDS is in place and ready to support implementation.

Etoile — a focused adoption programme — is a subset of the overall work being done in the industry to demonstrate the value and operation of data synchronisation.

Etoile's focus and final agreed to goals / measures were:

1. Geographic areas – US, Spain, UK, Germany, France, Netherlands
2. Participants
    - Initial list of 7 Retailer / 17 Manufacturer GCI companies
    - Over the course of 2007, project participants grew to 8 data pools and 37 companies (12 Retailers and 25 Manufacturers).
3. Key Project Components:
    - Ensuring Connectivity/interoperability of the technology and the standards through data pool to data pool interoperability. This goal would prove the reliability of Data Pool to Data Pool technical connections within the GDSN. This would be accomplished by establishing network connections with all Etoile project participants.
    - Testing the Data Quality Protocol process to ensure its ability to deliver accurate data. Accurate data is critical to delivering useful global data synchronisation and realizing the true benefits of GDS.
    - Demonstrating Business Process Improvement through use of GDSN. By improving internal trading partner processes (e.g. reduction of manual processes, improvement in type of manual processes such as automation of manual inputs). Etoile would be able to demonstrate the full value of GDSN.
4. Identification of barriers and challenges was an overarching project charter while pursuing the above project goals.

Overall data synchronisation connections grew from 34 in March 2007 to 98 in March 2008 with progress continuing today.

Etoile was successful in:

- Proving base levels of Data Pool interoperability are in place

- Identification of challenges / barriers and facilitation of resolutions in following areas
    - 'Some' DP business models not fully supportive of GDSN single point of entry philosophy. GDSN Data Pool Network and Value Added Services document was developed to help clarify.
    - Regional needs – Each region has specific needs / requirements that must be understood / addressed when initially starting as well as alignment of / timing of implementation activities between trading partners (i.e. Spain).

  - Retailer readiness (while commitment is strong) poses key challenge in some regions (UK).

- Establishing metrics to measure:
  - Trading Partner / Regional Connectivity
  - Data Pool Interoperability
  - Data Quality
  - Percentage Synchronised
  - Business Process Improvements

## Key Learnings

Etoile 2007 demonstrated that Manufacturers and Retailers who are internally aligned and focused on executing data synchronisation through the GDSN are seeing results today. These trading partners recognize that they are still early in the journey and believe data synchronisation is a critical tool in the advancement in the way their organization conducts business with all their trading partners. There is not an element of their business that this evolution does not touch, and therefore data synchronisation is not something that has a beginning and an end, but rather a start, with a goal of integration into everyday business practices and processes. During Etoile 2007, participants found that their learnings depended on the level of experience and readiness of their trading partners. Companies or regions just beginning the GDS journey learned different lessons than those companies with some level of experience, as shown below:

### New Connections

- Acceptance and use of GDS depends heavily on retailer commitment and readiness. In order for manufacturers to gain significant value from GDS, they must be able to share their product data with a variety of trading partners. Until retailers are committed to accepting data via GDSN and are ready to accept that data and integrate it into their systems, neither trading partner can gain value from GDS.

- Successful implementation of GDS projects is complex to manage and requires support from top level executives but must also have involvement / engagement from every level of the organization to be successful. However, internal alignment and focus alone will not generate results. Developing strategies and planning / aligning these strategies between trading partners is another key to generating return on GDS investment:

- A regional strategy for implementation, if it is a multi-national organization. Multi-national companies can have both global and regional activities based on their business model and their customers' businesses. Successful companies recognize that data synchronisation readiness varies greatly by geography and local presence of global manufacturers and retailers. Companies successful in GDS have aligned well-informed strategies to address regional and customer differences in GDS implementation. In addition, these successful companies have internal mechanisms to ensure local offices understand the global GDS strategy.

- With a region or company, the first GDS connection is the hardest. Retailers and suppliers have found that the first trading partner connection they develop on GDS highlights numerous data and process issues. If these issues are addressed and solved, subsequent GDS connections are significantly easier.

- Organizational training / business process reengineering. GDS requires retraining employees and redesigning their work processes in order to successfully integrate the data into everyday business transactions. Recognizing that opportunity and actively managing the transition is a hallmark of successful GDS implementation.

- Internal systems alignment. In order to truly eliminate disruptions in data flow enabled by GDS, successful companies have changed their internal systems to integrate information from GDSN directly into back-end systems with the objective of driving supply chain activities using the synchronised data. This requires IT resources and, often, capital investment. Information sent/received via the network needs to be incorporated into internal systems. A number of companies synchronising data today are using the GDSN to receive or send data but not using the data within their internal systems. These companies have not recognized the full benefits of GDS, as they must manually add the data to their internal systems. However, they are seeing some benefits even without full internal alignment. The journey to reach data synchronisation is proving to be beneficial to companies by increasing their awareness of the need for alignment.

- Implementation plans by business unit, sales category or other primary business activity. Retailers and manufacturers will naturally have different implementation strategies. Companies must carefully consider their business activities and match those activities to their implementation strategies. For example, a retailer may choose to implement data synchronisation all the way through a particular category based on their overall business strategy, whereas a different retailer may choose to implement GDS with all new items, regardless of category. A carefully considered and well understood strategy is critical to successful implementation.

- Ensuring Connectivity/interoperability of the technology and the standards through data pool to data pool interoperability:
    - Technical Data Pool Connectivity / Interoperability - Project Etoile successfully proved Data Pool technical connectivity and interoperability is in place and is repeatable and reliable. During the period of testing over 98 successful connections were made between 37 retailers and manufacturers and 8 different data pools.
    - Business - Some data pool business models / practices were found not to be fully aligned with the GDSN single point of entry philosophy. While technical interoperability was indeed demonstrated, some trading partners using these data pools were still challenged to successfully complete connections via GDSN certified data pools in the network. To solve this issue, GDSN has worked with those specific data pools and developed a set of guidelines http://www.gs1.org/docs/gdsn/gdsn_dp_network_and_value_add_services.pdf for all data pools to use to ensure consistent use of the network. Users encountering this issue during Etoile worked with their trading partners, the greater GDS community, and GDSN to guide these data pools to successfully complete connections.

## Existing Synchronisers

- Proactive suppliers gain more GDS connections with retailers than those who wait for retailer mandates – Etoile 2007 demonstrated that suppliers who are serious about developing retailer GDS connections can increase their number of connections through proactive work with their data pool and retail partners. As suppliers gain additional benefits with each new GDS retail connection, it is advantageous for them to seek additional retail connections rather than reacting to retailer demands.

- Sharing accurate product data as a strategic imperative. In order to synchronise data using the GDSN, companies must be able to have an internal "single source of the truth" for product data and share that accurate product data with all parts of their organization. In addition, as product data changes, there must be internal systems and processes for updating the "single source of the truth". Companies moving forward with data synchronisation through Etoile 2007 found that their internal processes for gathering, verifying and sharing data was significantly more complicated than the technical aspects of synchronising data through GDSN. The primary Etoile focus during 2007 was establishing connections, as critical mass beyond the US was not ready to pursue Data Quality.

- Demonstrating Business Process Improvement through use of GDSN. Etoile 2007 demonstrated business process improvements by eliminating some processes and by improving the type(s) and automation of some manual processes. Overall, of the 43 trading partner connections tracked and measured for this section of Etoile 2007, companies were able to realize a: 9% reduction in processes, some realizing as much as 50% improvement; 60% of the spreadsheet tools were eliminated; 23% of the paper forms were eliminated; and GDSN data pool connections grew by 27%. Developing greater learning on business process improvement will be a more significant component for those Etoile participants who are ready in 2008, to pursue the automation of a single process such as new item additions.

Etoile 2007 Process Improvements (consolidated):

| | Status January 2007 | Status January 2008 |
|---|---|---|
| # of trading partner connections | 43 | 43 |
| GDSN data pools | 26 | 33 |
| Non-GDSN data pools | 3 | 3 |
| EDI (peer-to-peer) | | |
| Portal(s) | 3 | 3 |
| Spreadsheet tools | 8 | 3 |
| Paper forms | 35 | 27 |
| Manual inputs | 5 | 4 |
| Other | 2 | 2 |
| **9% reduction in processes** | | |

| Supplier A | Status January 2007 | Status August 2007 | Status January 2008 |
|---|---|---|---|
| GDSN data pool | | X | X |
| Non-GDSN data pool | | | |
| EDI (peer-to-peer) | | | |
| Portal(s) | | | |
| Spreadsheet tools | X | | |
| Paper forms | X | X | |
| Manual inputs | X | | |
| Other | | | |
| **Process reduction** | | **33%** | **50%** |

| Supplier B | Status January 2007 | Status August 2007 | Status January 2008 |
|---|---|---|---|
| GDSN data pool | | | X |
| Non-GDSN data pool | | X | |
| EDI (peer-to-peer) | | | |
| Portal(s) | X | | |
| Spreadsheet tools | X | | |
| Paper forms | | X | |
| Manual inputs | | | |
| Other | | | |
| **Process reduction** | | | **50%** |

Individual certified data pools also have the ability to offer "non-standard value added commerce services" designed to meet the needs of local customers. These non-standard services include activities such as product measurement services, consulting services, data quality services, and can vary from data pool to data pool. However, all certified data pools offer GDSN standard functionality and a single point of entry for all subscribers according to global standards, including interoperability with all other certified data pools around the world.

### Implications for manufacturers, retailers, and service providers

Connectivity/interoperability -- Service providers, GDSN, Inc and users need to continue to build out key business process enablers. GDS standards and services connected to activities such as price synchronisation, regional-specific needs and attributes, and additional global needs/attributes will need to continue to be addressed as more companies begin their data synchronisation journey. Although basic product data can currently be exchanged via GDSN, additional attributes and functionality will be critical in ensuring full, industry-wide adoption.

Manufacturers and retailers should develop a clear, well-communicated GDS strategy for working with trading partners. The companies most successful in their GDS implementation work have been able to clearly articulate their implementation strategies to trading partners and their service providers. This clear understanding of the strategy, both within a company and with their trading partner, allows everyone involved in GDS to ensure that they are working toward the common, agreed-to end goal. In addition, this strategy should be aligned across the entire company, both

globally and locally. For companies wishing to further understand development of a GDS strategy, data pools and GDSN, Inc have resources available to assist.

## Next Steps / Call to Action

Etoile 2007 was successful in demonstrating and proving technical interoperability between certified data pools, increasing the number of connections to the Global Data Synchronisation Network, and facilitating learning and removal of barriers by companies, data pools and local GS1 member organizations around successful data synchronisation. There were, however, some aspects of Etoile 2007 that were unable to be tested based on time constraints and user readiness.

Based on the success of Etoile 2007, the next steps for 2008 include continuing focus on the three main components of Etoile 2007, demonstrating the role of Etoile and GDS in achieving success in "New Ways of Working Together", and including additional regions to assist manufacturers, retailers, and service providers in moving toward successful data synchronisation.

### Etoile 2008

Etoile 2008 wil maintain the 3 primary components of Etoile 2007 with primary emphasis on identification and removal of barriers for GDS. Although interoperability was proven in Etoile 2007, further demonstration of technical interoperability will be done with a variety of data pools in 2008, however, the other two components of Etoile 2007 will be the primary focus in 2008.

GDSN will work with the industry to complete GDSN Data Quality Self Assessment by Q4 2008/09 in order to understand the role of data quality in successful GDS and to assist companies in achieving quality data.

In addition, the participants in Etoile 2008 will continue to capture business process improvement information in order to assist the industry in understanding the importance of GDS in gaining efficiencies in their businesses. Etoile 2008 participants will identify focus areas, such as new item add, for each trading partner pair. Learnings, challenges and progress around the role of GDS in these focus area will be monitored and reported to the industry.

Participants and regions will be reaffirmed for Etoile 2008. Most of the companies gained value from their work with Etoile 2007 and therefore will be participating in 2008. Etoile 2008 will also be re-evaluating engagement in several geographies that started in 2007, such as UK and Spain, and investigating the addition of other countries, such as Belgium/Luxembourg and China based on retailer readiness.

### Etoile and GDS role in "New Ways of Working Together"

GDS, and by extension, Etoile, is a critical part of company's ability to gain success in "New Ways of Working Together". One of the key pillars in New Ways of Working Together" is Connecting Our Business Information. GDS, through its machine to machine exchange of critical product and, in some instances pricing, information is a core element in the ability to connect business information between trading partners. Etoile's work in expanding GDS in the industry should be shared with organizations and trading partners engaged in "New Ways of Working Together" projects.

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### Summary

Overall, Etoile 2007 was able to provide greater visibility to the technology and services available today and act as a catalyst for identifying / addressing barriers and impediments while creating additional connections between trading partners. Momentum around data synchronisation has and continues to grow. The number of items published, as well as the number of trading partners continues to grow on average approximately 50% and 25% respectively each year, in the GDSN (as measured by the Global Registry). It is anticipated that this trend will continue as even more companies will be onboarding over the next 12 months based on new geographies developing connections to the global network. The trend toward use of Global Data Synchronisation shows promising advances and excellent advantages for trading partners utilizing the business processes and network.


***About GS1 and GS1 GDSN Inc.***

GS1 is a leading global organisation dedicated to the design and implementation of global standards and solutions to improve the efficiency & visibility of the supply and demand chains globally and across sectors. The GS1 system of standards is the most widely used supply chain standards system in the world. For more information on GS1, please visit: www.gs1.org .

GS1 GDSN, Inc. is a subsidiary of GS1 managing the Global Data Synchronisation Network™ (GDSN). The GDSN is an internet-based, interconnected network of interoperable data pools and a global registry (the GS1 Global Registry™) that enable companies around the globe to exchange standardised and synchronised supply chain data with their trading partners. For more information, please visit: www.gs1.org/gdsn