



Executive summary

# GS1 Global Data Model Pilots

## An important first step in bringing the Global Data Model to life

Today’s companies need to keep pace with the growing and complex demands from Consumers, trading partners and regulators for more and better product data. Accurate and complete data that can be shared with many stakeholders—consistently and globally—is quickly becoming the needed foundation for success in Retail.

Yet, Brand Owners and Retailers are spending significant time, money and energy managing foundational product information needs. Brand Owners are often asked to customise their product information to meet each of their local Retailer’s unique needs. Retailers are requesting more and different types of data from Brand Owners. They collect data from multiple sources to augment missing or inaccurate data since there is no single source of truth. Retailers are spending time aggregating and verifying foundational data, rather than differentiating Consumer experiences.

All this has created unnecessary complexity, cost and consumer dissatisfaction in the Retail industry—for Brand Owners and Retailers alike. For Consumers, it has caused confusion and lack of trust in product information, which has an impact on their shopping experience and spending.

To address these challenges, industry has aligned on the need to simplify and harmonise the exchange of master data—issuing a call for participation in the creation of the GS1 Global Data Model (GDM).

Industry has aligned on the need to simplify and harmonise the exchange of master data—issuing a call for participation in the creation of the GS1 Global Data Model (GDM).



Figure 1: Major milestones on the Global Data Model journey

## About the Global Data Model initiative

The purpose of the Global Data Model is to simplify and harmonise the exchange of master data. The GDM will identify and define—in a globally consistent way—the set of foundational attributes needed to list/order, move, store and sell a product, both digitally and physically. It will enable an improved Consumer experience and reduce complexity by harmonising foundational data across the industry.

Industry representatives from Brand Owners, Retailers, Solution Providers and GS1 Member Organisations (MOs) collaborated to:

- Develop business-friendly names, definitions, examples and usage statements for data attributes that complement the technical definitions. This will help business users clearly understand the attributes and how they are used in a technology-agnostic way.
- Develop an aligned data model (a set of GS1 data attributes) at the global and/or regional levels, using the inputs of 18 data models sourced from around the world. The GDM pilot standard (v 1.0) for FMCG food and near-food was released in August 2019.

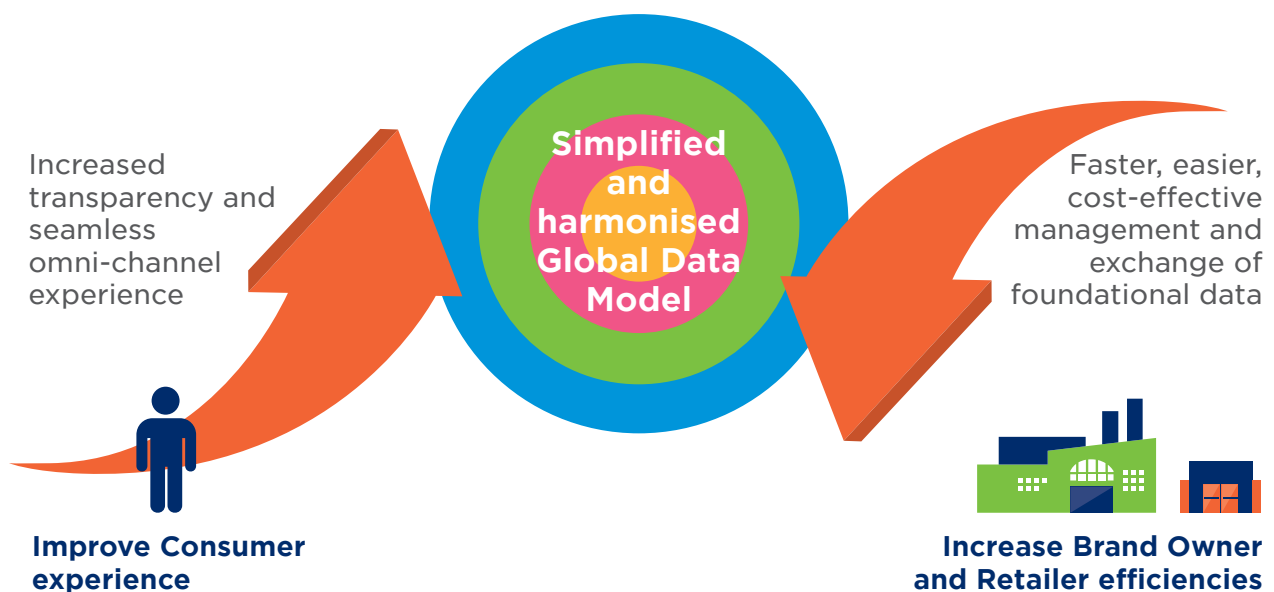


Figure 2: The Global Data Model will enable an improved Consumer experience and reduce complexity by harmonising foundational data across the industry. Source: GDM business case

Development work continues to integrate additional categories (e.g., pet food, alcoholic beverages, tobacco, etc.) and finalise business-friendly attribute names and definitions.

The GDM initiative also includes workstreams for industry engagement and adoption, marketing and communications, GDM governance, and pilots and implementation.

## GDM pilots: Transition to implementation

With the release of the GDM v1.0, work began to transition from a focus on the development of the GDM to its implementation. Two related workstreams were launched to support the implementation of the GDM:

- Execute pilots in key markets to validate the GDM and understand readiness to implement. Learnings about the GDM during pilots will be fed back into the development work to make the GDM stronger.
- Build a business case to articulate the value of the GDM for industry and benefits for Brand Owners and Retailers, as well as to understand the needs for implementation and investment, (e.g., people, processes, technology).

Beginning in August 2019, the first group of Brand Owners, Retailers, Solution Providers and GS1 MOs piloted the GDM v1.0 for the FMCG food and near-food sectors. (See Figure 3 for the pilot pairs by market.) A total of 14 pilots were completed in October 2019. The pilots were supported by GS1 Belgium & Luxembourg, GS1 Colombia, GS1 Czech Republic, GS1 Germany, GS1 Netherlands, GS1 US and the GDM Project team for planning and execution, analysis and communications.

The GDM v1.0 was piloted in three regions: Europe, Latin America and North America using a diverse set of Global Trade Item Numbers (GTINs) to evaluate the GDM for product subcategories and type (shelf-stable, refrigerated or frozen), trade item hierarchies (simple or complex) and channels (digital or physical, direct-to-store delivery or warehoused).

Market	Brand Owners	Retailers
Belgium & Luxembourg	Nestlé	Metro
Belgium & Luxembourg	PepsiCo	Metro
Colombia	Grupo Bimbo	Grupo Éxito
Colombia	Nestlé	Grupo Éxito
Czech Republic	Nestlé	Ahold Delhaize
Germany	Procter & Gamble	Metro
Netherlands	Nestlé	Ahold Delhaize
Netherlands	PepsiCo	Ahold Delhaize
U.S.	Kellogg's	Walmart
U.S.	PepsiCo	Walmart
U.S.	Nestlé	Walmart
U.S.	Johnson & Johnson	Walmart
U.S.	Procter & Gamble	Walmart
U.S.	J.M. Smucker	Walmart

Figure 3. Pairs of Brand Owners and Retailers by market in the first group of pilots were actively supported by the Brand Owner and Retailer GDSN Data Pools, including 1WorldSync, atrify and Logyca.

The number of GTINs in each pilot varied from 3 to 60. Each participant used an Excel spreadsheet to analyse each attribute for the core, global and regional GDM layers as well as for the local country's layer. Since the GDM is technology agnostic, some participants also exchanged attributes in the Global Data Synchronisation Network™ (GDSN®) environment to further validate technical readiness.

## GDM pilots: Summary of results

The primary pilot objectives were to collect learnings needed to improve and implement the GDM, including “what it will take” to implement. Additional objectives were to collect insights on data quality and business processes.

### Validate the GDM.

- Does the GDM have all the “right” attributes that we need?
- Is the GDM fit for purpose? If not, what additional development work is needed?

### Understand readiness to implement.

- Is our company fully ready to implement the GDM? If not, what is required to get ready?
- When will we be ready?

### Improve data quality.

- Does using the GDM help us provide all relevant attributes to our trading partners?
- Do we have all the information for each attribute? If not, do we need to go outside of our company to get it?

### Simplify business processes.

- Can we organise attributes across the product lifecycle (list/order, move, store, sell) to help improve the new item listing process and get product to shelf faster?

Additional GDM pilots are ongoing in 2019 and will continue in 2020. As of November 2019, a second group of companies have either begun or are expected to begin their pilots soon.

The second group of participants includes several Brand Owners and Retailers from the first group as additional participants, expanding company participation and to more markets.

## Pilot detailed findings and recommendations

### What did we learn based on our pilot objectives?

- Regarding the validation of the GDM, the pilots confirmed that the GDM is fit for purpose. As expected, participants provided detailed feedback to make the GDM stronger. Follow up discussions to review and improve the GDM prior to submission to the GS1 Global Standards Management Process (GSMP) are planned.
- When examining their readiness to implement, some pilot participants in Europe advised that they are ready now. Examples of barriers include lack of training and education, approval to invest in systems changes, and less mature markets that need more time to collect information and create the local layer.
- The pilot participants confirmed that the GDM will help improve data quality—completeness and accuracy. One area of improvement is the need for code lists and better defining some fields so that recipients receive the data they expect.
- Regarding the simplification of business processes, pilot participants advised about the GDM's positive impact on the proof of concept for the product lifecycle. However, pilots did not conclusively demonstrate that a new item can be listed or ordered using only the GDM because the group of attributes used in pilots is incomplete. Participants recommend that discussions continue to develop the attribute mapping.

### What will it take to implement?

Based on their experiences, pilot participants shared 8 important learnings about the GDM and what it will take to implement.

1. The GDM scope for FMCG food and near-food was confirmed. As expected, there is a need for minor additional work on attributes to address gaps.
2. It was proven in selected target markets that integration with the local layer is possible.
3. A pre-requisite to implementation is a clearly defined global governance process for the GDM. Ongoing governance at the global, regional and local levels is needed.
4. Some markets will need to engage locally to create the local layer (if it does not yet exist) or additional time should be allotted to collect the information required for each attribute.
5. System changes may be required for technical readiness. Therefore, companies will want to understand their needs for these internal updates. Furthermore, there may be updates required with Solution Providers, including Data Pools.
6. The implementation of the GDM for new items should be prioritised before updates to existing items.
7. It is beneficial for companies when all product information (B2B and B2C content) comes together in one complete “package” for new items or product changes/updates. Product information will need to be mapped with the GDM and organised by the product lifecycle stages.
8. Improved, more robust training and education is needed to help companies understand the GDM and use the attributes, including what is required at each stage of the product lifecycle.

### What is the readiness to implement?

Companies conducted an analysis to understand their current level of alignment to the GDM and attribute readiness. Some companies in European pilots reported being aligned and ready now. For other markets, companies reported attributes can be aligned to the GDM in 12 months.

Figure 4 represents the average results of all 14 pilots. Of the 190 attributes in the combined FMCG food and near-food GDM, the average pilot pair is already exchanging 60 or 32% of those attributes.

After six months, companies will be aligned and exchanging 82% of the GDM attributes and, in 12 months, they will be aligned and exchanging more than 92% of attributes. The reasons for the gaps have been identified by the pilot pairs that will work to address them.



Figure 4: Today, 60 of the 190 total GDM attributes are aligned and require no additional effort.

### What are the recommendations?

**Change management is needed.** To take advantage of the feasible benefits of the GDM, Brand Owners and Retailers will need to invest in technologies, processes, people and change management. This includes making changes in their current technology systems as well as cleansing their product information to adapt to the GDM. People will also require training for changes in processes driven by the GDM.

**Accelerate the GDM adoption.** The Consumer Goods Forum (CGF) and GS1 Board members recognise the impact of harmonised product information for the industry and are committed to implementing the GDM. To speed its adoption, industry can identify and train local GDM ambassadors across priority markets; GS1 can support major Retailers and Brand Owners during their GDM rollouts in pilot markets with implementation plans based on trading partners' needs; and Brand Owners and Retailers can leverage the GDSN.

**Collaboration is required.** Moving forward, the implementation of the GDM will require ongoing collaboration between CGF companies, GS1 MOs and GS1 Global Office (GO) to grow adoption and support implementation. This will include:

- Achieve critical mass by quickly growing GDM adoption with additional companies and target markets, in all regions.
- Align the GDM with existing and new global standards, programmes and services, as each product category is standardised.
- Complete work on the attributes, using pilot feedback, and develop the remaining regional and local layers. Continue the discussion on product lifecycle and attribute mapping for list/order, move, store and sell with additional companies, in all regions.
- Develop implementation materials for companies of all sizes, including attribute education and training, readiness assessment and gap analysis, and guidelines.
- Pilot with search engine optimisation (SEO) providers in target markets to learn about product master data for SEO.
- Continue early involvement and ongoing collaboration with both the Brand Owner and Retailers' Solution Providers (e.g., GDSN Data Pools).
- Gain ongoing user support and commitment from GS1 MOs and GS1 GO to grow adoption and support of the GDM implementation.
- Share pilot learnings and the business case work with all relevant stakeholders and communities.

---

Lessons learned and recommendations from the pilots will now be shared with industry members and GS1 MOs working on other GDM workstreams such as industry engagement and GDM adoption, communication and marketing, and GDM governance.

## Conclusion

Lessons learned and recommendations from the pilots will now be shared with industry members and GS1 MOs working on other GDM workstreams such as industry engagement and GDM adoption, communication and marketing, and GDM governance. Feedback to improve the model will be used in the Global Standards Management Process. In addition, information on attribute best practices will be used to create GDM education and training and to develop better, more relevant business and technical implementation tools.

## Contact us

For more information about the GDM initiative, contact Markus Mueller, Director Global Data Model Programme, at [markus.mueller@gs1.org](mailto:markus.mueller@gs1.org). Or, to learn more about the pilots and this report, contact Elena Tomanovich, Senior Director of Retail Industry Engagement, at [elena.tomanovich@gs1.org](mailto:elena.tomanovich@gs1.org).

## About GS1

GS1 is a neutral, not-for-profit organisation that develops and maintains the most widely used global standards for efficient business communication. We are best known for the barcode, named by the BBC as one of “the 50 things that made the world economy”. GS1 standards improve the efficiency, safety and visibility of supply chains across physical and digital channels in 25 sectors. Our scale and reach – local Member Organisations in 112 countries, 1.5 million user companies and 6 billion transactions every day – help ensure that GS1 standards create a common language that supports systems and processes across the globe. Find out more at [www.gs1.org](http://www.gs1.org).

## GS1 AISBL

Blue Tower, Avenue Louise 326, bte 10  
BE 1050 Brussels, Belgium  
T +32 2 788 78 00  
E [contactus@gs1.org](mailto:contactus@gs1.org)

[www.gs1.org](http://www.gs1.org)

## Connect With GS1

