Global Data Model Governance Manual

Definition of the process for ongoing development and maintenance of the Global Data Model (GDM)

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1.1	Mar 2023	Andrew Hearn, Tasha Wiehe, Eileen Harpell & Marie Petre	Changes that outline the process to make changes to a Regional Layer of the Global Data Model before an official Regional Maintenance Team has been formed and updates to the process for ratifying a local layer. Remove duplicate content that already exists in the GSMP Manual.

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1 Introduction

1.1 Purpose of the Global Data Model

The retail landscape is changing at an unprecedented rate. In this connected world, consumers increasingly rely on product information for purchasing decisions. The purpose of the Global Data Model (GDM) is to simplify and harmonise the exchange of master data. The GDM aims to 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. By harmonising foundational data across the industry around the globe, it aims to enable an improved consumer experience and reduce complexity by delivering more reliable and complete product information to consumers.
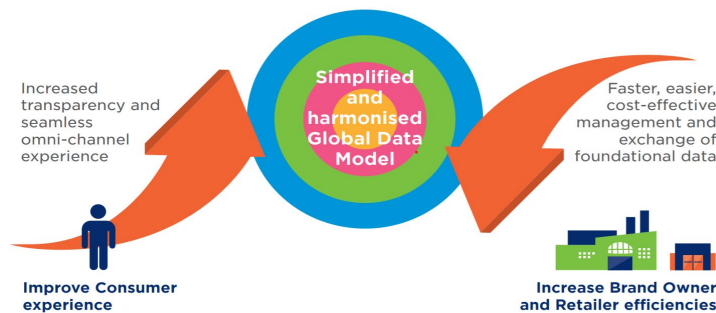
1.2 Scope of the Global Data Manual (GDM) Governance Manual

This document defines the governance process for the ongoing development of the Global Data Model (GDM).

The GDM is intended to be an "open standard" meaning that (1) it is developed and/or approved, and maintained by a collaborative consensus-based process, (2) the process is transparent, (3) parties that are materially affected or interested are not excluded from the process, (4) the standard is subject to (F)RAND Intellectual Property Right (IP) policies which do not mandate, but may permit, at the option of the IP holder, licensing essential intellectual property without compensation (i.e. royalty-free), (5) the standard is published and made available to the general public for a reasonable fee or for free.

The procedures followed by the Global Standards Management Process (GSMP) and defined within the Global Standards Management Process (GSMP Manual) shall be followed when developing the Global Data Model. Any differences between GDM Governance and the GSMP are set out in this GDM Governance Manual. For any occurrence that is not specifically defined in this document, the processes & procedures in the latest version of the GSMP Manual are to be followed. The latest version of the GSMP Manual can be accessed via the GS1.Org website.

The process described here is to create and maintain the Global Data Model. Any changes that need to occur to the Global Data Synchronisation Network (GDSN) or other means of data exchange are outside the scope of the Global Data Model Maintenance Teams and need to be addressed separately.

1.3 Guiding Principles for the Governance Manual

The governance of the Global Data Model is founded upon a set of principles intended to drive value for the global community that leverages the Global Data Model:

- To be effective, governance needs to be a performance driver for sustainable success – and not simply a compliance matter.

- Establish governance foundations that include good conduct and good judgement by those who are responsible with running the organisation.

- There is a division of responsibilities between the Oversight Roles (ongoing governance process) and the Operations Roles (day to day operations).

■ Communications should be made in a way that provides all stakeholders equal access to information concerning the organisation of the Global Data Model, Policies and Procedures and supporting platform specifications.

1.4 GSMP, Global Data Model Development and Maintenance

The development of new product categories at a global level and the ongoing maintenance of the Global Data Model (GDM) takes place within the Global Standards Management Process (GSMP). While the ongoing maintenance will take place in a Standards Maintenance Group (SMG), the development of a new global product category requires a new Mission Specific Work Group (MSWG) in GSMP. Rules around a new SMG and MSWG can be found in the GSMP Manual.

✅ ***Note:** To see the latest SMGs and MSWGs, please visit the GSMP website for the list of all Standards Development Work Groups.
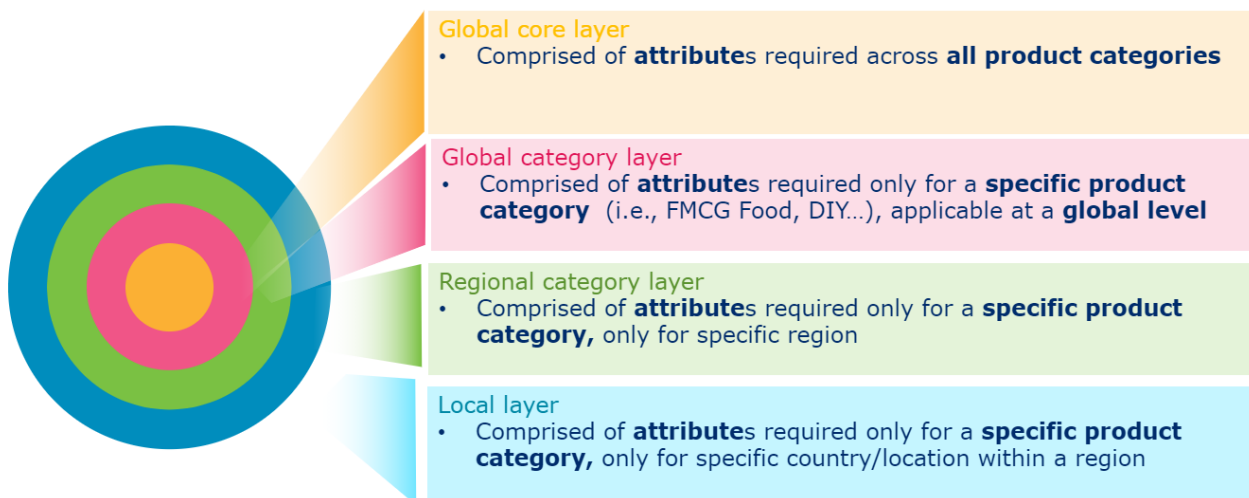
1.5 The structure of the Global Data Model Layers (aka: 'The Onion Model')

The Global Data Model allocates the agreed product attributes into four distinct layers:

■ The **GS1 Global Core Layer** is comprised of the conditional or mandatory[1] attributes that are agreed to for all product categories.

■ The **GS1 Global Category Layer** is comprised of the conditional or mandatory attributes that are agreed to for a specific product category (e.g., FMCG Food, DIY, Healthcare, etc.) on a Global level.

■ The **GS1 Regional Category Layer** is comprised of the conditional or mandatory attributes that are agreed to for a specific product category (e.g., FMCG Food, DIY, Healthcare, etc.) on a Regional level and that are not part of the GS1 Core or Global Category Layer. An example of a region is the European Union.

■ The **GS1 Local Layer** is comprised of the attributes that are agreed to on the local level only (e.g., GS1 Member Organisation, Local Data Models, etc.). These attributes can be conditional, mandatory or optional and can be related to a product category.

The documentation supporting the Global Data Model can be found via: GS1 Global Data Model.

The following is a representation of this structure:

Global core layer
• Comprised of **attribute**s required across **all product categories**

Global category layer
• Comprised of **attribute**s required only for a **specific product category** (i.e., FMCG Food, DIY…), applicable at a **global level**

Regional category layer
• Comprised of **attribute**s required only for a **specific product category,** only for specific region

Local layer
• Comprised of **attribute**s required only for a **specific product category,** only for specific country/location within a region

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[1] For the avoidance of doubt, "mandatory", in this context, means "required to conform to the standard".

2 Team structure supporting the Global Data Model (GDM)

2.1 Global Data Model (GDM) Development and Maintenance Teams

The Global Data Model (also known as the 'Onion Model') is composed of multiple layers: Local, Regional and Global. For the efficient growth and implementation of the GDM, each layer and new product category requires a team focused on the initial development and ongoing maintenance of the attributes that are added, removed or moved between the layers of the GDM.
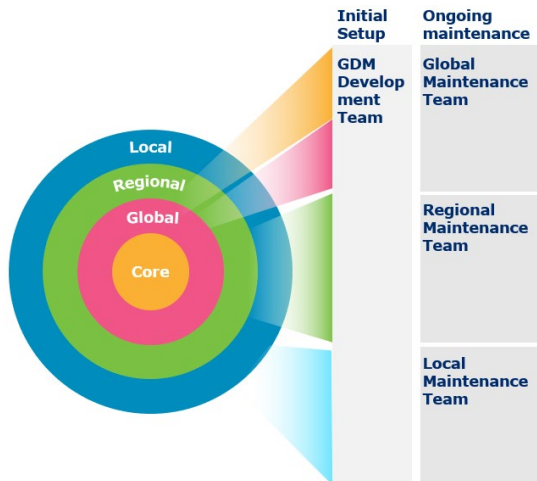
As new global product categories are added to the GDM a development phase begins where a new team is created to develop the GDM for that specific product category. This new team is focused on adding existing, standardised attributes to create data exchange that is designed to remove confusion, redundancy and streamline the exchange of master data. This phase is described in more detail in the section: Creating a New Global Product Category.

Once the new global product category has been added, then the Ongoing Maintenance Phase begins. It is this phase where the GDM Maintenance Teams become involved. Their role is to manage the ongoing changes to the Global Data Model on every level: Local, Regional, Global and Core.

This manual is mainly focused on the design and ongoing operation of those maintenance teams. GS1 Global Office will support the initial kick-off of the teams, support the process for standards ratification as well as serve as advisor for ongoing development.

2.2 Overview of Global Data Model (GDM) Maintenance Teams

Below is a description of each of the GDM Maintenance Teams and their roles. All teams will as much as possible leverage development tools and /or documentation that provide visibility into all the layers and to all the development teams.

The three teams that manage the maintenance of the Global Data Model are:
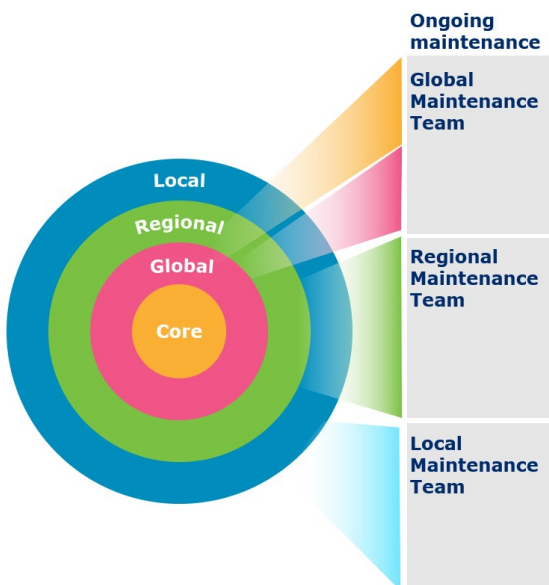
Global Maintenance Team: The Global Maintenance Team is responsible for the ongoing maintenance of the Global Layer of the GDM. The Global Maintenance Team's focus is the needs of the overall global model. They will gather the active stakeholders to modify the Global or Core Layer of the GDM, including a review of recommendations from the logic review when attributes move between layers of the GDM. In addition, this team may facilitate work requests for maintenance of Regional Layers (with the local representatives) where Regional Maintenance Teams do not exist. The membership of the Global Maintenance Team will consist of members of the Local and Regional Maintenance Teams.

Regional Maintenance Team: A Regional Maintenance Team is responsible for the ongoing maintenance of a Regional Layer of the GDM. A Regional Maintenance Team's focus is the business need of a specific region, ex: Europe. They will gather the active stakeholders to modify the regional layer of the GDM for their region, as well as provide representation to the Global Maintenance Team. Members of the Regional Maintenance Team must be members of a Local Maintenance Team and may also be members of other Regional and / or Global Maintenance Teams. Regional Maintenance Teams are created from the members that

participate within the Local Maintenance Groups within the region. The Regional Maintenance Team will apply the GSMP, subject to the amendments provided for in this manual.

Local Maintenance Team: The Local Maintenance Team is responsible for the ongoing maintenance of the Local Layer of a specific geographic area. The Local Maintenance Team's focus is the business need of a specific country, ex: Germany. They will gather the active stakeholders to add or remove from the local layer of the GDM for their country, as well as provide representation to the Regional and Global Maintenance Teams. These teams will be managed by the appropriate GS1 Member Organisation for the specific target markets and created if the need is identified. The Local Maintenance Team will either apply the GSMP process in full or one of the approved alternate GS1 Member Organisation-processes described in section 2.3.2 below.

2.3   Membership & Process in the Global Data Model (GDM) Maintenance Teams

2.3.1   For all GDM Maintenance Teams:

Membership in the ongoing development of the Global Data Model is based upon active participation in and active effort towards implementation of the GDM. This includes attending the appropriate meetings, belonging to and participating within a Local Governance Team to document a GDM Local Layer, participating in the GSMP Community Review and eBallots. If team members are not actively participating, they will be notified by the team lead of the appropriate GDM Maintenance Team that they need to increase their activity or will be asked to remove themselves from the related GDM Maintenance Team.

- Members are encouraged to participate in any/all GDM Maintenance Teams that are valuable to their business goals. A multi-national company may be involved in several teams, e.g.: a member of the Local Maintenance Team for France can also be a member of the European Regional Maintenance Team as well as the Global Maintenance Team. This includes involvement with the development of new Product Categories, if relevant to the needs of the individual companies

- All team members must comply with the GS1 IP Policy (or an equivalent local document) to participate in the development of the Global Data Model. This means that:

  o either each team member has signed the GS1 IP Policy and appropriate Opt In documents applicable in GSMP on behalf of their company, or

  o for a Local Layer only: the responsible GS1 Member Organisation has followed one of the alternate processes described in section 2.3.2 below, including adequate equivalent IP documents.

- The election of team Chairs and Co-Chairs will follow the steps documented in the GSMP Manual or, for the Local Maintenance Team applying one of the alternate processes described in section 2.3.2 below, the process applied by the GS1 Member Organisation.

- Regardless of the process used (whether GSMP or an alternate GS1 Member Organisation's process), balanced representation should be maintained on all Maintenance Teams to reflect (if applicable) the relevant regions, the different sides in the supply and demand relationship and product categories included in the GDM. Any Maintenance Team that is formed needs to ensure that it is representative. The membership numbers listed below are the minimums needed to form the teams. The goal is to drive membership beyond these minimums so that the team is truly representative.

2.3.2   Local Maintenance Teams – additional requirements

2.3.2.1 Team Composition:

In addition to the requirements set out in section 2.3.1, a viable Local Maintenance Team is made up of local companies who conduct business in the specific country, as well as representatives of the GS1 Member Organisation (for the specific country) with:

- At least one (1) GS1 Member Organisation representative

- At least two (2) retailers (or equivalent), that are trading in the country
- At least two (2) brand owners (or equivalent), that are trading in the country
- At least a total of five (5) industry and GS1 Member Organisation representatives

2.3.2.2 Process:

In some cases, local work groups want to have a choice between GSMP and a local process. To ensure that the local layer meets all legal requirements around IP and antitrust/competition law, this section provides for two options:

- either the Local Maintenance Teams can use the GSMP, or
- they can use the GS1 Member Organisation's own process, subject to the conditions described below

In all options, the local layers will always be subject to:

- A review by the GS1 Review Team (see section 2.4 below),
- A Global Community Review through the GS1 GO Community Room, and
- Ratification by the Board Committee for Standards (BCS)

Local layers that do not comply with the rules set out herein will not be considered GS1 standards and may not be labelled as such, nor presented as part of the GDM (whether in the GS1 MO's own materials or on the website and navigation tools made available by GS1 GO).

A. Local Maintenance Team using GSMP

The local layers of the GDM can be developed within GSMP if the local GS1 MO chooses to not develop their local processes.

B. Local Maintenance Team using GS1 MO process

The table below describes alternate local processes to develop local layers of the GDM.

POSSIBLE SITUATIONS	MO OPTIONS	CONDITIONS
GS1 MO has a process to develop open standards, which requires participants to sign licensing commitments equal to or similar to the GS1 IP Policy	GS1 MO wishes to use its own existing process and IP documents. *For example:* If the local layer has **already** been developed under the GS1 MO's process and the participants have signed the GS1 MO's own documents, the GS1 MO can use this option to avoid reiterating a standard-development process and signing additional IP licensing commitments.	GS1 MO signs "*Contribution of a Local Data Model into the GS1 Global Data Model Standard - GS1 MO Commitment*" (**GS1 MO Commitment**)
GS1 MO has a process to develop open standards, but does not require participants to sign licensing commitments equal to or similar to the GS1 IP Policy	GS1 MO wishes to use its own existing process. *For example:* If the local layer has **already** been developed under the GS1 MO's process and the participants have not signed any IP documents, the GS1 MO can use this option to avoid reiterating a standard-development process and signing additional IP licensing commitments.	• MO signs GS1 MO Commitment • All participants in MO Work Group sign Annex 1, "*Contribution Declaration Form*". If the participants cannot sign Annex 1, the MO assumes the IP risk (per the GS1 MO Commitment) or if it does not want to assume that risk, it can start over and develop a new Data Model with a new group under IP.

POSSIBLE SITUATIONS	MO OPTIONS	CONDITIONS
GS1 MO does not have a process to develop open standards and does not have any IP licensing commitment documents equal or similar to the GS1 IP Policy.	GS1 MO does not yet have a process nor any IP documents and has **already** developed a local layer.	• MO signs GS1 MO Commitment • All participants in MO Work Group sign Annex 1, "*Contribution Declaration Form*". If the participants cannot sign Annex 1, the MO assumes the IP risk (per the GS1 MO Commitment) or if it does not want to assume that risk, it can start over and develop a new Data Model with a new group under IP.
	GS1 MO does not have a process nor any IP documents and has **not yet** developed a local layer.	• MO signs GS1 MO Commitment • All participants in MO Work Group sign Annex 2, "*GS1 (country) Contribution Declaration Agreement*"

Once the requirements described above have been met, the Local Layer developed via the MO's local process needs to follow the steps below to be considered a GS1 standard and be presented as part of the GDM:

☐ Global Community Review

- Any new Local Layers or changes to existing Local Layers need to be shared, for visibility, with the GS1 Community via a Global Community Review

- The MO responsible for the Local Layer will submit the latest version of their Local Layer to GSMP to start a Global Community Review

- All GSMP members can see & comment but only those conducting business in that local area AND that are actively participating in the implementation of the Global Data Model will have their comment(s) addressed. All other comments are informational and there is no obligation to actively address them. The Global Office GSMP team will sort the comments by those who self-select that (1) they do business in the local area and (2) are actively implementing the GDM.

☐ Local Layer eBallot

- If there are changes to the Local Layer after the Global Community Review, the MO organises a local eBallot to confirm the changes with the local community.

- If there are no changes to the Local Layer after the Global Community Review, the Local Layer moves to the next step of BCS ratification.

☐ BCS Ratification

- After the Global Community Review and any needed eBallots are completed, the Local Layer will be sent to the BCS for ratification to become a GS1 Standard. Once ratified, the Local Layer and all its changes are considered a global GS1 standard.

2.3.3 Regional Maintenance Teams – additional requirements:

2.3.3.1 Team Composition

A viable team is made up of:

☐ Local GS1 member companies (companies who conduct business in a specific region) as well as GS1 Member Organisation representatives for the specific region

☐ Representatives must be part of a Local Maintenance Team. It is best practice that representation in the Regional Maintenance Team encompasses all the regions, industries and product categories that are included in the Global Data Model

☐ All Local & Regional Maintenance teams are supported by a 'lead' GS1 Member Organisation or their appointed resource(s), whose role is to organise and facilitate the discussions on the Local and Regional levels. This includes representing the needs of their members amongst all levels of the GDM development process.

☐ Representation of all countries within the region (at least one member, which can be a GS1 representative or industry member)

- A Region may consist of at least (2) GS1 MOs / Local Maintenance Teams
  - At least four (4) retailers (or equivalent), that are trading in the region
  - At least four (4) brand owners (or equivalent), that are trading in the region
  - At least one representative from each Local Maintenance Team in the region is actively engaged
  - The Regions that are represented in the Governance of the Global Data Model, for example, may align to the regions identified by GS1 (Europe, North America, Latin America, Asia Pacific, Middle East, Mediterranean and Africa (MEMA))

    The final decision of the creation of regions and the countries that are grouped together to form a region will be made by the GDM Steering Committee

- There may be instances where there may not be a regional layer due to lack of commonality or interest

- An attribute is considered in the Regional Layer if it is used by at least 2/3rds of the countries in that Regional Maintenance Team. The graphic below illustrates the intersection of the attributes that are common amongst the local data models that form the Regional Layer:

2.3.3.2 Process

The Regional Maintenance Team will apply the GSMP in full, it being understood that comments in the Community Review and voting during eBallot are open only to companies that conduct business in the region.

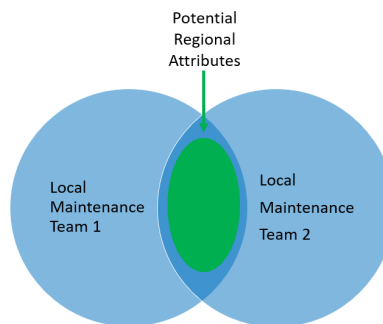## 2.3.4 Global Maintenance Teams – additional requirements:

2.3.4.1 Team Composition

A viable team is made up of:

- Representation should be included from all the regions included in the Global Data Model
- Representatives must be part of the regional or local maintenance team. It is best practice that representation in the Global Maintenance Team encompasses all the regions, industries and product categories that are included in the Global Data Model
- At least one (1) GS1 Member Organisation representative from each region or an appointed resource(s)
- At least six (6) retailers (or equivalent), at least one from each region
- At least six (6) brand owners (or equivalent), at least one from each region
- Minimum membership will be a total of 13 industry and GS1 Member Organisation representatives

2.3.4.2 Process

The Global Maintenance Team will apply the GSMP in full.

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2.4 GS1 Review team

The GS1 Review Team is involved in several development activities related to the Global Data Model. The membership of this team will include GS1 Global Office Subject Matter Experts to ensure a comprehensive analysis. The team will meet as needed for the specific tasks outlined below to ensure continuity and visibility into all the development efforts that are underway.

The GS1 Review Team's responsibilities include:

- **Work Request Assessment**

  - Review all new Work Requests to determine if it is actionable and determine if attributes need to be added to master data.

- **Logic Review**

  The main goals of the Logic Review are to:

  - Identify potential duplicate attributes
  - Confirm the completeness of the information

- **Layer configuration**

  - Highlight potential opportunities to promote or demote an attribute to move between layers of the GDM.

  - Perform 'sanity checks' on the possible growth of local layers to ensure there is not an unnecessary expansion of the local layer in a specific target market. The goal is to ensure that the local layers are confined to truly local regulations and requirements to simplify the data exchange.

Any concerns of the Review Team need to be addressed, for example a duplicated attribute, before the work can proceed. If an agreement cannot be reached between the development and review teams, an appeal can be made to the Board Committee for Standards (BCS) to provide a recommendation. For more details on the appeal process, please see the Appeals section of this manual and the GSMP Manual.

2.5 Scope of Global Data Model Maintenance

The scope of the Global Data Model maintenance is to actively manage the attributes that have been added to the Global Data Model. This includes:

- Changes to the GDM attributes
  - Location of the attribute within the layers (local – regional – global)
  - Cardinality (mandatory, conditional mandatory) for the GDM
  - Recommendations for creation, use & updates for code lists & code list values
  - Validation Rules to support data quality
- Local and Regional layers can be removed from the GDM if they are no longer actively maintained. A Work Request will need to be entered to the Global Maintenance Team to officially deprecate the specific Local Layer or Region.

Note: The Global Data Model Teams do not have the ability to delete or add completely new attributes in the GS1 standards but can remove or add them from the Global Data Model. The Global Master Data Standards Maintenance Group (SMG) has the responsibility to permanently remove or add attributes in Master Data. These changes can be initiated by a Work Request from the GDM Teams to the Global Master Data SMG.

2.6 Publication schedule

The Global Data Model will be published on a quarterly cycle if there are changes that have been made in that quarter. The publication schedule can be adjusted on a case-by-case basis to meet the needs of the community.

3 APPENDIXES

A Global Data Model Governance Evolution

This section specifies the procedure by which the Governance process itself may be modified:

- A proposal to change the Governance process is submitted to the Vice President of Standards Development

- The Vice President of Standards will review the proposed changes and makes a recommendation to the Board Committee for Standards on how to proceed

- If a change to the process is needed, the GDM Governance teams will be informed, and a 30-day Community Review will be used to gather and then resolve comments

Once approved by the Board Committee for Standards, the process change takes immediate effect. The GDM Team may choose to publish a new version of the Governance Manual, or a "Process Change Notification" (PCN) that documents the specific changes to the text of the Governance Manual.

B Summary of the Global Data Model Maintenance Teams

On-going governance will have three layers: Global, Regional, and Local

Ongoing maintenance	Responsibility	Focus area	Team composition
Global Development Team	• Maintain global layer attributes	• Across categories and regions	• At least 1 GS1 MO representative from each Region • At least 6 retailers (or equivalent in other categories), at least one from each region • At least 6 brand owners (or equivalent), at least one from each region
Regional Development Team	• Maintain regional attributes • Represent their region needs on global layer	• Specific region (Europe, North America, Latin America, MEMA, Asia Pacific)	• At least 1 GS1 MO representative from a region • At least 2 retailers (or equivalent), that are trading in the region, ideally 1 per active country • At least 2 brand owners (or equivalent) that are trading in the region, ideally 1 per active country
Local Development Team	• Maintain attributes on local layers • Represent their country needs on regional & global layer	• Specific country (e.g., Germany)	• At least 1 GS1 MO representative from the country • At least 2 retailers (or equivalent), that are trading in the country • At least 2 brand owners (or equivalent) that are trading in the country