

Retail Foundation Data

Strategic insights on retail foundation data and hierarchies for operational excellence

■ Point of view

Executive summary

In the fast-paced and competitive retail landscape, leveraging data to drive decisions is crucial for achieving operational excellence and delivering superior customer experiences. A strong retail foundation data framework is essential for unlocking these insights. Foundation data provides the core elements necessary for retail operations. Typically managed by buyers and merchandisers, this data includes:

- **Organization hierarchy:** The structure that defines roles, responsibilities, and relationships across different levels of the retail organization.
- **Merchandise hierarchy:** The structure for categorizing and organizing products to optimize inventory management, pricing, and marketing strategies.
- **Supplier/Business partner information:** Integration of supplier and business partner data into retail systems.

Our perspective examines the importance of organization and merchandise hierarchies in retail foundation data, their operational impact, and best practices for implementing these frameworks to improve decision-making, resource management, and customer satisfaction.

Introduction

As retail businesses expand across regions, channels, and product categories, managing operations at scale requires a solid data foundation organized into clear organizational and merchandise hierarchies. These hierarchies provide a structured approach to organizing data, ensuring consistency and enabling effective decision-making across departments and business levels.

This paper explores the components and significance of these hierarchies and how they can enhance retail operations.



Challenges faced by retailers while implementing foundation data

Implementing foundation data in a retail setting can be particularly challenging due to the complexity and scope of these structures. These hierarchies define how a retailer organizes and categorizes its products, stores, and operations. Issues in data management at this level can impact everything from inventory management to pricing strategies and customer experience. Here are the key challenges retailers face when implementing organization and merchandise hierarchies:

1. Complexity of hierarchical structures

Retailers typically have intricate organizational and merchandise hierarchies, often involving multiple layers such as regions, divisions, departments, categories, sub-categories, and individual products. These structures need to be replicated accurately in the foundation data, which can be very complex.

2. Inconsistent data across hierarchies

Data across different levels of the organization and merchandise hierarchy can become inconsistent. For example, other departments or regions may have different naming conventions, pricing structures, or product categorizations.

3. Data integration across multiple systems

Retailers often manage organization and merchandise hierarchy data across various systems such as inventory management, ERP, POS, and CRM. Integrating these systems to ensure uniformity and avoid discrepancies in data is difficult.

4. Alignment with business objectives

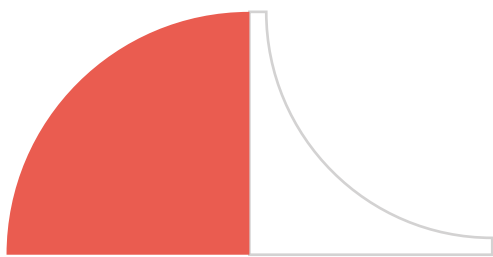
The organizational and merchandise hierarchies must align with broader business goals, including financial reporting, marketing strategies, and customer segmentation. If the hierarchies are not well-designed, they may lead to poor insights or misaligned business operations.

5. Data governance and ownership

Assigning ownership and governance can become confusing with multiple layers of data involved in the organizational and merchandise hierarchies. It may be unclear who is responsible for maintaining the accuracy and integrity of data at different levels of the hierarchy.

6. Handling changes in hierarchy structure

Retail businesses frequently undergo organizational changes, such as introducing new product categories, merging departments, or expanding into new regions. These changes can lead to a mismatch between the foundation data and the organizational structure.



7. Cross-channel consistency

In an omnichannel environment, it can be challenging to maintain consistency in the organization and merchandise hierarchy across various sales channels (brick-and-mortar stores, e-commerce, mobile apps, etc.). Each channel may have different requirements, and discrepancies can confuse employees and customers.

8. Customer-centric hierarchy design

Retailers may face difficulties in designing hierarchies that are functional from an operational standpoint and meet customer expectations. For example, how a retailer organizes in-store or online products (e.g., by brand, category, season) may differ from how customers search for or expect to find them.

9. Product assortment and category management

A well-defined merchandise hierarchy is crucial for effective product assortment and category management. However, determining how to categorize products and assign them to the appropriate hierarchy levels can take time and effort.

10. Data maintenance and updates

Retailers face the ongoing challenge of keeping the organization and merchandise hierarchy data current. Products may move between categories, pricing may change, or store locations may be added or closed, all requiring continuous updates to the foundation data.

11. Managing multiple regions and localized hierarchies

Managing localized versions of the organization and merchandise hierarchy can be complex for retailers operating across multiple regions or countries. Different markets may have different cultural norms, product demands, and regulatory requirements.

12. Performance and scalability

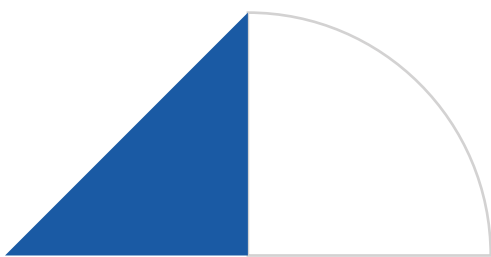
As retailers grow, they need a system that can scale to handle an increasing volume of data across a larger and more complex organization. Once simple hierarchies can become unwieldy as the business expands.

13. Vendor and supplier data integration

Retailers often rely on external vendors and suppliers for product data, and these external data sources must be integrated into the merchandise hierarchy. Variations in how vendors categorize or describe products can lead to misalignment and errors.

14. User access and permissions

Different users within the organization (e.g., store managers, merchandising teams, IT staff) need varying access levels to the hierarchy data. Managing who can view, edit, and approve changes can be challenging, especially when dealing with large and complex hierarchies.



Best practices

- **Define clear structures:** Clearly define roles and categorization rules for organization and merchandise hierarchies, ensuring alignment with business goals and customer behavior. Retailers must carefully design their hierarchies to ensure they align with business needs. A clear, logical structure reflecting real-world organization and merchandising strategy is critical. Software solutions should be capable of supporting complex, multi-level hierarchies without causing confusion or inconsistencies.
- **Allow flexible hierarchies:** Enable alternate hierarchies for different reporting purposes, providing flexibility for evolving business needs. Retailers should ensure that their data management systems allow for flexible reorganization and scaling of hierarchies. Automated processes for updating hierarchies and ensuring they reflect real-world changes are crucial for maintaining accurate foundation data.
- **Provide default and customizable attributes:** Establish default attributes at higher levels, with options for lower-level custom attributes to support business flexibility. Standardizing data definitions, naming conventions, and classifications across the organization is essential. Implementing a centralized data management system that enforces these standards can help prevent inconsistencies.
- **Minimize delays:** Streamline data entry by incorporating as much information as possible into the foundation data early in the process. Having the data ready early is essential for minimizing delays later. This foundational data is the backbone for systems like point-of-sale (POS), inventory management, order processing, and marketing campaigns. Retail processes become slow, error-prone, and inefficient without clean, accurate foundational data.
- **Use common top levels:** Ensure both hierarchies share common top-level structures for consistency in reporting. This reduces confusion and errors when integrating data from different sources.
- **Independent warehouse/Distribution centers:** To support multi-location operations, treat warehouses or distribution centers independently from the organization hierarchy. This allows organizations to scale operations more effectively across multiple locations. Each warehouse can operate with its resources, systems, and processes, making adding new locations easier without disrupting the business's overall structure. It also allows the company to respond quickly to changing demands or market conditions in specific regions.
- **Support business partners:** Enable flexibility to accommodate different business partners and suppliers. Retailers should work closely with suppliers to ensure data is standardized and compatible with their merchandising hierarchy. Tools like Electronic Data Interchange (EDI) or supplier portals can help automate the integration process and ensure consistency.



What should not be done

- **Avoid adding/Removing levels post-go-live:** Once the system is live, avoid adding or removing hierarchy levels; future-proof the structure with configurable placeholders. Once a system has gone live, introducing changes to the hierarchy — like adding or removing levels — can create significant challenges and disrupt workflows. This is especially true for large-scale systems where a deep integration of processes, data, and user interfaces has been established. Hierarchical systems often store data that relies on specific relationships between levels. Changing these structures can result in data inconsistencies, errors, or loss.
- **Limit flexible attributes:** To prevent misuse and complexity, restrict the number of flexible attributes. Allowing too many such attributes can lead to misuse, increased complexity, and difficulty in managing and maintaining the system.
- **Build foundation data in early phases:** Foundation data should be built in the initial development phase. If foundation data is not prepared early, later stages of development may experience delays due to missing or incomplete information.
- **Avoid mixing master data:** Separate master data from foundation data to maintain a clean architecture. This separation ensures that data quality is preserved, data governance is clear, and system performance remains optimal. It also helps businesses effectively manage their data across different domains and provides a strong foundation for analytics, decision-making, and compliance.
- **Allow multi-currency for business partners:** Enable multiple currencies for business partners with a default option for flexibility. This capability makes the business more adaptable and efficient in a globalized marketplace. With multi-currency support, transactions in different currencies are automatically converted and reflected correctly in the financial system. This ensures that reports, balances, and financial statements are accurate and up-to-date, even when dealing with foreign exchange fluctuations.
- **Avoid unnecessary item-level complexity:** Manage different item types using attributes or flags rather than adding additional levels. More levels can mean more code and logic to maintain, making the system harder to update or extend in the future. Managing many levels can complicate searches, filtering, and aggregation, leading to less efficient queries.



Key takeaways

1. **Assess flexibility needs:**

If multiple instances or brands are involved, determine the need for flexibility at the brand or instance level. Assessing flexibility needs at the brand or instance level involves evaluating the diversity of brands or instances, understanding the operational requirements, and aligning flexibility with business goals. One can design a system or strategy that maximizes efficiency and customer satisfaction by carefully considering the needs for customization, scalability, and adaptability across different operational environments.

2. **Coordinate reference data:**

Ensure foundation and reference data modules are aligned for comprehensive data management and development.

3. **Plan for satellite systems:**

To avoid implementation delays, account for systems that populate or consume foundation data. The program plan should include these systems to ensure testing and releases are as close to the live environment.

4. **Evaluate partner IDs:**

Consider whether the same business partner ID should be used across brands or instances.

5. **Stay flexible for future needs:**

Be open to introducing new fields or attributes in future phases based on evolving business requirements. A flexible hierarchy that can accommodate regional differences while maintaining core consistency is important. Retailers should set up mechanisms that allow localized adaptations of the hierarchy, such as language, pricing, or product categorization while maintaining overall organizational coherence.

6. **Simplify user experience:**

Streamline the user interface to minimize complexity and clicks in data entry and reporting.



Conclusion

Driving retail success through optimized foundation data and hierarchical structures

Effective management of organizational and merchandise hierarchies is critical to retail success. These foundational data structures provide the clarity, consistency, and scalability needed to drive better inventory management, pricing, and marketing decision-making. Retailers who invest in robust and well-implemented hierarchies will be better positioned to navigate complexity, maximize operational efficiency, and enhance the customer experience.

By following best practices in organizing and managing retail foundation data, businesses can build a data infrastructure that supports growth and adaptability, ensuring long-term success in an increasingly competitive market.

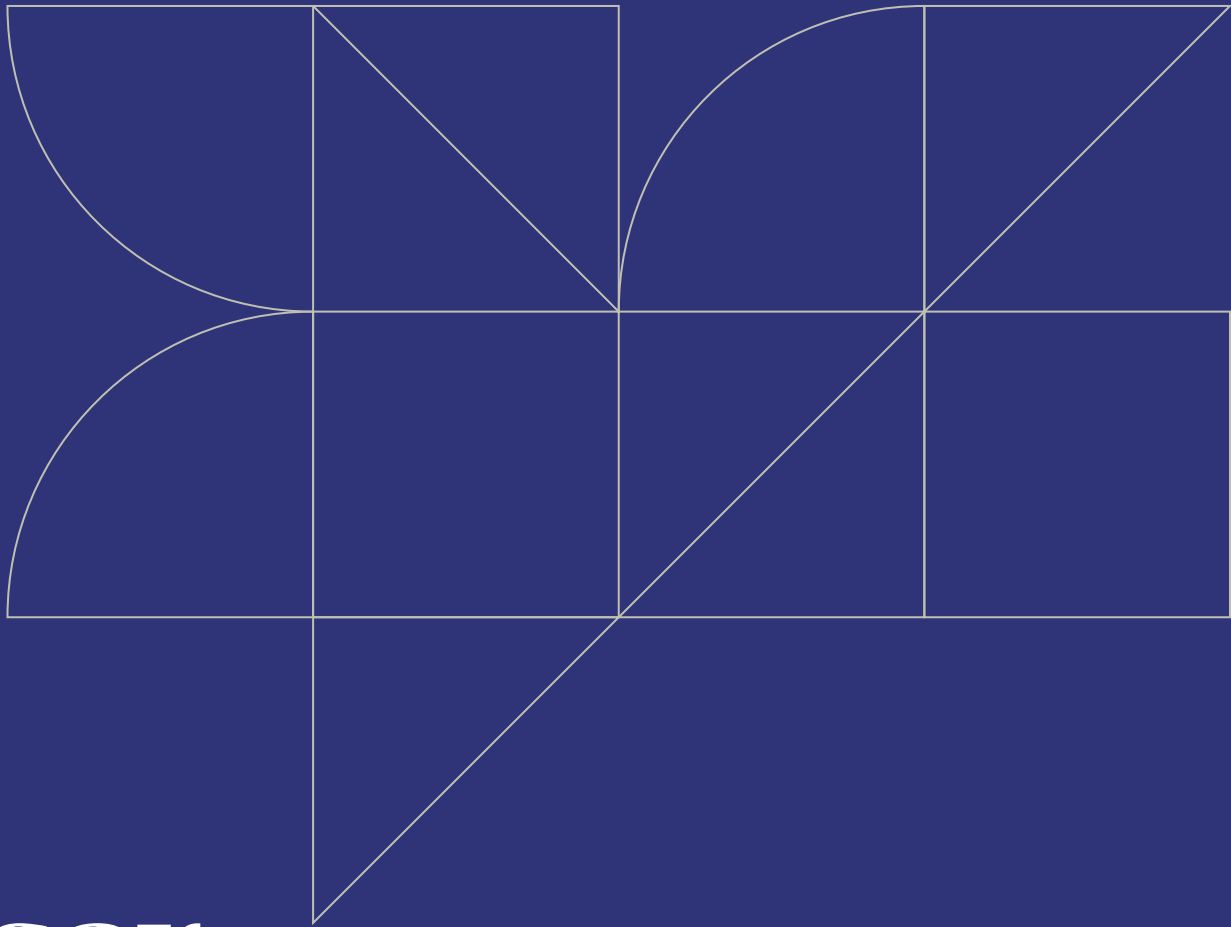




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