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## Dynamic way of Remediating Product & Item Attributes for Ecom or Stores

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### Abstract

Product Attributes are key to the Ecom Sales; As Customers may search based on any Attributes of a Product like Brand, Color, Gender, style etc of a Category; Search results of Products could be from different Departments & Categories with same Attributes and would be challenging in determining which Product the Customers are interested in. Also challenges of incomplete Product attributes in the Catalog & inaccurate Taxonomy and its relationships.

How to handle these Product & Item Challenges? Also addressing Data Quality issues of Item & Product. How to handle Product attributes if they are Not same on Omni channel like Stores, Ecometc

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### 1. Introduction

For those who don't know about Product or Items Attributes in Retail? Every Retailer either brick & mortar or Ecom need to maintain Product & Item level metadata information; The more a Retailer maintains the Metadata info and in return it helps in understanding the Patterns after Sales if they do Analytics in order to increase Sales; As Metadata is backbone of an Operational data so maintaining Product's attributes are what makes it distinct from other products. Attributes include things like size, color, flavor, package type and other features that are relevant to the category. From a consumer perspective, these attributes are what determine the consideration set and influence the ultimate purchase decision. From a retail perspective, product attributes help define how aisles, departments and shelf sets are organized. Manufacturers use attributes to help define their products' competitive set. (Note: "Attributes" are also known as "characteristics," depending on your data supplier.)

How to handle these Product & Item Challenges? Also addressing Data Quality issues of Item & Product::

**Issue 1** :: What if Products complete info is Not available in the db? Even if they have Incorrect Product info?

**Business Impact**:: If a Retailer doesn't maintain full metadata of a Product & its Attributes then if a Customer Searches for an Product based on its Attribute he can't cannot see the desired Products and it will impact Sales; Lets assume if they have partial/incomplete info of Product Attributes then they might Show irrelevant Products again Customers may not like it.

**Resolution ::**

The best practice is to maintain Products & Item information as Master Data which means they need to implement Data Quality & Governance principles; So Measuring or Tracking this metadata as KPI's by implementing Data Quality checks like Accuracy, Completeness, Consistency, Timeliness, Validity and Integrity. These DQ checks has to be implemented as **Automated framework and generate Reports automatically**; Having Stewards team and addressing these Reported checks on Timely manner would Address the incomplete and inaccurate Products Attribute issues.

**Issue 2::**What if Products Attributes are Not regularly monitored? And its Product hierarchies are not maintained ?

**Resolution::** This is an opportunity to clean house; In general it's not a company's fault that their product masters get so jumbled for different reasons like below.

- i. Because Legacy systems don't handle multiple product categories very well, and people develop customizations and workarounds to get the info they need.
- ii. Plus, the retail and consumer brands landscape has changed so much in recent years – companies who have implemented an ERP system in 90's couldn't predict that someday they will sell New products of Different Departments & Categories. Or that a company may acquire another brand that sells a completely different products.

So it's a continuous exercise that's where a modern, cloud-based applications comes in: where you need a system for handling many different categories, while minimizing confusion and extra work for product management. Adding a new product category should NOT require customizations to their existing system.

**Issue 3 ::**What are the advantages an Retailer has maintaining Products & Item Attributes if the Retailer is Omnichannel like Stores, Ecom, Market place etc? What are the challenges they can have too?

**Resolution:** Retailer can Leverage his own Correct/Golden data using Data Enrichment principle of Master Data between Stores &Ecom channels.

Where they need to maintain Stewards Team to fix these Data issues regularly and they need build bridge between Stores &Ecom Products data. And Synchronize them dynamically moment one of the source has latest updated data.

**Issue 4::**How to handle Agile Data's Product & Item Attributes?

**Resolution:** These days Data has become so agile that by the Time you fix above issues or we may update our Golden record with Incorrect data; So we also need to have 3<sup>rd</sup> party checks in place as part of Continuous Improvement; Example before I correct my Golden data I need to validate that New Data is incorrect or how old is it? Consuming from 3<sup>rd</sup> parties or Online Streaming or web scrawling techniques can be used.

**Issue 5 ::** Is there any Dynamic way of Remediating Product & Item Attributes on Ecom& Stores? Example if New Products are launched and we don't have All Attributes & its dimensions?

**Resolution:**In this Digital world we can address ALL above 4 Issues with modern techniques like below ::

- i. **Extracting Text out of Images** :: We need to read Text from Images and extract the Data and can be used to fix Store Level Data or Ecom data. Also this technique helps in creating New Data hub of Metadata repository in order to validate as Final step even after following above Resolution steps.
- ii. How to correlate the Product or Item from data base with Image? **We need to read Barcode and determine which Product or Item it is; As Barcode makes an Image unique and it is same as Product No or Item No.**

#### 4. Conclusion

I want to call out how critical these Attributes are either at Item & Product level; Earlier days or in Traditional world Product/Item info used to be static however these days data has evolved into Agile based on Customers search or latest trends so Retailer has to adopt same dynamic way of handling Data.

We cannot assume or make hard binding of Attributes or brands to a Category or Department because we never know those Attributes can be referred to other brands or departments or category.

As explained most of the common Product & Item Attributes level issues and how to address them;

- Centralize and sanitize scattered data.
- Enrich product descriptions and specifications.
- Track progress and product completion.
- Link images, documents and media to products.
- Categorize products and files.
- Manage upstream data and prepare it for sales channels.
- Manage relationships between products.
- Create and publish product catalogs.
- Build custom product feeds.
- Format product data for multi-channel syndication.
- Automate catalog creation and maintenance.
- Find everything in one central database.

#### References

The few references on Product Attributes & handling those:

- [1] <https://sunrise.co/blog/product-attributes-erp/>
- [2] <https://www.cpgdatainsights.com/understand-your-database/product-attributes/>
- [3] <https://www.plytix.com/product-information-manager>