Multi Channel Enablement using SAP MDM

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http://wiki.sdn.sap.com/wiki/display/SAPMDM/MDM+Content+and+Processes

Applies to:
SAP MDM 7.1

Summary

With revolution in telecommunications technology and era of Internet, there has been a paradigm shift in the Customer shopping habits. Online internet stores are becoming more popular among Customers for various reasons including ease of shopping and also availability of deep discounts. This has opened a challenge for Retailers as how do they provide consistent experience to their Customer irrespective where they do the shopping either in Brick and Mortar stores or through the internet web site. There are many other ways Customer can do shopping apart from these two like using “phone” service or by using “catalogs” or “kiosks” etc. It demands Retailers to come up with Multi Channel strategy. Product Master Data Management plays key role in enabling Retailers by providing consistent and integrated information to Multi Channels. This document talks about as how SAP MDM can be used to support Multi Channel strategy from Product Master Data Management perspective.

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Introduction

Multi Channel (Multiple Sales channels) has become one of the key aspect in many customer facing industries, primarily for Retail Industry. Over the period of last couple of decades various channels are becoming available for Customers to use at their disposal. At the same time Customers demand to have consistent experience across those various channels. For instance, Customer would visit internet channel to short list couple of products to buy. But before actual payment is made he may want to visit brick and mortar stores to touch and feel the short listed product and also discuss with sales people in store. It is critical that Customers receives same information about the Product from Internet and as well as information from physical store. After purchasing a product with internet special discount, Customer may decide to pick it from specific physical store where he would again interact with sales staff in the store. The Product Master Data Management solution plays key roles in enabling Multi Channel vision by providing consistent Product information across multiple channels. This enables not only Customer but also store staff and support services staff to server Customers effectively with ease of experience from Customer perspective.

Typical Multi Channel Landscape
It is imperative in Multi Channel scenario to decouple Product and also Customer master data components from other transactional applications and customer facing applications in the landscape. As depicted in the following diagram, Product MDM component is decoupled from ordering, customer facing and other landscape applications. It acts as a shared asset across various applications and across various functional and business units.

The customer facing layer is a “Multi Channel” layer which provides various ways Customer can use to deal with organization. Apart from end customers, this Multi Channel layer also enables consistent interaction with Partners, Marketing Units and International Selling.

Multi Channel layer is supported by “Multi Channel Platform” which manages interaction with multiple channels. It is complemented by selling and ordering layer which interacts with customers to capture and process the orders. There are many other functional components involved apart from these two like customer service functions, technical support, return processing etc.

Master Data Management becomes the core part of the Information layer. There are various Master Data domains as part of MDM. One of the key prominent component is Product MDM apart from Customer MDM, Supplier MDM, Location MDM and many others.

Product MDM component supports Multi Channel platform to provide single version of truth about Products. There are multiple faces or views of Single Version of Truth. One dimension of these views is based on functional unit that is Commercial View, Specification View, Technical View etc. Other dimension of these views is based on Product information interdependency between multiple sales channels.

**Product Information among Multiple Channels**

Though the core Product information is same, many a times it is necessary to “alter” and “filter” information of Product among various Channels.

For instance, Retailers keep some Products that are sold only through Internet channels but not through other channels. Products itself may belong to different “categories” when mapped to various Channels. A “Mobile Handset” sold in brick and mortar stores may belong to specific category in “Electronics”. But in addition to this category, Internet channel may further split it based on price range of the product.

Many a times Retailers may provide “Internet only” promotions. In that case price and certain associated information about the Product differs among brick and mortar store and Internet store. Mail-In-Rebate may be applicable only for Internet Products and other way around as well.
In next section we will take a look at simple case as how SAP MDM can be used to manage this inter Sales Channel Product information dependency and needs.

**Modeling Product Information dependency among Channels**

Let us consider a scenario where Internet price has discount over the store product price. On Internet, in addition to normal merchandising hierarchy, it also needs to project products based on price range. Please note that in real Multi Channel scenarios there could be many other complicated requirements that distinguishes same product across various channel. For simplicity of example, simple scenario of product differentiation based on sell price with discount and price range categorization among Store and Internet channels are considered.

Above diagram illustrates one way of representing the data model. There are other ways as well to represent product association across multiple channels. For sake of simplicity, a simple way of representation is chosen for this example. “Retail Product” represents products on sell at brick and mortar stores and associated “Store Category” hierarchy. Whereas “Internet Sell Product” represents products that are sold at Internet channel and associated “Pricing Taxonomy”

**Modeling Product Multi Channel in SAP MDM**

This section illustrates one way of SAP MDM configuration to represent data model discussed in above section.

Following figure shows the data components defined in SAP MDM.
It has defined following components to illustrate example.

1) Retail Product: Primary Product information for Store channel
2) Internet Sell Product: Product representation in Internet Channel
3) Product Category: Hierarchy representing Product structure for Stores
4) Price Taxonomy: Category representation for Product to be represented at Internet Channel

Following figure illustrates “Retail Product” configuration.

This “Retail Product” is mapped to specific category of “Store Category” hierarchy. Also it stores the price of the product to sell in a store.

Following figure illustrates “Internet Sell Product” configuration.
This “Internet Sell Product” is linked to the primary store product by attribute “Associated Product”. “Internet Sell Product” is mapped to specific price range category. Also “Internet Price” is defined.

Both “Internet Price Range Category” and “Internet Price” are auto calculated.

Following figure illustrate auto calculation rule for “Internet Price”. It is based on store price mentioned in primary store product and the applicable internet discount.

In order to auto calculate the price range category, we need to define assignment rule and workflow based on that.

Following figure shows the assignment rule definition to determine the associated price range category.
Workflow is defined to execute this assignment rule whenever “Internet Sell Product” is updated or created.

Following figure shows workflow configuration for execution of this assignment rule. Subsequent figure shows configuration of steps of this workflow.
Now let us look at how these configurations work together to enable Multi Channel.

Following figure shows the “Retail Product” definition for “32 ABC TV”. It has store price set to $205 and category set to “Electronics”.

Following figure shows configuration of “Internet Sell Product” for “Internet Special 32 Inch TV – ABC” which is associated with store product “32 ABC TV”. Also based on auto calculation rule, it calculates “Internet Price” as $202 (i.e. store price $205 – internet discount $3). Also price range category is set to “$201-$400”.

Following diagram shows that discount price is being modified to $6 from $3.
As soon as this discount price is modified, internet price is auto calculated to $199 and also price range category is changed automatically by execution of workflow to "$101-$200".

Summary

Multi Channel capability has become survival ability rather than just being a requirement. It demands organizations to provide consistent and reliable Product information across multiple channels along with “alteration” and “filtering” based on needs on various channels.

SAP MDM provides way to configure Product MDM support for Multi Channel by use of Assignment rules, Auto calculation, Workflows and catalog-category relationships etc.

Related Content

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SAP MDM Data Manager Guide
Key Capabilities of MDM
Short quick summary to catch the reader's attention and of course the search engine