



elevant text and multimedia content is a key expectation of customers irrespective of the touchpoint. Organizations understand the need to meet this expectation of their digital customers. Product Information Management is where digital experience originates. It helps enterprises to become faster, consistent, compliant by enabling easy and efficient circulation of product information.

In the digital age, businesses must re-analyze their product information management processes and capabilities and adjust to the changing reality to stay relevant. Today's product information management (PIM) solution must provide good governance of product information, offer content that is consumer friendly (both internal and external), and support automation of dissemination of data and assets to all channels of marketing and sales. It should be well integrated with other enterprise systems to provide best digital experience to both, internal as well as external stakeholders.

Why is PIM important?

Engineering and manufacturing organizations responsible for creation of new equipment, machines or devices have multiple product lifecycle stages (Concept to Shelf) before the final product is created. These product lifecycle stages are typically handled by different functions/groups and different systems in a large organization. The PIM system provides a platform to store and manage all product related information across business functions and multiple channels from a single unified dashboard.

A product manager, who is typically responsible for managing marketing and sales of multiple products, has a big challenge in tracking the product in its lifecycle stages, as most of the tracking may need to be done manually. A PIM solution provides an ideal platform that will have a unified view of this process across all systems and help track the stages in the product lifecycle. The data model of PIM can easily capture status of each of these stages. Integration with the systems maintaining this information can bring in status data to PIM whenever the step related to that system is complete. A dashboard created on top of the data will easily represent the step pending in the overall process. This can greatly reduce the manual efforts needed by the product manager and his/her team.

Marketing content added for a particular product may be applicable for other products as well. A good PIM solution allows easy availability of this information across multiple business functions and product lines and therefore, allows for better collaboration and reuse of content. A workflow-enabled mechanism will allow the marketing content to be added and reviewed by other groups including the product manager before it is approved for publishing. The PIM data can be used to create an Augmented Reality (AR)-based interface for a mobile or web page. For example, Wayfair helps customers project a piece of furniture in 3D in their rooms to get a better feel of how it may suit his/her home. L'Oréal also uses AR to help customers interact with their skin products on a smartphonebased app.

A PIM solution also maintains relationship between multiple products. These relationships may be like alternate product, accessory, additional component in a configurable product, etc. This information can greatly enhance the digital experience for a buyer as well as reduce the time required to list various possible configurable options. Alternate product suggestions can come in handy when a particular product is unavailable or goes out of production; this can potentially reduce downtime for an assembly line. This information can initially be fed to the system and later a machine learning-based bot can be used to improve on these relationships based on buying patterns of users.

For instance, consider a laptop manufacturer who sells laptops online. While the manufacturer can come up with certain base models with variants based on the type of display, processor speed, type and size of RAM etc., it will be difficult to list all the possible configurations and prices for all possible combinations. While it is time-consuming for the seller, the buyer experience also gets cumbersome, as he/she has to carefully search for the exact required combination. A more optimal experience for the buyer will be to provide a limited number of models, which can be further configured based on the list of supported upgrades. The relationships established between products in the PIM ensures only the right workable combination is available for a change in configuration. The core product information, combined with the pricing information gives the buyer an instant update on the overall cost impact of a configuration change and therefore helps her decide the optimum configuration based on her needs and budget.

PIM solution can also help enhance the digital experience in the retail industry and can potentially increase the cross-sell and upsell opportunities for the retailer. Most retailers collect the digital footprints and profiles of the customers and can combine this information with the product information stored in their PIM solution to target the right product to the right customer. Integrating the PIM solution with a web-behavior analytics solution can greatly improve cross-selling opportunities. Consider a customer looking for a dress. If the retailer has the right set of accessories linked to this dress in the PIM solution, which may include a matching pair of shoes or a pair of earrings etc. and can present this as a combination, there is a high probability that the customer may end up buying all of them. Also, machine learning can be used to make better product recommendations based on user behavior. A bot may be fed with the data of user journeys and future product relationships can be fine-tuned based on this input.

Similarly, there is a great opportunity to combine the online and the offline experience for the customer. Let's consider the instance of a customer who searches for a particular product online and then goes to the store to get a physical feel of the product. The online store can process the online browsing history from the cookie, add that to the details of the customer and when he/she visits the store, present interesting offer on the browsed product using a beacon. A Chat bot can be used to deliver real time customer support.

A PIM solution automates the categorization of products into different segments. While a product should belong to one primary hierarchy, it can also be part of multiple hierarchies. Depending on the usage, an organization may have multiple hierarchies like product line hierarchy, financial hierarchy, product category hierarchy, project hierarchy etc. Creating a business rule engine to automatically classify a product to multiple hierarchies and thereby representing them in appropriate nodes of the hierarchy and showing relationships across these hierarchies can greatly help product owners and end customers. As an example, a retailer may classify a product like antiseptic liquid as part of multiple hierarchies. It may be personal care, health, disinfectant etc. An end customer must be able to see these products as a part of each of these categories. This is also relevant in case of manufacturing customers that are required to maintain multiple hierarchies and undergo

multiple changes in the hierarchy structures because of organization changes or product realignment or in a merger and acquisition scenario.

Market researches show that a customer is more likely to buy a product with good user reviews.

PIM can allow digital feedbacks and comments of a product to be displayed alongside a product.

These positive reviews and feedbacks when posted on social media can also help build better brand awareness. Since these feedbacks are coming from customers' known circles, it can drive other users to buy the same product thus improving product sales.

Vendor catalog management is a complex process. Using Blockchain in PIM helps authenticate product changes made to product sheets and master data. It helps by allowing smart contracts to authenticate changes made to master product data sheets. Blockchain helps PIM with an additional layer of security

In summary

Product Information Management solution delivers to organizations strategic advantages that greatly enhance the digital experience of both, its internal as well as external stakeholders. Integrating the PIM solution to other enterprise software packages helps in realization of multiple digital goals in terms of efficiency, better collaboration and reuse, enhanced cross-selling and upselling opportunities, and significantly-improved customer satisfaction. Combining it with some of the latest technology trends like AI, ML, Blockchain, AR etc. can greatly enhance the experience of the end users. Images and videos have a greater impact in conveying product features and people expect to see how a particular product will suit them. Managing these content, and making them available to the right channel will surely enhance customer experience and conversion rates.

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