Classical PIM vs. Industrial PIM

Industrial PIM: Where PIM and configurator merge

Can we treat industrial companies like their counterparts when it comes to IT infrastructure? Are the basic needs and solutions the same? Is there a need for an advanced Industrial PIM or is a Classical PIM enough?

Traditionally, industrial companies differ from their counterparts mainly by manufacturing products that are more complex in variation. While most industrial companies shared the same goal of being successful, innovative, having good management, and a solid IT infrastructure, the complexity of their products required industrial manufacturers historically, to have a need for a configurator. Some industrial companies have implemented a configurator solely as an internal tool for their engineers and sales teams and some have exposed parts of these tools to their customers, allowing them to make independent choices.

Today, as markets experience a growing demand for PIM solutions, I feel it is necessary to address a basic question: Do industrial companies need Industrial PIM? PIM is still recognized as a system for consolidating a company’s data and knowledge into a single source of truth. This approach overlooks one of the key factors of industrial companies: existing IT infrastructure, including ERP data, consists of products that have been manufactured in the past or “faster moving” rather than the full range of products the company aims to expose.

In an ideal world, industrial companies will seek to expose their customers to a product range which fulfills two basic rules:

I. The product can be manufactured - sometimes known as a “valid” product.

II. The company wants to sell the product.

The first rule is determined by the engineering department who bases the decision on the company’s manufacturing capabilities. The second rule is determined by the management and sales teams.

The diagram depicts a typical situation for an industrial manufacturer. The outer layer shows the unrestricted product combinations. This layer is irrelevant as it allows for many “impossible” product combinations, not taking into account the combination dependencies i.e. - a certain size can only be manufactured up to a certain working pressure. The “Engineering Filter” shows the feasible manufacturing capabilities for when all product combination dependencies are accounted. This amount of product combinations is what most internal configurators create, especially for internal engineering requirements. In most cases, manufacturing capabilities are more diverse than the amount of products the company seeks to promote. The marketing ambitions will be based solely on economic terms such as profit margins and competition. Certain sizes, for example, might be regarded as commodity products earning smaller margins and thus ruled off the list. The “Sales Filter” reduces the product combinations even further by limiting the available engineering capabilities to the final product range offered by the sales force. ERP products, represented in the inner layer, are usually smaller in number than the feasible manufacturing product combinations. These products have either been manufactured in the past or are a range of products entered into the ERP databases that cover the faster moving product combination.

Classical PIM solutions have sought to deal with the ERP product combinations. Implementing a Classical PIM system in this environment will only allow for ERP system product data enhancement, and will neglect the company’s inability to provide full marketing data for a wider spectrum of products. Repositioning the “other” product combinations to a stand-alone configurator signifies running two separate systems which are more complex to integrate.

In contrast, an Industrial PIM differs from a Classical PIM. An Industrial PIM has an embedded configurator that is built to handle all possible marketing product combinations rather than only ERP products. The database of the Industrial PIM allows for products with limited combinations to be “database driven” and more complex products, with a vast number of product combinations, to be “configurator driven”. An Industrial PIM is similar to a hybrid car running on both battery and petrol, depending on road conditions. Using this example, a hybrid car would be one which runs flawlessly regardless of the energy it consumes and one where the driver would not notice a change in energy source. Similarly to the car example, an Industrial PIM gives all users a flawless experience, regardless of the source in which the product data is obtained. System administrators use an Industrial PIM to easily manage and publish product data in both database and configurator situations. Similarly, publishing product information on an e-Catalog, for example, allows customers and end users to easily navigate products. The main difference between database and configurator driven products is that the latter is created on demand. The product does not exist in the database but rather through a set of rules and dependencies.

Let’s review this example: a company manufacturing both valves and fittings. While the fittings are more limited in combinations and are entered into the ERP’s database, the valves are more complex and come in a wide variety of combinations and are therefore configurator based. Why? The number of valve product combinations, once all parameters are accounted for, i.e. - design, material, size, connection type, thread, seal material, handle type, treatment and more, can be too big for a database to hold and can easily reach to millions of combinations. In addition, maintaining a large database will be more complex than maintaining a set of rules. Although the “engine” running both types of product lines is different, the front- end interface is exactly the same and the users will not notice the difference.

An Industrial PIM takes into account the special need of doing e-Commerce in a highly configurable environment. In the same way that the product code is determined dynamically, so can the price of the product be created based on a set of rules.

II. Industrial PIM systems can be integrated into existing IT infrastructure in a similar way to any other Classical PIM systems. The ROI of such integrations can be even more significant than that of Classical PIM systems as they allow for additional cost savings and creation of new sales.

**There can be millions of product variations**

**Additional cost savings and creation of new sales**