CONFIGURATION LIFECYCLE MANAGEMENT GIVES A COMPETITIVE EDGE TO B2B MANUFACTURERS

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Executive summary:

Today's B2B manufacturers are experiencing more challenges than ever. For example, personalization demands, supply chain instabilities and siloed IT systems result in longer sales cycles, more lead time to introduce new products and slow growth. This combination of market (external) and efficiency (internal) challenges requires new strategies and business models. Personalization demands high product configuration, which, in turn, involves responsiveness and agility from all functions across the organization.

This whitepaper discusses how Configuration Lifecycle Management (CLM) can help B2B companies, technical highlights and success stories across industries. In addition, it delves into the trends, the exponential business value unlocked, and the competitive advantage gained through CLM.

Configuration is a critical cross-functional topic as departments, from marketing, sales and service, and engineering to manufacturing, require reliable and up-to-date product configuration information to perform their activities efficiently and accurately. That's where CLM can help as it creates an enterprise ecosystem focused on the digitalized end-to-end product configuration lifecycle management process.

Latest industry trends in B2B manufacturing

Organizations seek ways to improve competitiveness and extract business value from existing functions. Several challenges prevent B2B industries from realizing this and can be broadly classified as market and internal challenges.

Market challenges:

Many companies have rapidly digitized their processes and data, which the COVID-19 pandemic has further accelerated. Digitization has become imperative to stay ahead of the competition. Also, there is a growing demand for personalization, where customers want products to suit their needs. So, companies must provide many options for customers to choose from. This, in turn, forces the products to be modular so that multiple options can be given with the base product. Finally, products need to address sustainability requirements such as being easy to repair, easy to reuse and easy on the environment.

Internal challenges:

In response to market demands, products have become smart with complex and numerous software and IoT components. As a result, engineering must handle multiple disciplines. At the same time, systems are specialized but siloed. Furthermore, the supply chain is shaky and unreliable with recent global events and not allowing the sales team to confirm the availability of a particular product configuration in advance. Finally, many companies want to graduate from designing the product for each order to modularizing it so that it can be configured with lesser engineering efforts.

Figure 1: Challenges that prevent manufacturing companies from realizing business value
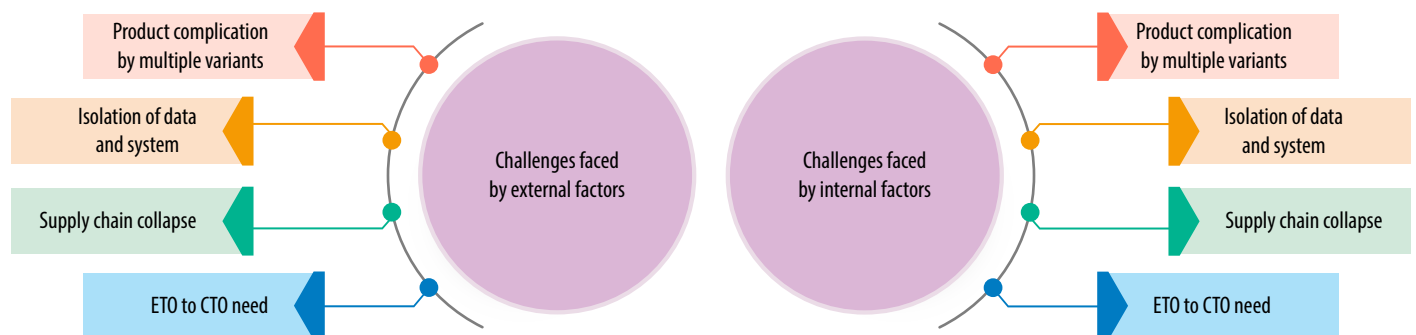
Note:
ETO - Engineering To Order
CTO - Configure To Order

How CLM increases sales productivity and operational excellence

A major challenge facing manufacturers is ensuring timely access to new information. Access to reliable and up-to-date information is essential with complex manufacturing processes increasingly based on smaller and customized batches.

This challenge is evident throughout the product lifecycle across engineering, sales, manufacturing and service. For example, the service and maintenance of complex products can be just as complicated as the product itself. With the move to a product-as-a-service model, where customers do not own products but consume them as a service, service obligations shift from the customer to the vendor. Therefore, it is essential when the product is configured to ensure that service, maintenance and upgrades can be performed with minimal effort and fewer issues. In addition, this approach ensures that current customers remain loyal

Salespersons can rely on a faster and error-free quoting process

The complexity of products directly impacts the complexity of the sales process itself. As a result, salespeople face significant challenges in configuring the right solution for customers owing to inadequate tools. Sales tools can be as simple as a paper catalog or as advanced as a mature ERP solution, yet both can be inadequate. For example, suppose the advanced sales tool cannot scale to accommodate all possible product configurations. In that case, it will likely respond poorly in live sales situations where customer patience is thin.

What is required is a reliable 'single source of truth' on available product configurations that can be confidently shared throughout the organization. This source of information can be integrated with existing solutions to enable salespeople to close deals faster. With greater accuracy, it can help engineers and designers develop new products more quickly, prevent configuration errors from reaching the factory floor and optimize service to create new revenue streams.

A single source of configuration truth is the key to success

CLM addresses these challenges by providing an overview of all possible real-time product configurations that can be queried to validate all product options. In addition, by integrating the Configure Price Quote (CPQ), Customer Relationship Management (CRM), Product Lifecycle Management(PLM), Enterprise Resource Planning (ERP)

and Manufacturing Execution Systems (MES) with a CLM platform, manufacturers can address the issue of timely access to new product configuration information.

CLM enables guided selling where salespersons and customers get assisted by intelligent product information customized to their needs. It can be directed to the right product with the correct configuration, eliminating waiting time for the back office to respond.

From configuration silos to end-to-end composable IT landscape for digital champions

Organizations have established effective processes and systems in vital functions like sales, engineering, manufacturing, services and support. But more often than not, these functions work in silos.

As organizations evolve, they face tremendous challenges as each function has different and sometimes even conflicting data formats, configuration rules and objectives. Typically, organizations have PLM for engineering, CRM for sales and ERP for manufacturing, with each team specialized in the required process. In addition, several legacy tools and local systems developed over time exist to address the company's unique requirement, called custom calculation tools.
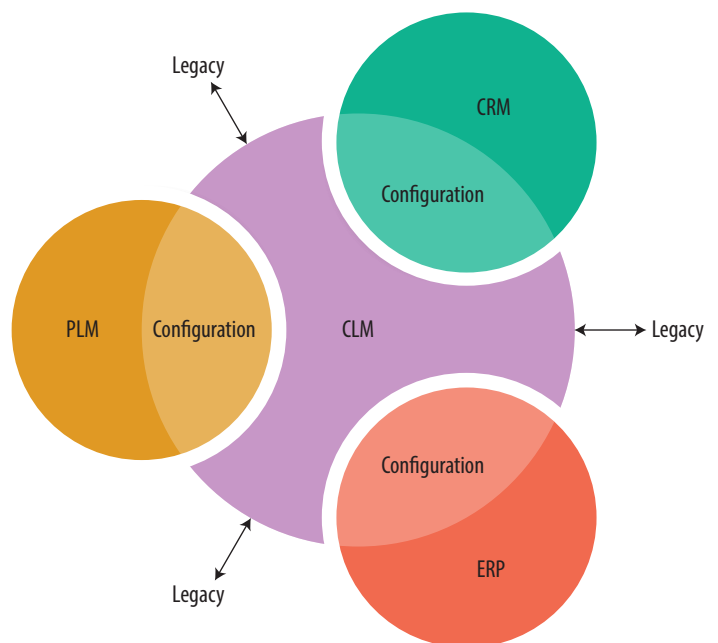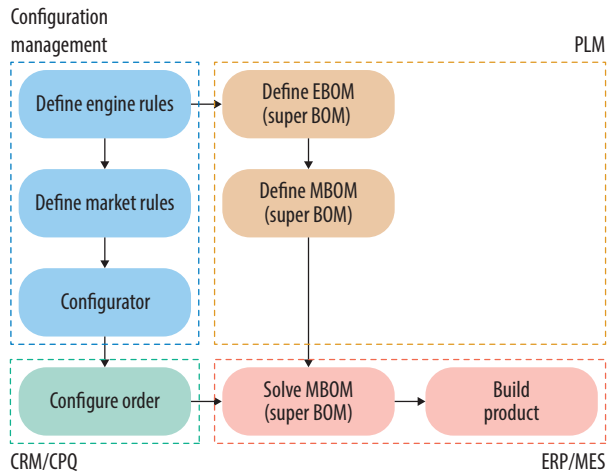
Figure 2: The CLM system

Figure 3: Technical view of the CLM system

The The CLM layer, which orchestrates several systems and legacy applications without changing much in the original , must be introduced to integrate functions and present a unified view. CLM joins the views of sales/engineering/ manufacturing and provides a unified view. It indirectly brings uniformity in terminology and processes over the long term. In addition, it supports the entire lifecycle of the product.

A typical technical view is shown below:

The left side in Figure 3 shows the level 1 detail of the CLM where CPQ operates at the intersection of PLM, CRM and ERP. PLM is the master of EBOM and has 150% MBOM, while CLM holds the product data and options that can be sold in CRM. Based on a particular order, 100% MBOM is processed in ERP and then moved to MES systems for manufacturing.

We have arrived at this best practice after implementing CLM for many customers and addressing many challenges during that course. It helped us integrate all organizational systems and functions without significant changes to the core processes.

Configit Ace® platform brings best-in-class CLM offerings

At the heart of the CLM platform lies Configit Ace®, an intuitive and efficient software platform for aligning product offerings in engineering, sales, manufacturing and service. Configit Ace® ensures the entire organization uses the correct configuration data. In addition, it enables product modelers from multiple enterprise functions to work together. As a result, configuration rule administrators in engineering, marketing, manufacturing, and service can focus exclusively on their own content. At the same time, intuitive conflict handling ensures that only a fully valid set of rules is released to downstream systems, resulting in dramatic improvements in time to market.

Unlike most PLM, ERP or CPQ systems, Configit's rule management prioritizes the power and effectiveness of the product modeling experience. By capturing configuration rules from all business functions, an enterprise becomes uniquely empowered for a seamless configuration lifecycle.

Its patented compilation approach Virtual TabulationTM (VTTM) to configuration calculates every possible product configuration within an entire product portfolio, saving it to a compressed, compact portable format. This format contains the whole solution space of a company's product
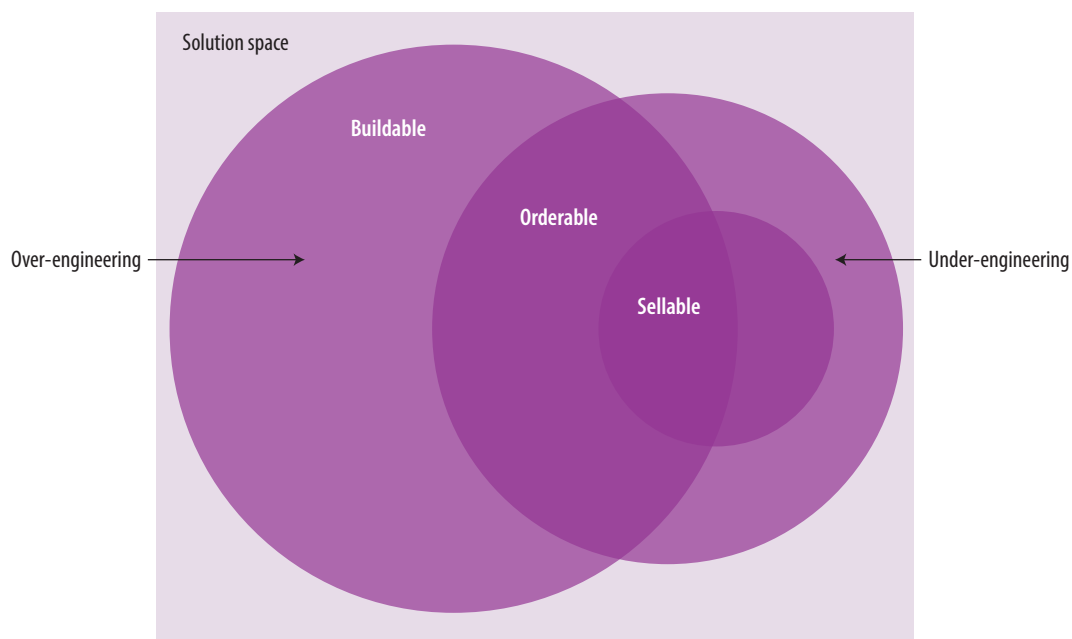
portfolio, providing a complete view of exactly how many product variants exist. In addition, it provides the transparency necessary to identify product variants that are sold the most or the least.

With this knowledge, companies can focus resources on more profitable products while recognizing significant cost savings from restricting or eliminating those combinations that are either too expensive to make or so rarely sold that maintaining components, parts, schematics, and drawings doesn't make economic sense.

Creating a Solution Space with Virtual TabulationTM provides a "Buildable, Orderable and Sellable" view of the entire product portfolio, allowing organizations to make informed decisions about what products to keep, what to eliminate and what to sell more, based on 100% reliable data.

Value unlocking with CLM

Thus, CLM brings an integrated way of working across an organization in addition to standardization, traceability and structure to the teams. As a result, organizations can derive more business benefits through CLM, like how our customers did:

Driving revenue:

- 10-15% **additional revenue** from new business models
- Up to **40% faster** order handling time
- **Double the share** of accessories sales
- 5-15% increase in **win rates**

Reducing costs:

- 95% reduction in product modeling time
- **90% less effort** as they can handle more products with the same resources
- **92% drop** in time for product design through sales to manufacturing

Mitigating risks:

- **Zero errors** - Eliminate configuration quality defects
- Up 30% increase in **quote accuracy**

Digital transformation:

- Create a product configuration ecosystem to scale
- Drive better choices in the digital transformation journey with more reliable and profitable solutions
- Deliver instant validation of product configuration options

- Enable manufacturers to meet growing customer demands, minimize the risk of errors and get products to market faster.

These benefits from CLM make the

- **Sales** team is nimble and provides the right solution to customers
- **Engineering** team to detect the whitespaces and understand the most preferred options in the market
- **Manufacturing** team to avoid wastage.

As a result, organizations can extract business value and gain a more significant competitive advantage in the market.

Infosys + Configit partnership - driving enterprise digital transformation with CLM solutions

Infosys, experts in successfully executing digital transformation initiatives worldwide, helps clients become thriving "Live Enterprises" by augmenting their core digital capabilities, advancing their operating models, and transforming their talent for the future. With Infosys Cobalt, enterprises have ready access to a growing portfolio of over 300 cloud-first solution blueprints. In addition, regulatory and security compliance and technical and financial governance are baked into every solution delivered.

Backed by its deep domain expertise, core engineering experience, system integration, and cloud and data specialization, Infosys provides holistic business solutions and transforms businesses.

Headquartered in Copenhagen (DK), Configit is a globally present supplier of business-critical software for configuring highly complex products and systems for B2B manufacturing companies. Configit, with its patented VT technology, is making strides in solving complex industrial configuration challenges. Its software can handle hundreds of products, thousands of rules and trillions of configurations within milliseconds.

With strengths in configuration management technology, Configit's collaborative configuration platform Configit Ace®, built on the multi-patented Virtual TabulationTM compiler technology, handles the most complex configurations on the market with unprecedented power and accuracy and speed.

Infosys and Configit have provided end-to-end CLM solutions to global enterprises for many years.

Real-life CLM case studies:

CLM applies to any industry vertical involving configuration across its functions. Here are a few examples:

- AGCO, a leading agriculture manufacturer, transformed its B2B business with CPQ as the core of the platform. Even though AGCO has several brands and multiple teams like whole goods and aftersales, the master data driving these were captured and integrated into a common consolidated and structured data model.
  This model enables AGCO to provide a different look and feel with the same reliable experience based on quality data. It also allows complementary solutions, such as the customer portal. The customer portal can be customized for each brand and even include brand items for each dealer. The move to digital solutions and eCommerce can be achieved while empowering the traditional dealership network to do more.
  It also includes an offline solution, recognizing dealers do not always have internet connections at remote places but still need access to change the configuration and other data. The solution embeds this information making it available offline and synchronizes with the backend when connectivity exists

- ABB's electrification business sells 1.5 million products daily, ranging from switches to substations. Managing the design, manufacture, configuration and upgrade of such a product portfolio across over 100 global locations is challenging. After a successful pilot, the firm has standardized the business processes and built a single version of the truth through a worldwide rollout. Many other business units have implemented product, system, and visual configurators powered by Configit VT technology, helping their sales, engineering and manufacturing teams immensely.

- Configit Ace® (CLM) is applicable in the elevator industry for sales engineers to define buildings and floors. It allows them to quickly identify required elevator units across the project and configure them visually. It also helps to seamlessly integrate the field team during the quotation phase itself and can propose and manage all accessories during the sales cycle. In addition, the solution supports the CRM and ETO processes, integrates with all design and civil engineering systems and prepares a complete set of submittals required for the project.

- Configit Ace® (CLM) can assist medical device organizations with highly complex, muti dimensional initial product research and configurations. It helps trial many configuration outcomes and selects the most suitable one based on target parameters. Regulatory compliance is a significant aspect, and CLM helps to provide traceability of configurations from research, design, procurement and sales.

- Configit Ace® (CLM) has been successful in the process industry, where there is a network of pipes. Each control must be configured at the system level to handle overall input and output process requirements. Configurations of multiple valves and controls can be synchronized, and process calculations run as part of it to create a complete process configuration

- In the pharma industry, the CLM solution can play a big role in dealing with many challenges, including handling recipes, specifications, market launch incorporating preferred suppliers, country-wise approved components, geographical regulatory constraints, approved specifications and creating market specific recipes.

Configit Ace®-based CLM solutions enable B2B manufacturers with relevant, helpful, and credible recommendations for improvement. In addition, CLM solutions empower sales teams by providing holistic solutions to respond to customer requirements consistently and digitally, demonstrating operational excellence improvements. As a result, they have unearthed business value across functions and helped organizations gain a competitive advantage.

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