

CLIENT CASE STUDY

From "Firefighting" to Future-Proof: How a Luxury Office Furniture Manufacturer Saves Millions by Calibrating their Digital Thread

The Challenge

A leading Luxury Office Furniture Manufacturer engaged us to lead the Options & Variants Process Improvement Initiative, a critical project aimed at solving fundamental business challenges stemming from increasingly complex product lines.

While the immediate goal was to streamline product options, the discovery phase uncovered deeper, systemic issues across people, processes, and tools. The company's reputation for quality was at risk due to legacy products lacking fully defined Engineering Bills of Material (EBOMs). Their existing ERP was highly customized and limited to three BOM levels, a severe constraint for new products requiring eight or more.

Critically, a culture of "firefighting" and reliance on tribal knowledge had become unscalable. This environment of ineffective decision-making contributed to an annual loss of \$3 million due to scrap, directly undermining the company's strategic goal to double operating income and revenue.

Systemic Issues: The "As-Is" State

Using Six Sigma methodology (Interviews and KJ Analysis), IpX translated anecdotal feedback into four core systemic problem areas:

Documents & Options (Model Naming):

Model numbering was complex, inconsistent, and arbitrary. External customers struggled with inconsistent options across product lines, while internal teams often quoted the "closest model number" rather than the actual finished item. This disorganization obscured sales data and confused dealers.

Variant Rules (Product Configuration):

There was no single source of truth for variant rules. Without a cross-functional team or a master matrix to define option relationships, ambiguity led to constant miscommunication between Sales, Marketing, and Engineering.

Planning Guide & Price List:

The guide was difficult to navigate, redundant, and bloated. Internal teams wasted time hunting for information, while unclear documentation triggered a high volume of special custom requests—the "biggest pain point" for the Specials Engineering department.

Systems & Connections (Data Management):

Systems were disconnected, forcing repetitive manual data entry. Critical data resided in uncontrolled repositories (network shares and legacy systems) containing over 1 million files with broken links and no revision control. This created a dangerous vulnerability: conflicting data and information silos.

THE CM2 FRAMEWORK: THE ENGINE OF TRANSFORMATION

The Approach

Our approach is built on the philosophy that Business Processes and Requirements must lead, and Tools must follow.

Methodology & CM2:

- IpX leveraged its proprietary methodology, combining end-to-end process optimization with Six Sigma tools. The assessment was founded on the Configuration Management (CM2) standard—using CM2-500 for process and CM2-600 for tool requirements.

Discovery Path:

- To gather the true "Voice of the Business", IpX conducted minimally invasive, one-on-one interviews. Findings were processed via KJ Analysis to remove bias and identify root themes.

Defining the Future:

- The roadmap included a CM2 Gap Analysis and the documentation of the "To-Be" Business Process. Requirements were defined using the "I want, So that, Acceptance Criteria" format. This rigor ensures vendors and System Integrators (SIs) are held accountable, reducing PLM development risk budget costs by an estimated \$150K-\$200K.

Proposed Future State: The Digital Thread

The initiative's actions are designed to build a coherent, end-to-end Digital Thread that supports a reliable Digital Twin.

Digital Configuration & Traceability:

A centralized Configurator and Product Data Management (PDM) system will now manage product information (CAD, BOMs, Process Plans). The Configurator will utilize CAD models with formula-driven family tables to deliver fully configured BOMs to the ERP. This creates a traceable link from EBOM to MBOM, eliminating hybrid/job BOMs.

Master Data Management (MDM):

An MDM plan will establish a single source of truth, ensuring consistent terminology and attributes across the enterprise. A non-significant, sequential numbering scheme will be implemented for all items and datasets to eliminate confusion.

The Value: Securing a Scalable Future

By transitioning from reactive "firefighting" to a structured, data-driven ecosystem, the manufacturer is not just solving today's scrap issues—it is laying the foundation for exponential growth. This initiative transforms the company's infrastructure from a bottleneck into a launchpad, enabling the "Specials in standard lead time" and "Instant quote turnaround" that customers demand. By establishing a true Digital Thread where requirements lead and tools follow, the company has effectively future-proofed its operations. This scalability allows the organization to double its revenue without doubling its chaos, securing its position as a market leader that is truly "Easy to do business with."

IpX Services



Let's Talk.