**DESCRIPTION OF CURRENT BOM PIM PROJECTS (082825)**

## **1. Part Classification**

### **Description:**

Teamcenter part classification project to transform Molex Product Development teams from being document-centric to leveraging a single source of truth for part attributes. Establishes a centralized database of classified part attributes, eliminating manual data re-entry and reducing errors.

### **Objectives:**

* Implement a centralized storage for attributes and part classification
* Develop data governance to maintain attribute information
* Enable automated attribute sharing across processes and systems
* Enable Teamcenter to classify new PSBU products for M2X program

### **Importance to BOM and Part Information Management:**

* Provides a standardized system for managing part attributes
* Enhances searchability and part reuse capabilities
* Enables automated processes and reduces redundancy
* Supports reliable BOM creation through consistent part data

## **2. Part Centric Charter and Cognite AI Investment**

### **Description:**

Combined initiative of establishing part-centric data architecture alongside leveraging Cognite's industrial AI platform for advanced analytics and digital twin capabilities. Focuses on making parts the central organizing principle and enabling AI-driven insights across manufacturing operations.

### **Objectives:**

* Establish parts as the foundational data element
* Create comprehensive part information repository
* Link all product-related information through part relationships
* Implement industrial AI capabilities for manufacturing optimization
* Create digital twin models of manufacturing processes

### **Importance to BOM and Part Information Management:**

* Centralizes part information for better traceability and analytics
* Enhances predictive capabilities and optimization across BOMs
* Supports cost analysis and design optimization through AI insights
* Leverages BOM data for comprehensive digital twin models
* Reduces data silos and improves data consistency

## **3. Master Data Nexus App**

### **Description:**

Central application for managing master data across all business units and systems, providing a single source of truth for product, part, and organizational data.

### **Objectives:**

* Establish unified master data management capabilities
* Eliminate data silos and inconsistencies across systems
* Provide real-time access to accurate master data
* Enable data governance and quality management
* Support downstream applications with reliable data foundation

### **Importance to BOM and Part Information Management:**

* Provides consistent and reliable data foundation for BOMs
* Ensures data accuracy and integrity across all systems
* Facilitates seamless data integration and sharing
* Reduces duplicate data and inconsistencies in BOMs

## **4. Resin Selection Tool**

### **Description:**

AI-powered tool that assists engineers in selecting optimal resin materials based on performance requirements, cost considerations, and manufacturing constraints.

### **Objectives:**

* Automate resin selection process based on design requirements
* Optimize material costs while maintaining performance standards
* Reduce design cycle time through intelligent recommendations
* Capture and leverage expert knowledge in material selection
* Enable consistent material selection across all design teams

### **Importance to BOM and Part Information Management:**

* Enhances material selection in BOM processes, ensuring cost-efficiency
* Integrates expert knowledge with part data for improved material choices
* Reduces manual errors and accelerates the BOM creation process
* Supports standardized material data within BOMs

## **5. Charted Drawings Enhancement**

### **Description:**

Enhancement of technical drawing and documentation systems to improve accuracy, accessibility, and integration with other design systems.

### **Objectives:**

* Improve technical drawing quality and consistency
* Enable better integration with CAD and PLM systems
* Support automated drawing generation and updates
* Enhance drawing searchability and retrieval
* Reduce drawing-related errors and rework

### **Importance to BOM and Part Information Management:**

* Ensures accurate and up-to-date drawings are linked to BOMs
* Facilitates integration of BOM data with engineering drawings
* Reduces errors and rework associated with part drawings
* Enhances visibility and accessibility of BOM-associated drawings

## **6. Digital EBOM to MBOM**

### **Description:**

Second stage of connecting Engineering BOMs to Manufacturing BOMs with enhanced capabilities for real-time synchronization and change management.

### **Objectives:**

* Establish real-time synchronization between EBOM and MBOM
* Implement change management workflows across BOM types
* Enable impact analysis for engineering changes on manufacturing
* Support concurrent engineering and manufacturing processes
* Reduce time-to-market through improved BOM management

### **Importance to BOM and Part Information Management:**

* Facilitates seamless transition from design to manufacturing stages
* Provides integrated visibility and control over the entire BOM lifecycle
* Enhances accuracy and consistency in part information across systems
* Supports dynamic and concurrent processes in BOM management

## **7. UBOM Phase 1**

### **Description:**

Initial phase of creating a unified BOM structure that connects engineering BOMs with manufacturing BOMs across all product lines and business units.

### **Objectives:**

* Standardize BOM structures across all business units
* Create linkages between engineering and manufacturing BOMs
* Establish BOM data quality and governance processes
* Enable real-time BOM visibility and traceability
* Support concurrent engineering and manufacturing processes

### **Importance to BOM and Part Information Management:**

* Establishes a cohesive framework for BOM structure consistency
* Enhances traceability and data integrity in BOM management
* Supports real-time visibility and changes across BOMs
* Aligns engineering and manufacturing information seamlessly

These projects collaboratively enhance BOM and Part Information Management at Molex by fostering efficient data management, improving accuracy, supporting AI advancements, and facilitating seamless integration throughout the product lifecycle.