Enterprise Bill of Material Management

The common language in business, especially in Original Equipment Manufacturers (OEM) and manufacturing industries, is the Bill of Material (BOM). The BOM is shared throughout the organization and the extended supply chain to convey the needed information and maturity around the company's product and services. In essence, an Enterprise Bill of Material is used in a company to enable customers to buy your products and services, provide the needed requirements for your internal organization and extended supply chain, to manufacture and deliver the product/service and provide the right information for your service organization to service the product and service in the field. It is the connecting stream of information for your organization.

So what capabilities does a company need to include for a successful Enterprise Bill of Material approach?

COMPLETE PRODUCT INFORMATION AND ITS MATURITY THROUGHOUT THE PRODUCT'S LIFECYCLE
The Enterprise Bill of Material needs to include all mechanical parts, electronic components and product software. Without all of these elements, you are only getting a "partial" view of the information needed to support a product/service centric organization. Within this perspective, the phases of maturity need to be visible throughout the product's lifecycle. This could include phases such as "Concept", "Design", "Design Validation", "Process Validation", "Production" and "End of Service".

COMPLETE MANUFACTURING & SUPPLIER INFORMATION
Product information needs to be accompanied with the associated Manufacturing and Supplier Information. This information provides the needed detail in terms of manufacturing assets and process to produce the parts / assemblies and final product. Along with this, is the inclusion of supplier content and information. This is needed to include the perspective of the extended supply chain. This will provide vendor information, in-depth knowledge of where the part/assembly is in terms of the lifecycle of the supply chain. This could include -Have the parts/assemblies being "Ordered"?, are they currently "In Process" of being built? Have they been "Received"? Are they in "Inventory"?.

CONFIGURATION & CHANGE MANAGEMENT OF THE ENETERPRISE BILL OF MATERIAL
The Enterprise Bill of Material needs to be configured and controlled. This includes configuration in terms of: "As Designed", "As Built" and "As Serviced". This provided the ability to communicate the Bill of Material in terms of its configured state throughout the lifecycle. Engineering needs to convey the "As Designed" as well as providing a method to progressively manage change to the product in this state. Manufacturing needs to convey the "As Built" configuration as well as providing a method to manage manufacturing and supplier change to the product while it is actively being produced. Service needs to convey the "As Serviced" configuration for all products produced that are currently in service—both older products that are no longer being built as well as product that are actively being produced.

INTEGRATED ENTERPRISE SYSTEMS
To deliver the Enterprise Bill of Material to the organization, the company needs to create the needed integrations to ensure that the Enterprise PLM and ERP as well as, other needed system information is made available to create a Single Source of Truth foundation. This strategy is the "Stitching" that creates the closed loop of information for sharing. It will provide the needed management and elimination of any data duplication.

At DRIVEN-4 we have practical experience to make an Enterprise Bill of Material reality. Give us a call to discuss?

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