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ConocoPhillips – Enhancing SAP MDM with Riversand Product Information Management (PIM) and Data Quality Management (DQM) Solutions

The Challenge

As the third largest integrated energy company in the U.S., $188 billion in revenue with operations worldwide, ConocoPhillips sources and procures materials from thousands of different suppliers across a wide variety of MRO products. The energy business for the super-majors tends to be highly distributed across various geographies. There are multiple production and refining facilities across the globe. This leads to highly distributed procurement and supply chain processes. This is a perfect recipe for tremendous data quality and master data management issues such as duplicate Vendor and Material records, inaccurate and incomplete Equipment and Bill-of-Materials (BOM) data. This in turn leads to significant challenges such as:

- Increased procurement costs due to poor spend analytics
- Increased inventory due to improper spare parts rationalization
- Increased inventory holding costs associated with the higher inventory
- Risk of plant shutdown due to incorrect spares/materials
- Wasted productivity of operations personal due to searching over poor data, eventually leading to unnecessary NPI (New Product Introduction) and further degradation of data quality. For example, Searching for a simple bolt could return over 500 unique results, hence employees wasted hours looking for what they wanted or, worse, just created another unique material for the same bolt

In order to streamline procurement processes, create a solid basis to support improved sourcing and spend analytics, and reduce risks and costs associated with plant shutdown and inventory carrying expense, ConocoPhillips decided to implement a single global instance of SAP and SAP MDM in 2006. However, the success of these projects depended heavily on implementing processes to clean the data one time and to keep it clean on an on-going basis.

SAP MDM was set up to handle some of the data issues but not the process issues that lead to data getting corrupted over time. Frequent acquisitions, new plant setups and plant expansions result in the creation of new Materials, Equipments and BOM's. For example, during the process of setting up and construction of a new plant, new Suppliers, Materials and Equipment are being set up in a highly distributed environment that is very hard to standardize. The data was already "bad" by the time it reaches the SAP environment and this leads to the corruption of data within the Material and Plant Masters.

Solution

ConocoPhillips contacted and engaged Riversand Technologies to provide strategic consulting, technology solutions and outsourcing services to tackle the data quality issues and to help with the migration to an industry standard schema and taxonomy.

The solution for ConocoPhillips involved the following:

- Determination of content standards for classification and unit of measures. Riversand helped ConocoPhillips choose PIDX as the standard for classification.

- One-time cleanup of content within Material Master that involved activities such as Classification to PIDX, Attribute Extraction and population to PIDX schema, Data Enrichment, Normalization, Description Generation and Duplicate Identification (including Form-Fit-Function matching).

- Deployment of Riversand ProductCenter solution along with the DQM module to ensure that data remains clean on an on-going basis. The solution provides various data quality enhancement functionalities along with a data quality approval workbench. The solution also includes the SPMS module that provides a collaborative environment for various stakeholders of a new plant construction project to organize Equipment and BOM master data.

Scale

Some representative numbers describing the effort on the project are:

Total Number of Items **~ 1,200,000**	Total Number of Templates **~ 3,800**
Avg. Number of Attributes/Item **~ 20**	New PIDX Templates created or modified **~ 3,000**

Benefits

As a direct result of this project ConocoPhillips achieved these immediate benefits:

- **Reduced Procurement Costs:** Buyers can find items for which they are searching due to rich accurate Material Master data. All Material data was classified, restructured and enriched to PIDX. All Material Master items were described completely and consistently with full text descriptions, UNSPSC cross reference, cross reference with SAP Material/Service Group and rich technical specifications.

- **Reduced costs for Material Creation:** Implemented Riversand ProductCenter for new Material Creation and maintenance to ensure the rationalized Material Master will retain its data integrity. The solution also ensures that Master Data rules are followed before new materials are created and prevent duplicate materials from being created

- **Reduced Inventory Costs:** Better Equipment, BOM and Spares/Material data leading to better inventory decisions

- **Reduced Rick of Plant Shutdowns:** Better Equipment BOM and spares data means better maintenance and operations of the plant leading to reduced risk of plant shutdowns due to incorrect spares.

ABOUT US

Riversand Technologies Inc. is a global leader in Product Information Management (PIM) and Product Master Data Management (pMDM) Solutions. Serving industries such as Manufacturing, Distribution, Oil & Gas and Retail, our PIM solution enables the creation of accurate product master data records for the purpose of synchronization across various enterprise systems in a timely fashion. Our solution can be implemented for various initiatives such as Product Master Data Management, Multi-Channel Retailing and eProcurement Cataloging. Our PIM solution easily scales to millions of items and thousands of attributes.

Headquartered in Houston, TX, it has 4 offices and over 100 employees worldwide.

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