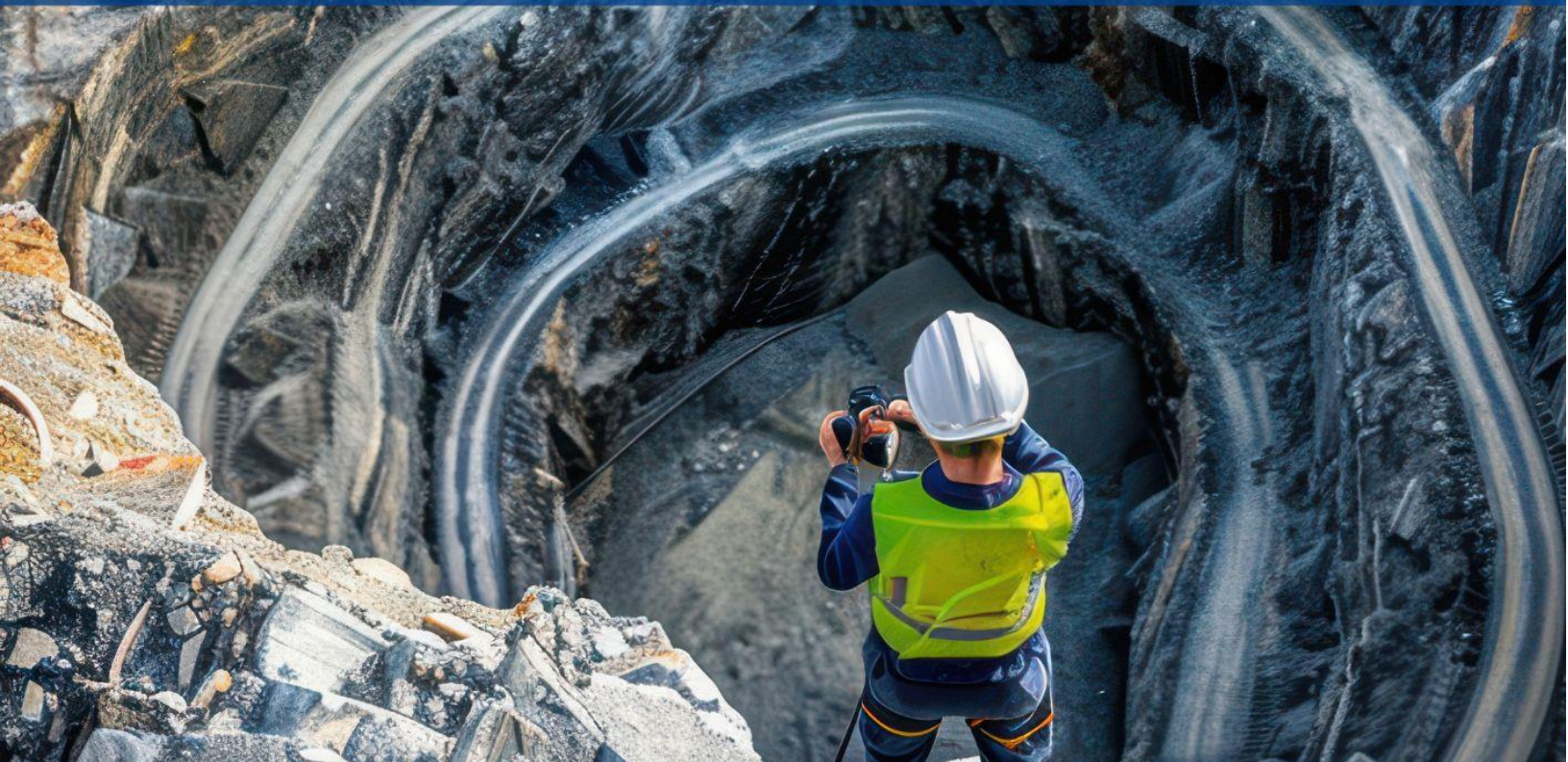




# PROCESS IMPROVEMENT FOR A LARGE MINERAL MINING AND CHEMICAL COMPANY



## Company: Large Agriculture Nutrient Provider

Revenue: \$15 billion+

Founded: Pre 1945

Industry: Chemicals

Businesses: 3 major line of businesses - Retail business unit, Wholesale business unit, & Advance Technologies business unit

## Project:

Harmonize **280,000+ SKUs** from Item master, Purchase order and Bill of Material using Verdantis Harmonize®

## Taxonomy:

Change from customized taxonomy of material groups and classes to UNSPSC

## Business needs

- Structure the material master and BOM
- Inventory reduction
- Detailed UNSPSC Coding
- Improved Attributes
- Process efficiency at Plants
- Improve sourcing
- Improve working capital

## Objectives achieved

- Structured BOM and Item master data powering work order system
- Improved sourcing
- Improved working capital
- Data standardization per global norms
- Improved process for inventory management

One of world's largest company that specializes in minerals mining and chemicals. The company, a agricultural nutrient provider was seeing record profits and industry leading profitability, backed by strong business fundamentals...

Our client runs a comprehensive and significant material purchasing operation, with manufacturing plants in **50+ locations across North America**. They had seen great success in the past few years, making them one of the largest global agricultural nutrient providers with industry-leading profitability and an unrivalled distribution network that spans across the U.S., Canada, Australia, and South America.

Economies of scale, strong distribution network, procurement expertise and advanced IT capability form the bedrock of sustained shareholder value.

...The director of procurement knew even more sustainable gains could be tapped with an improved work order system, fed with harmonized data

As Director of Materials Management, Jack Hill was directly responsible for the performance of the materials purchasing department. While efficient procurement of materials was a significant contributor to our client's strong bottom line, Jack felt that processes could be further improved with an improved work order system fed with standardized, non-duplicated and enriched Plant Maintenance parts material data.

The process improvement initiative's success depended on the right technology partner using the correct methodology

Jack knew that he had to get this process improvement initiative right the first time. The scope, methodology and the technology partner would all be equally vital to ensure success. With Ross Wyatt from Engineering joining Jack as sponsor for the project, they entrusted Jason Bell to manage this project with the goal of an optimum, IT-leveraged work-order system.

This translated to improved requirement for improved data quality in Plant Maintenance parts material data to support the improved work order system; and would include Material master, BOM (Bill of Material) and free text PO (Purchase Order) items.

The business goal was clearly spelled out - reduce sourcing costs of parts by standardizing descriptions for stocked parts as well as non-stocked parts.

## The scope included 280,000+ SKUs from BOM, PO and Item master data

This comprehensive improvement would standardize:

- Complete plant maintenance parts master data
- Complete BOM (Bill of Materials) data
- PO data (Free Text) from last 2 years

The total count was a just over 280,000 SKUs. The current taxonomy in use was a customized one containing 37 material groups and 1268 classes. All the parts data from the material master, BOM and PO free text needed to be mapped to an industry standard UNSPSC 13.1201.

The selected master data management vendor would have to classify all the SKUs (Stock Keeping Units), normalize descriptions, enrich them and de-duplicate the item master, in an accurate and consistent manner. One of the significant outcomes of this exercise would be a complete and accurate Bill of Material for operational support.

## An accurate BOM was crucial for material planning and replenishment

As Director of Materials Management, Jack Hill was responsible for providing “the right parts in the right quantities at the right time” for all predicted and emergency material requirements. These requirements would come from an Equipment Bill of Material (BOM). A complete and accurate BOM was vital to ensure that decisions regarding material planning and replenishment were empowered with accurate information.

Without this empowerment, such ‘blind’ decisions would result in avoidable situations like stock-outs, excess inventory, maverick spend for rush orders and costly downtime.

## A high quality pilot and competitive SLAs sealed Verdantis as the correct partner

With the scope identified, to identify the partner who could manage this complex data management exercise, Jack put together an evaluation team from Engineering, IT, Plant Storerooms, Project Management, SAP Systems and Management. Over a one year period they evaluated a wide range of solutions and alternatives for data quality improvement solutions to enhance the SAP plant maintenance system.

The evaluation team selected Verdantis to harmonize their 280,000 historic Items after a competitive Proof of Concept (POC) and Request for Proposal.

“The business goal was clearly spelled out - reducing sourcing costs of parts by standardizing descriptions for stocked parts as well as non-stocked parts”

### Items classified

- Industrial machinery components and accessories
- Tool attachments and accessories
- Specialized pipe fittings and flanges
- Lifting equipment and accessories
- Electrical lugs, plugs and connectors
- Pump parts and accessories
- Indicating and recording instruments

“As Director of Materials Management, Jack Hill was responsible for providing “the right parts in the right quantities at the right time” for all predicted and emergency material requirements.”

As Jack put it “ We chose Verdantis because of the quality of their POC delivery and their automated approach to minimize the resources we needed to deploy. This coupled with competitive pricing put them as an automatic first choice.”

Project manager Jason Bell praised the project approach - “We were able to bring in our key suppliers and retired plant maintenance personnel together for scheduled and short in-person group sessions for milestone reviews. This reduced the need to pull active resources out of their work for reviews, which was a really important consideration in this project. Right from the start we aimed to use minimal active resources so that our business-as-usual was not affected”.

Verdantis harmonized the structured and free text data with high granularity with over 88% of SKUs classified at a commodity and class level...

Verdantis followed its time-proven approach of understanding customer requirements; classifying the agriculture nutrient provider’s data according to the UNSPSC with assigned data sheets; and extracting attribute value pairs followed by attribute enrichment leveraging external data sources.

“We were able to bring in our key suppliers and retired plant maintenance personnel together for scheduled and short in person group sessions for milestone reviews. This reduced the need to pull active resources out of their work for review”

- Jason Bell, Project Manager

The initial requirement gathering finalized the taxonomy to UNSPSC 13.1201. **Of the 280,204 SKUs, 48% data was from material master, 27% from purchase orders, while the remaining 25% data was from Bill of Materials.** More than 1000 unique data sheets were assigned to the parts as a part of this exercise. Verdantis Harmonize was successful in classifying 88% of SKUs at a class and commodity level- the highest granularity levels available in UNSPSC.

The material master data was in structured form, while the BOM and purchase order data was in un-structured free text form. **68% of the source data had either 1 or 2 attributes, with only 14% data having 3 or more attributes.**

Once classification was over, the project moved into the attribute extraction and attribute enrichment phase. At this stage, 2% of records were identified as “level 1” duplicates – duplicates identified by matching normalized manufacturer name and part number.

The Artificial Intelligence powered software AutoSpec® enabled extraction of attributes for materials across the entire data set; while AutoEnrichAI® leveraged its category-leading non-source enrichment capabilities to extract additional attributes for the web enriched materials.

...enabling an improved work order and immediate gains of 5-6% of inventory value...

Jack's team decided that only items with 4 or more matching attributes should be classified as Level 2 duplicates. Jack added ***"Overall close to 6% of items were identified as duplicates, leading to a saving of 5-6% of total inventory cost. Equally important, a complete and accurate Bill of Material was created leading to more robust process on the manufacturing floor."***

An accurate BOM realized benefits like:

- Fewer incorrect material orders
- Faster execution of planned work
- Faster recovery from breakdowns
- Identification of inactive inventory
- More effective reliability engineering

“Apart from significant savings in inventory costs, a complete and accurate Bill of Materials was created leading to more robust processes on the manufacturing floor ”

- Jack Hill, Director of Materials Management

...While demonstrating its 10/10 ability to deliver as promised

Verdantis received a customer rating of 9/10 overall for the project, with a perfect score of 10/10 for Project management, On-time delivery and responsiveness. Project manager Jason Bell said, At the start, start, Verdantis team promised on-time delivery and highest quality, and they have been very conscientious on both counts.”

## About Verdantis

Verdantis is the first to offer Master Data Management solutions that bring real ROI and Business Value by focusing on the business use and application of organizational Master data. Verdantis uniquely offers end-to-end automated ERP MDM solutions driven by our suite of Artificial Intelligence (AI) based solutions and business roles and rules. Our easy-to-use solutions are easily configured to fit enterprise requirements for classification, enrichment, screens, fields, security, attachments, workflow approvals, languages and more.

Verdantis Harmonize® is a high-speed automated material /item data quality improvement tool that uses internal knowledge assets to master legacy data. Harmonize assures a globally unified, standardized, de-duplicated and enriched material master for uploading into a customer's ERP, EAM as well as Verdantis Integrity.

Verdantis Integrity® is a data governance tool that manages the quality of the material/item/product master data on an ongoing basis. Powered by a strong workflow engine and a guided item creation process, it keeps a cleansed and harmonized material master permanently pristine. It prevents data duplication and enhances organization-wide parts discovery, visibility and compliance.

Leading global companies have chosen Verdantis solutions for the following reasons:

- In-depth industry and data-specific domain expertise with a robust project methodology
- End-to-end automated processes to harmonize & enrich historical master data
- Ability to ensure semantic and structural data integrity and quality
- Ability to handle large volumes of cryptic and complex data in multiple languages
- Delivery of higher quality and volume than manual/database-centric approaches
- Flexible engagement models with a single focus on customer success

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