Using Standardized Material Master Data to drive down costs and emissions

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Agenda

- Introduction to Prospecta and MDO

- Master data and PIDX

- Case Study Overview

- Benefits and Summary

MDO | Prospecta: Building Data Culture

- Founded in 2002
- MDO Launched in 2008

1

- Focused on data management & automation

2

- HQ in Sydney
- Global presence
- 250+ employees

3

- SaaS product suite, hosted on AWS

4

- SAP Spotlight Partner

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- Funded by private equity partner, Ellerston Capital

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Prospecta Master Data Online (MDO) Solutions

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Solutions for Enterprise Systems, Industry & Line of Business Products, Vendors, Assets, Customers

Master Data Management

Multi domain MDM Enterprise SaaS system for Data Governance

Data Intelligence Workbench

A complete data quality solution, including knowledge bases for use across industries and disciplines.

MDO FUSE
Enterprise Data Management Platform

MDO Solutions for SAP

Data Readiness for S/4 & SAP Cloud Applications

With pre-defined templates, data rules and models, MDO Data Readiness can help prepare your data for SAP Digital Transformations.

MDO Supply Chain for SAP

Industry Standards based Master Data Governance with a collaborative way to improve data quality for Materials, Assets (EAM) and Suppliers.

"By 2022, 60% of organizations will leverage machine-learning-enabled data quality technology for suggestions to reduce manual tasks for data quality improvement" – Gartner

SAP SuccessFactors

SAP S/4 HANA

SAP ECC

SAP Ariba
SAP Business Network

The issue we face

"To reach net zero emissions before 2050, we need all business to measure, account for and disclose carbon emissions as a first step to reducing them.

We cannot solve what we cannot measure."

"But measuring carbon and other greenhouse gas (GHG) emissions across product value chains today is almost impossible".

World Business Council for Sustainable Development (WBCSD) May 2021

So, what is this master data thing?

- Master data is the core data essential for running operations within a business
- Comes in a number of flavours:
  - Customer
  - Asset
  - Product
  - Location
  - Etc
- Often the opposite of Big-Data
  - Low volume
  - Low volatility
  - Complex and valuable.
- Should be "The Golden Record". Standardised, accurate, trusted and accessible across an enterprise

- J Smith; Jack Smith; Jacky Smith
- Leman; 49/26AD1; Leman Drilling 1
- Stop cock, Kelly cock, Valve
- Postcode; Lat/Long; Grid ref

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Solution – Turn data into information

- Stop buying equipment and the spares you already own

- Establish a single source of optimised, accessible, trustworthy material data:

  - Standardised, enhanced, rationalized and maintained

- Link all stocked spares to Bills of Materials to remove unrequired stock

- De-dupe vendor lists, rationalize and rank

- Add CO_2-eq to procurement evaluation criteria and price book data

- Remove duplicates from stock and rationalize bins to reduce warehousing

The concept of circularity can be applied to not only production by-products, but also the day-to-day management of corporate assets. Reuse and diversion from landfill of assets and parts will save our organizations money and reduce emission footprints.

Petroleum Industry Data Dictionary

- Structured descriptive templates based on NOUN;MODIFIER:ATTRIBUTE 1 to n
  - Includes Universal Standard Products and Service Classification(UNSPSC) to commodity level – ie Liner Hanger
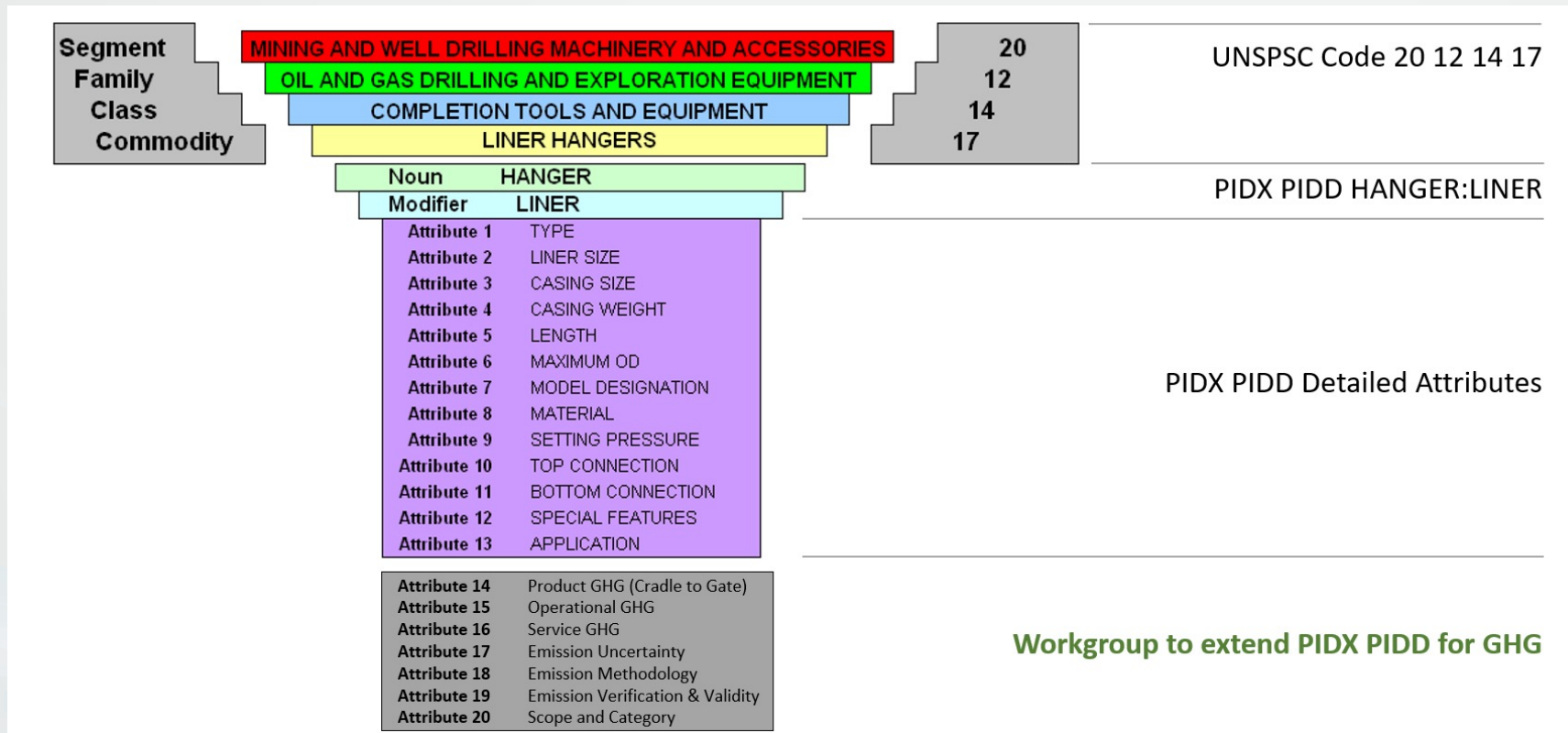
Difficult questions

- What is your department doing to reduce the company's carbon footprint;

- How will you get to net-zero if you have no control over materials procurement or stock;

- How will you go about flat-lining (then reducing) the constant rise in warehouse volume required;

- Do you have the information you need and can trust to help you reduce the carbon tied up in materials, without hitting your pick-rates/production targets;

- And where does digitization play a role in reducing our Scope 3 emissions?

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Case study background

- The operator recognized the need for a data standard and technology to manage the master data. Through participation in the PIDX Catalog & Classification workgroup, settled on two standards and one technology:
  - PIDX's Petroleum Industry Data Dictionary (PIDD) – open standard, designed and maintained by the industry to cover Up and Downstream
  - United Nations Standard Products and Services Code (UNSPSC) – also open standard, designed to enable the grouping of families of items for catalogue management and spend analysis
  - Conscious that 75% of manual data improvement projects fail, they selected a Prospecta as a specialist software and services company to leverage these standards and their corporate master data governance rules

The Program

A Fortune 500 American global independent energy company, engaged in the exploration and production of crude oil and natural gas.

After retiring SAP MDG, the company implemented **MDO** and **PIDX and UNSPSC Data Standards** to:

- optimize spend,
- reduce purchasing and warehousing spend,
- improve user experience,
- establish "plans for every part".

Ultimately, benefits were realized across procurement, maintenance and reliability, inventory management, and IT.

The next step is to apply these capabilities to emission and sustainability goals.

Project Summary

PROJECT DESCRIPTION

- Implement a new Material Master Platform and perform an MM Taxonomy refinement and Material Master Enrichment exercise.
- Current state pain points to address:
  - Difficult user interface with limited desirable features leading to non value added spreadsheets and a limited user base
  - No systematic process for workflowing newly created Material Masters to the appropriate personnel for BoM addition, establishment of supply strategies and contract additions
  - Sub-optimal data quality, taxonomy structure, search capability and duplicates in existing MM's

IMPACTS, RISKS, UNCERTAINTIES

Impacts:
- Holistic approach that includes GSC, MR&I, IT, End Users for input and endorsement throughout the project
- Improved user experience and removal of pain points

Risks & Uncertainties:
- Risk: Constrained category management capacity to complete award and contract in 2019 combined with lack of funds in 2020

VALUE / BENEFIT

- Friendly & Intuitive user interface eliminating requirement of NVA spreadsheets, reduction of free text usage, elimination of duplicate MM's, superior search function & pipeline status visibility
- Integrated MM creation workflow ensuring BoM attachment, supply strategy settings and contract additions resulting in :
  - Decreased WO cycle time and accurate part orders
  - Optimized spare parts inventories
  - Automated procurement of materials
- Active/Passive defect detection, tools to govern taxonomy / business rules & cleansed MM's resulting in higher quality data

Key Benefits & Expected Results

Much friendlier user experience (People)

Key Benefits
- Broader user base & the elimination of material master (MM) request spreadsheets
- Superior search functionality
- Connections to external master data cloud to help enrich MM characteristics
- Reduced duplicate materials

Expected Results
- Improved Efficiency
- Decreased MM Creation Cycle Time
- Reduction of MM Duplicate Creations
- Increased ordered part accuracy

MM workflow allowing for a "Plan for every part" (Process)

Key Benefits
- Ensure BoM connection
- Connect MM's to the procurement process to increase contract reference
- Ensure MM supply strategies resulting in optimized inventory levels

Expected Results
- Minimized production down time aiding in safe / reliable operations
- Decreased WO Cycle Time
- Faster and more accurate part ID
- Increased automated Procurement and less RFQ's
- Optimized inventory levels and spare part availability

Advanced platform functionality (Systems / Tools)

Key Benefits
- Active/Passive defect detection, lifecycle management, tools to govern taxonomy, descriptions and business rules.
- External supplier portal for self service maintenance capability
- Supplier RFI functionality
- Mobile functionality

Expected Results
- Higher quality data leading to greater analytical insights
- Vendor managed data
- Easier MM catalog and business rule stewardship
- Track benefits in emission goals / sustainability

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Benefits Summary

- Savings across the business:-
    - Reduced working capital tied up in MRO
    - Simplified and improved user experience
    - Reduced waste diverted to landfill through reuse programs
    - Reduced Scope 3 emissions by purchasing only what was needed
    - Reduced warehousing size
    - Improved pick rates, even with lower inventory levels
    - Improved procurement efficiencies
    - Better 'wrench time'
    - Aggregated purchasing to achieve volume discounts
    - Staff morale and retention

ANY QUESTIONS?

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