

The importance of Material Master Data in driving down GHGs

The logo for mdo, featuring the lowercase letters 'mdo' in a bold, black, sans-serif font. A small blue triangle is positioned above the letter 'd'.

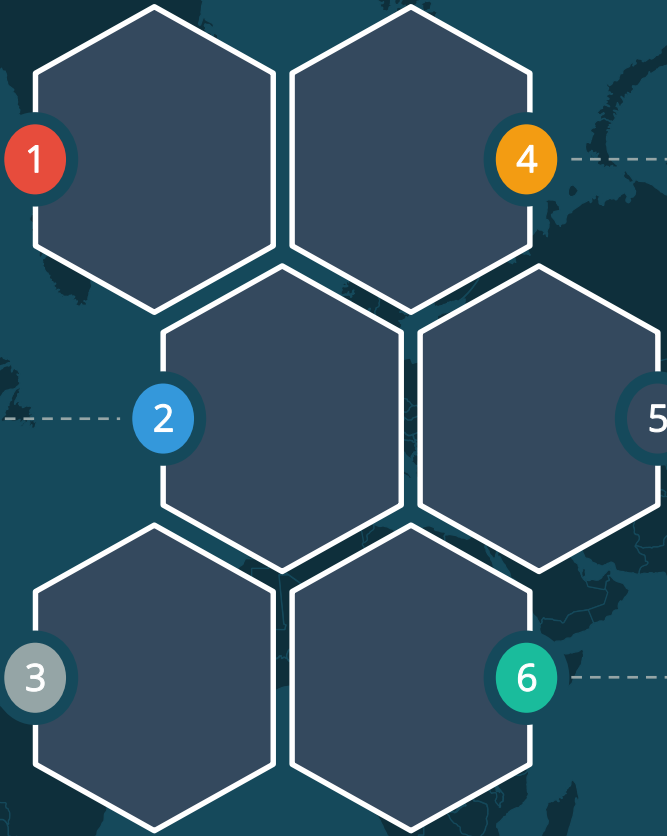
mdo

MDO | Prospecta: Building Data Culture

- Founded in 2002
- MDO Launched in 2008

- Focused on data management & automation

- HQ in Sydney
- Global presence
- 250+ employees



- SaaS product suite, hosted on AWS

- SAP Spotlight Partner

- Funded by private equity partner, Ellerston Capital

Prospecta Master Data Online (MDO) Solutions

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

Petroleum Industry Data eXchange

PIDX International is a trusted professional organization comprised of Energy Industry leaders dedicated to working together to standardize data exchange for digital business.



EXPLORATION



DRILLING



PRODUCTION



PROCESS



TRANSPORT



REFINING

Buckle up, we may encounter some turbulence!

- Our sector is responsible for 75% of the emissions that have taken us to 1.1°C
- However, energy is vital for a population of some 10 billion by 2050
- Global electricity demand is expected to double by 2050
- Potential annual market >USD 1 trillion by 2050 for low emissions energy
- So, what can the Oil & Gas market expect (based on Net Zero)
 - Peak demand for oil by 2025
 - Oil demand down to 25 mb/d by 2050
 - Increase in gas demand for 5 years, with significant regional variations
 - Disruption, from an industry pivoting on its axis

More immediate challenges

- Major disruption for the Oil & Gas sector in pivoting to “Energy”
- Government legislation and pledges
 - Carbon cap-and trade
 - Carbon import duties
- Pressure from shareholders
 - Climate Action 100+ with a portfolio of \$60 Trillion and 80% of global industrial emissions, mandating earlier net-zero achievement
- Closing the ‘Data Gap’ for reporting GHGs moving from voluntary to mandatory
- Staff attraction and retention
- Moral imperative

Measure to Manage

“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”.

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?

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

So, why is master data an issue?

- It's all about the nomenclature, stoopid!

[Ronnie Corbett: The Four Candles sketch - BBC News](#)

A practical example – Rear light for a 1980 Princess

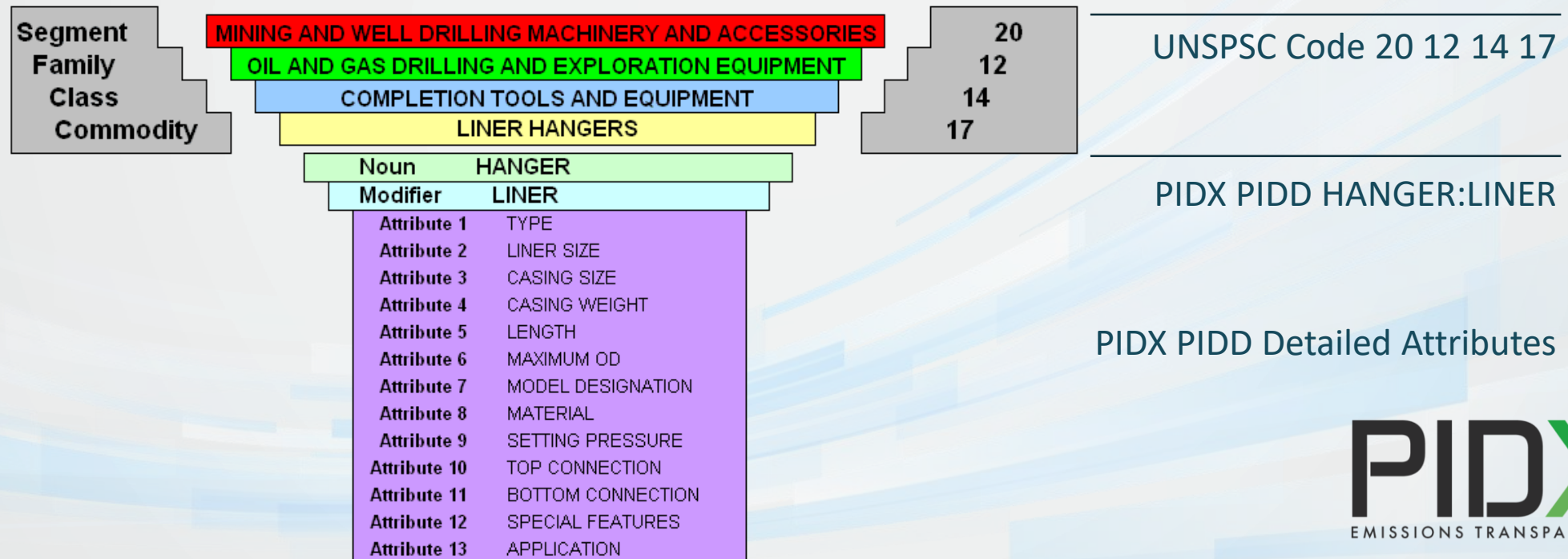


DESCENT; CLEAR; 12V; 5W; BA 15S BAYONET



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



Solution – Turn data into information

- Stop buying equipment 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 CO2-eq to procurement evaluation criteria and price book data
- Remove duplicates from stock and rationalize bins to reduce warehousing

ETDX

- **Emissions Transparency Data eXchange** – developing standards for the exchange of carbon emissions data across the industry

- Baker Hughes
- BP
- Chevron
- ConocoPhillips
- Engage Mobilize
- Global Carbon ESG
- Global Value Web
- Halliburton
- Microsoft
- OFS Portal
- Prospecta Software
- Schlumberger (IDS)
- Shell
- Sullexis

ETDX and Open Footprint

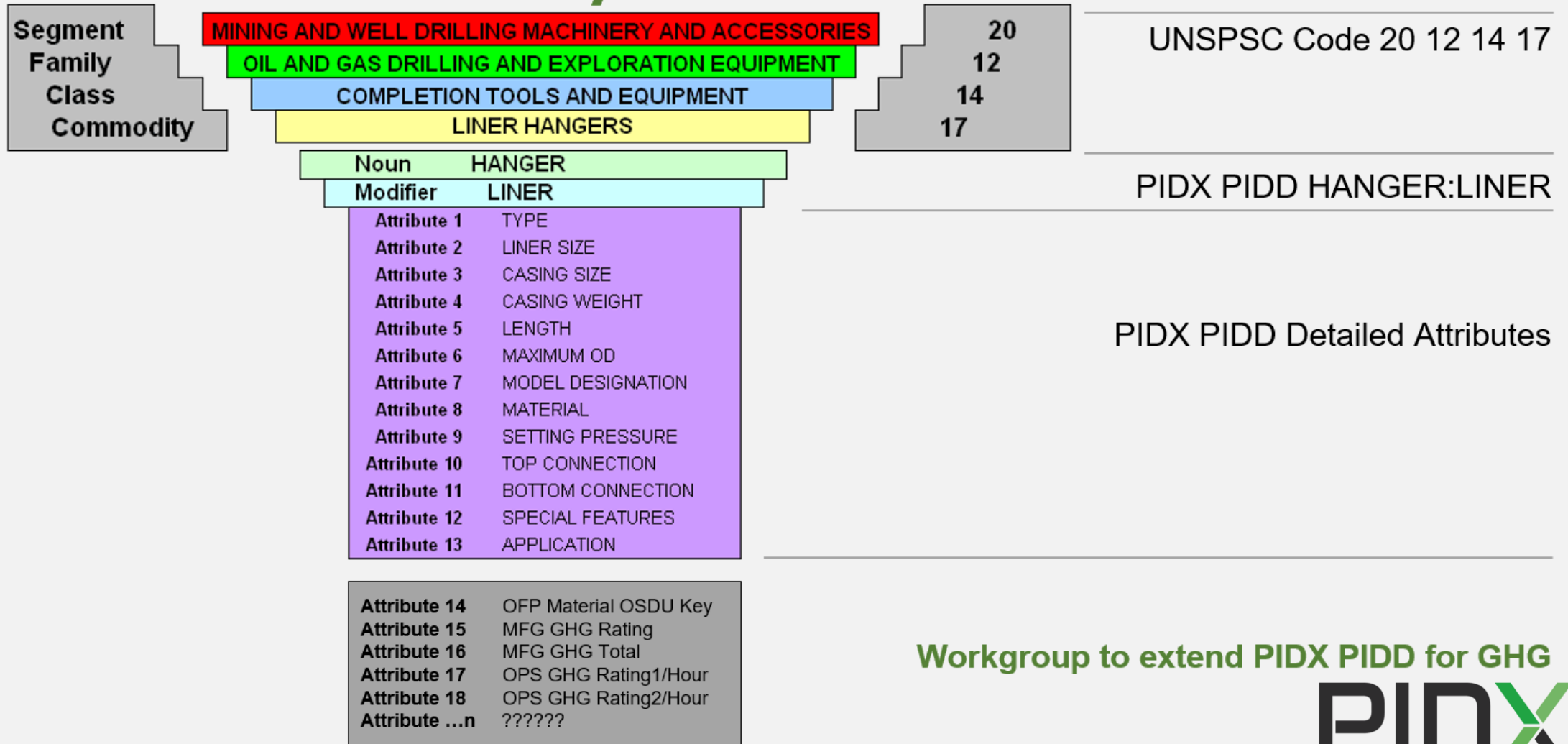
PIDX:

- For the O&G industry, defining data types and packaging for secure and encrypted transmission of emissions data reporting for suppliers to customers

Open Group's Open Footprint Forum:

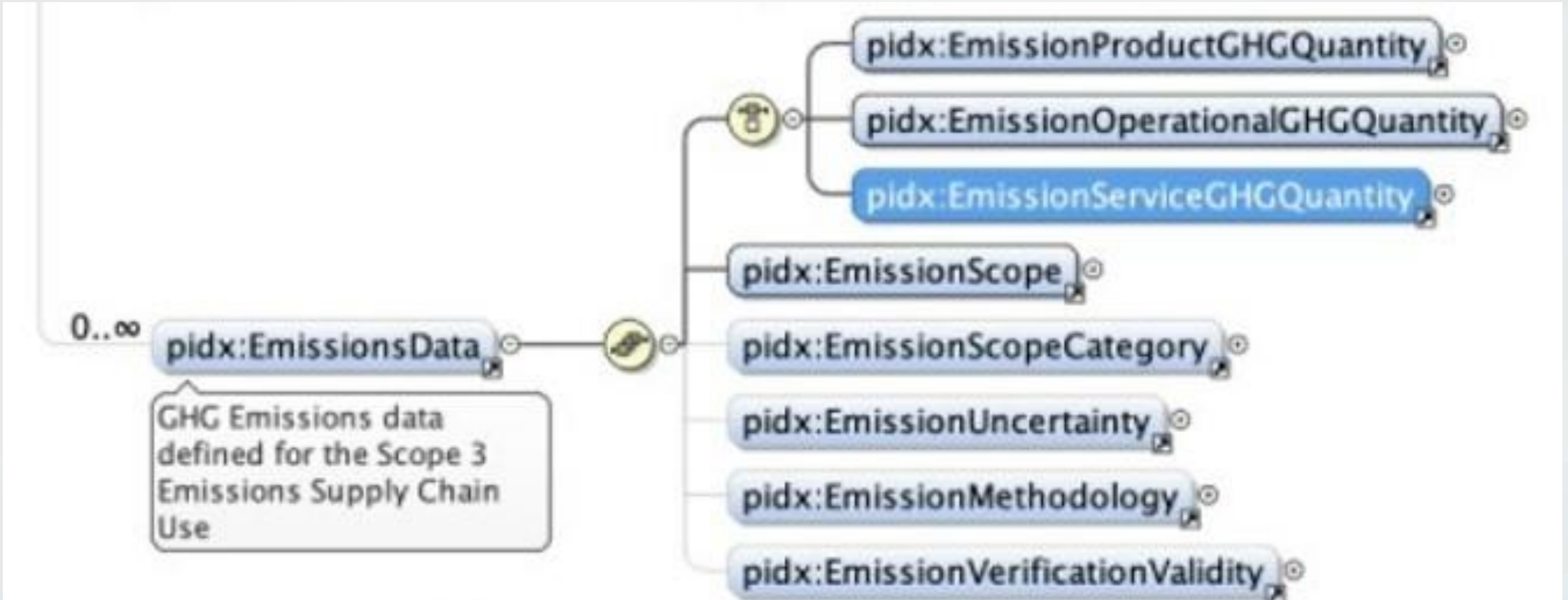
- Establishing the emission data elements that require reporting for any industry and defining the standard storage, naming and access structures for emission data at rest

PIDX – Emissions Transparency Data eXchange



Workgroup to extend PIDX PIDD for GHG

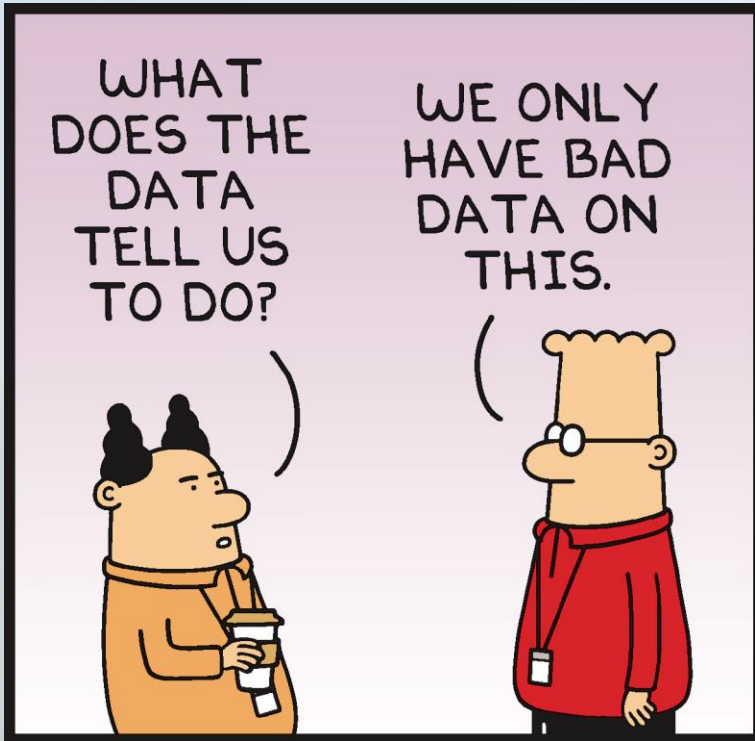
ETDX data transmission PoC



Benefits

- Reduced emissions:-
 - Reduced CO2-eq tied up in spares
 - Emission transparency across supply chain
 - Reduced warehousing size
- Savings across the business:-
 - Reduced working capital tied up in MRO
 - Improved pick rates, even with lower inventory levels
 - Improved procurement efficiencies
 - Better 'wrench time'
 - Aggregated purchasing to achieve volume discounts
 - Staff morale and retention

Alternatively...



A large, stylized logo for 'mdo Master Data Online'. The text 'mdo' is in a small font at the top left, followed by 'Master Data Online' in a larger, bold, white sans-serif font. The logo is set against a dark blue background with glowing circuit lines and a glowing blue triangle in the top left corner.

ANY QUESTIONS?

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