



Emissions Transparency in the Supply Chain

24th February 2021

Chris Welsh

CEO OFS Portal/COO PIDX International

PIDX Standards Scope



EXPLORATION

DRILLING

PRODUCTION

PROCESS

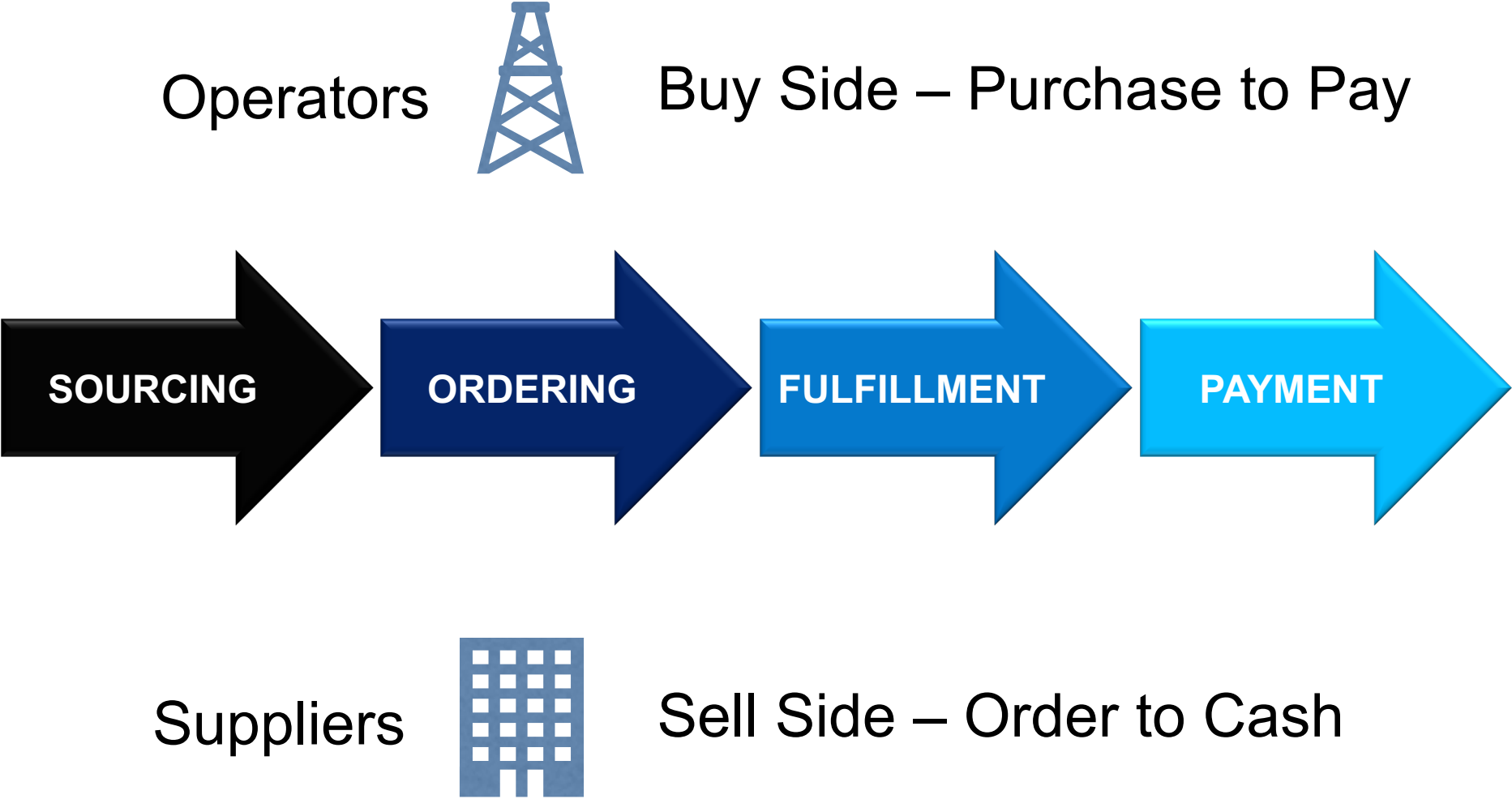
TRANSPORT

REFINING

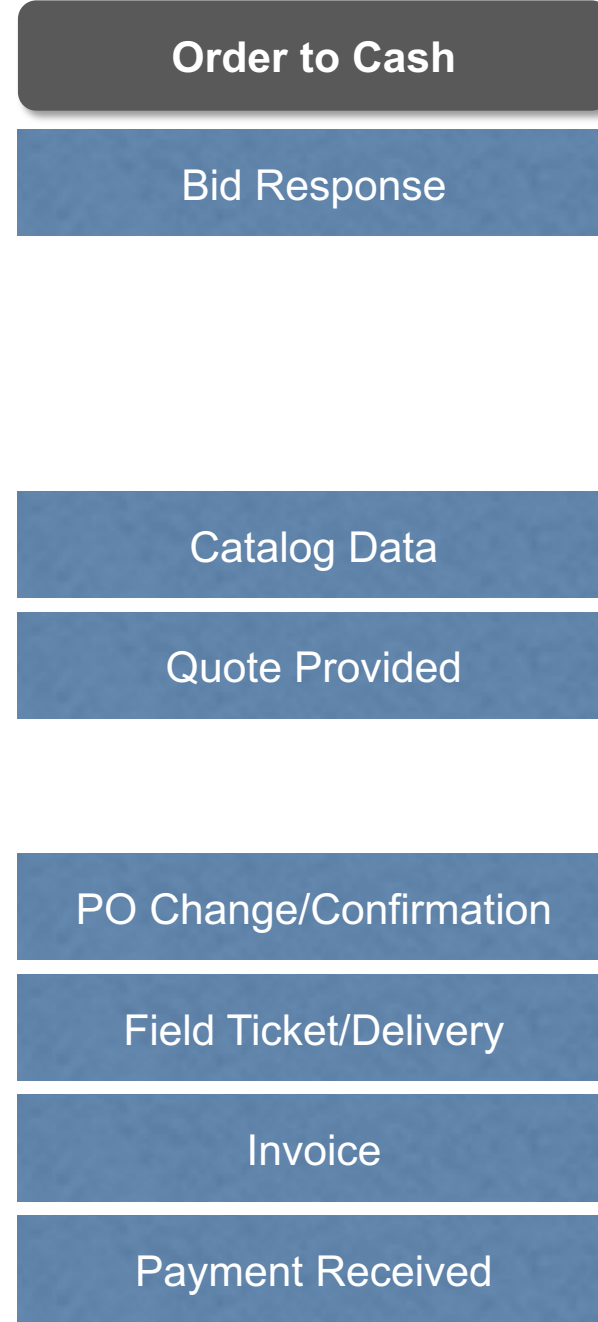
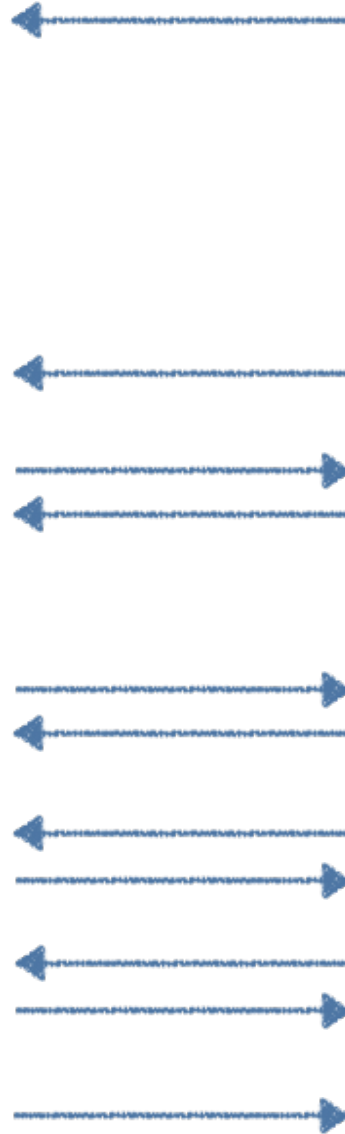
MARKETING

| | | | |
|--|-------------------------|--|------------------------------------|
| ASN | InventoryBalance | OrderStatusRequest | PipelineSchedule |
| BillOfLadingCreate | InventoryBalanceRequest | OrderStatusResponse | PriceSheet |
| BillOfLadingResponse | Invoice | PIDXCodeLists | Quote |
| CementingTemplate | InvoiceResponse | PIDXLib | QuoteNotification |
| CustodyTicket | OrderChange | PipelineNominationChange | QuoteRequest |
| FieldTicket | OrderCreate | PipelineNominationCreate | Receipt |
| FieldTicketResponse | OrderResponse | PipelineNominationResponse | RequestRequisitionReturn |
| Enhanced Price Sheet | | LoadingDeliveryReceipt | Downstream Product Codes |
| Price Sheet Mapping | | PIDX Bill Of Lading | Downstream Product Code Definition |
| Pre-Qualification Standard Data Model | | RightToLift | Downstream Company Codes |
| Supplier Registration and Prequalification Data Standard | | CODE Crude Oil Data Exchange | Downstream Terminal Listing |
| | | EDI GRADE-Gas Revenue Accounting Data Exchange | |

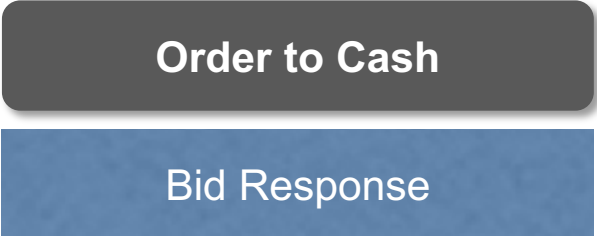
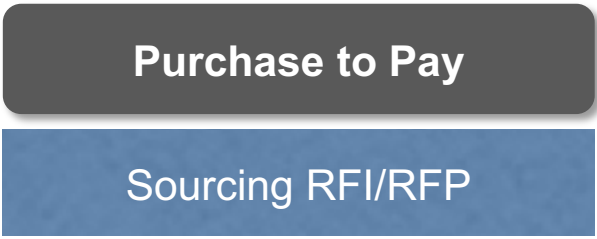
Digital Supply Chain



Operators



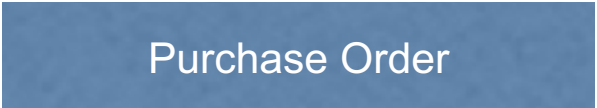
Suppliers



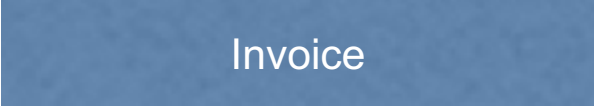
Pre-Award
(1 off)



**Post-Award
Master Data**
(1-100 off)



**Post-Award
Transaction
Data**
(10k-100k+ off)





Specify Emissions Ratings Requirements As Part of Sourcing



Individually Identify Contracted Items Emissions Ratings According to Manufacture Total and In-Use Rating



Identify Items Emissions and Quantity Used in Transactions

Manufacturing vs. Use Phase Emissions

Emissions for Manufacturing

Collective BOM of Emissions from Manufacturer

Emissions for Use

Calculated over Lifetime of Deployment

Electricity

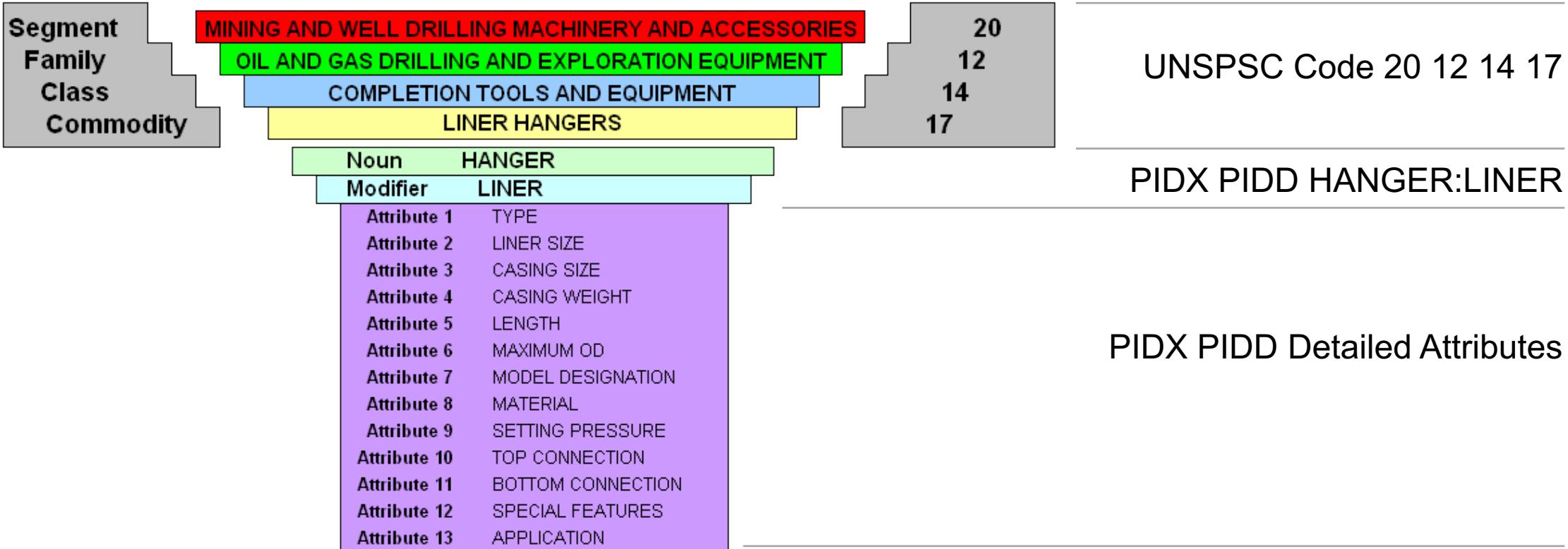
The CO2 emission factor used is **0.309 kge / kWh**, taken from BEIS (2018)*. This includes an allowance for the 7.8% of transmission/distribution losses on the national grid.

$$276 \text{ kWh} * 0.309 \text{ kge} = 85 \text{ kg (188 lbs) / year}$$

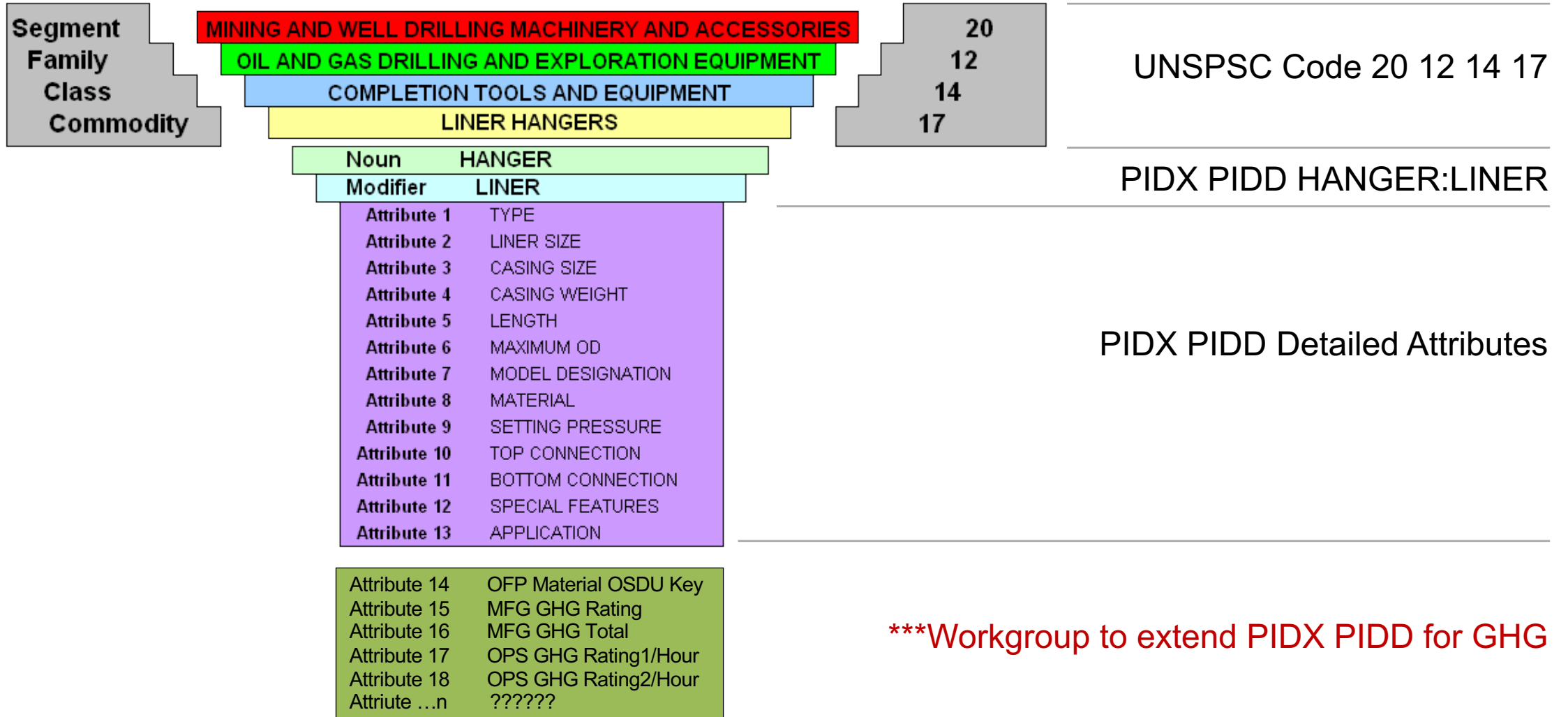


*BEIS (2018) 2018 Government GHG Conversion Factors for Company Reporting: Methodology paper for emission factors: final report
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/726911/2018_methodology_paper_FINAL_v01-00.pdf

Extending the PIDD Definitions for Materials and Services

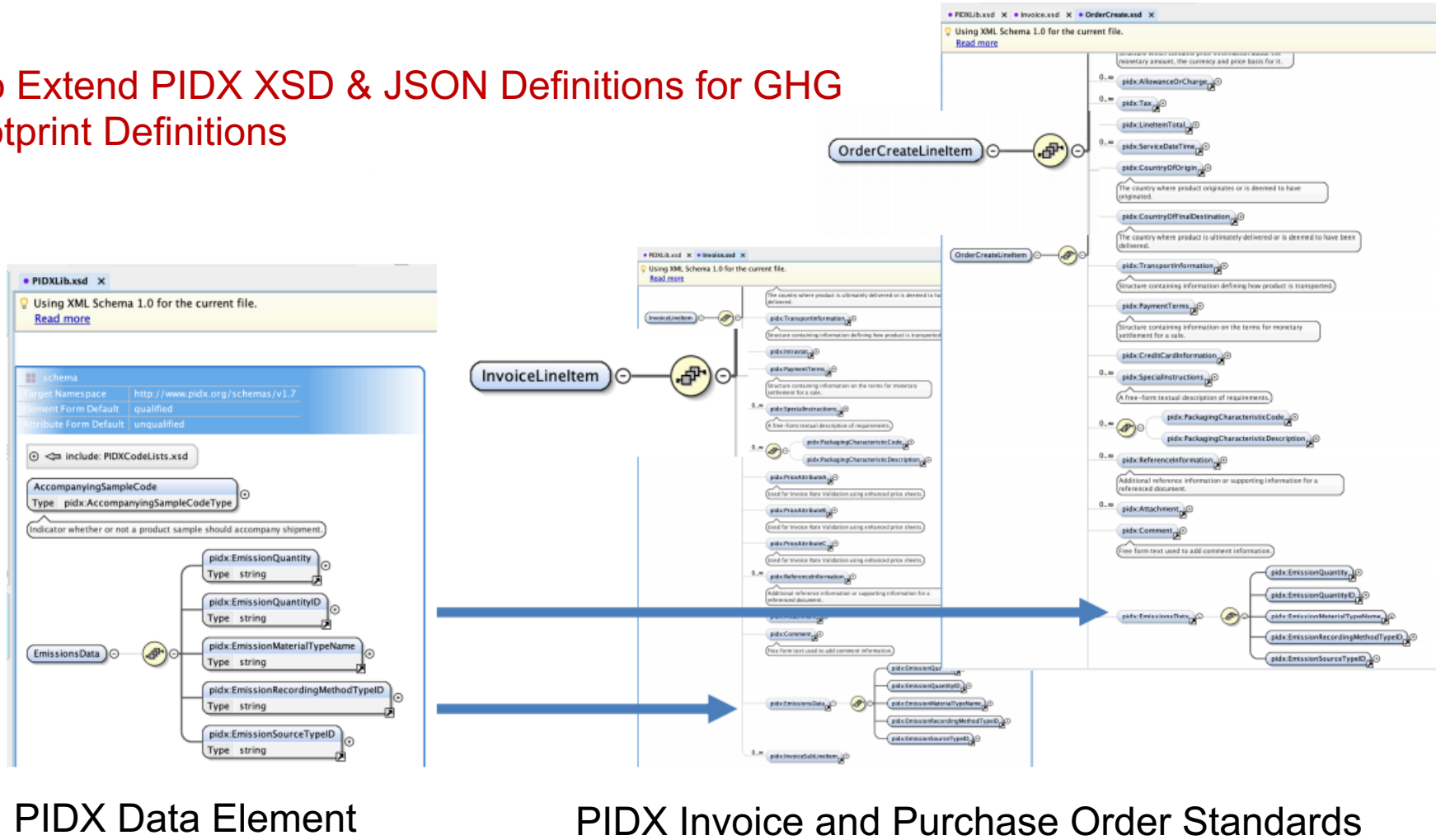


Extending the PIDD Definitions for Materials and Services



Extending the PIDX Transaction Standards to Include Emissions Data

***Workgroup to Extend PIDX XSD & JSON Definitions for GHG using Open Footprint Definitions





Emissions Transparency in the Supply Chain

24th February 2021

Chris Welsh

CEO OFS Portal/COO PIDX International