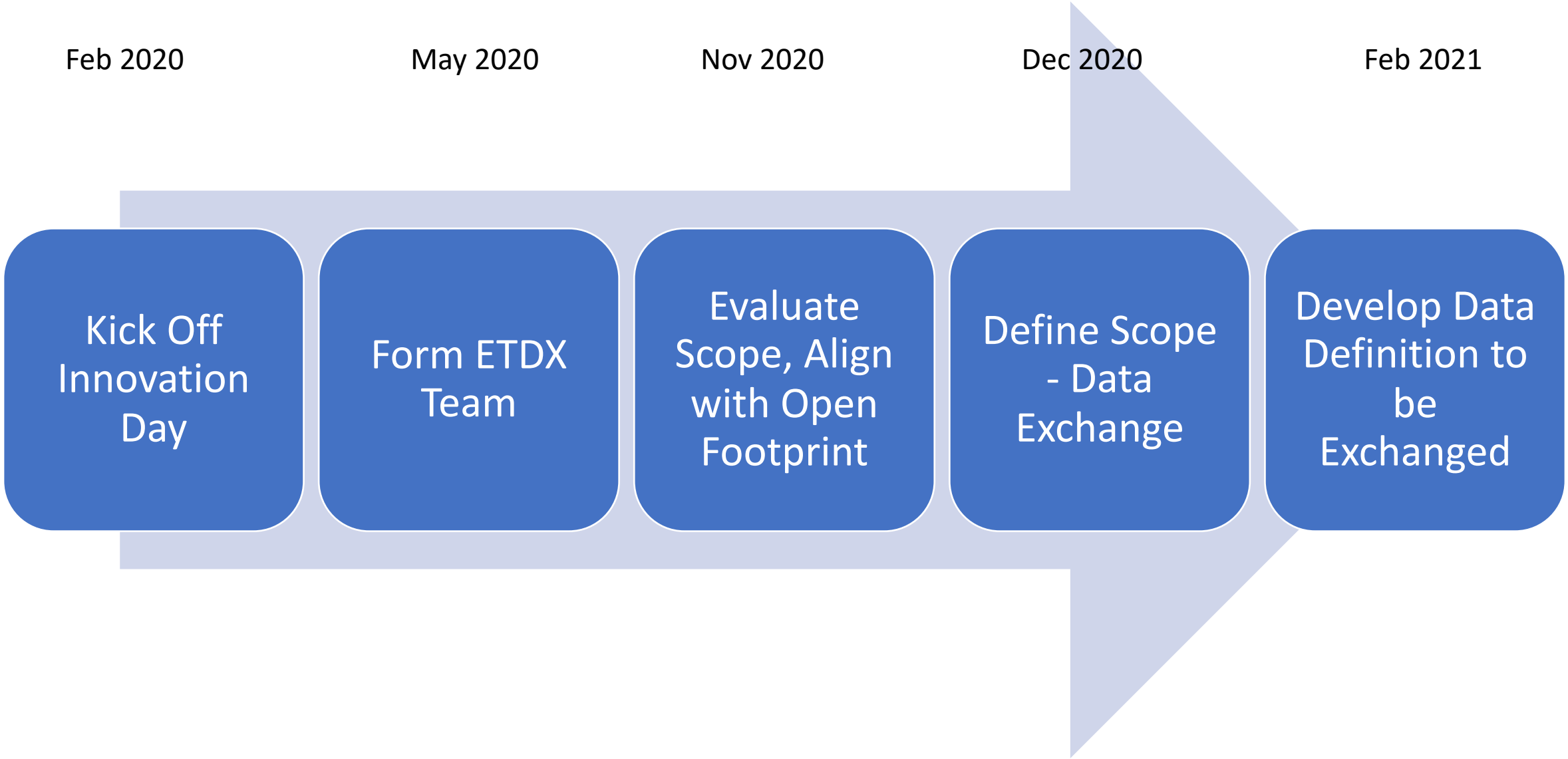
Production Release of the ETDX Scope 3 Emissions Reporting Standard

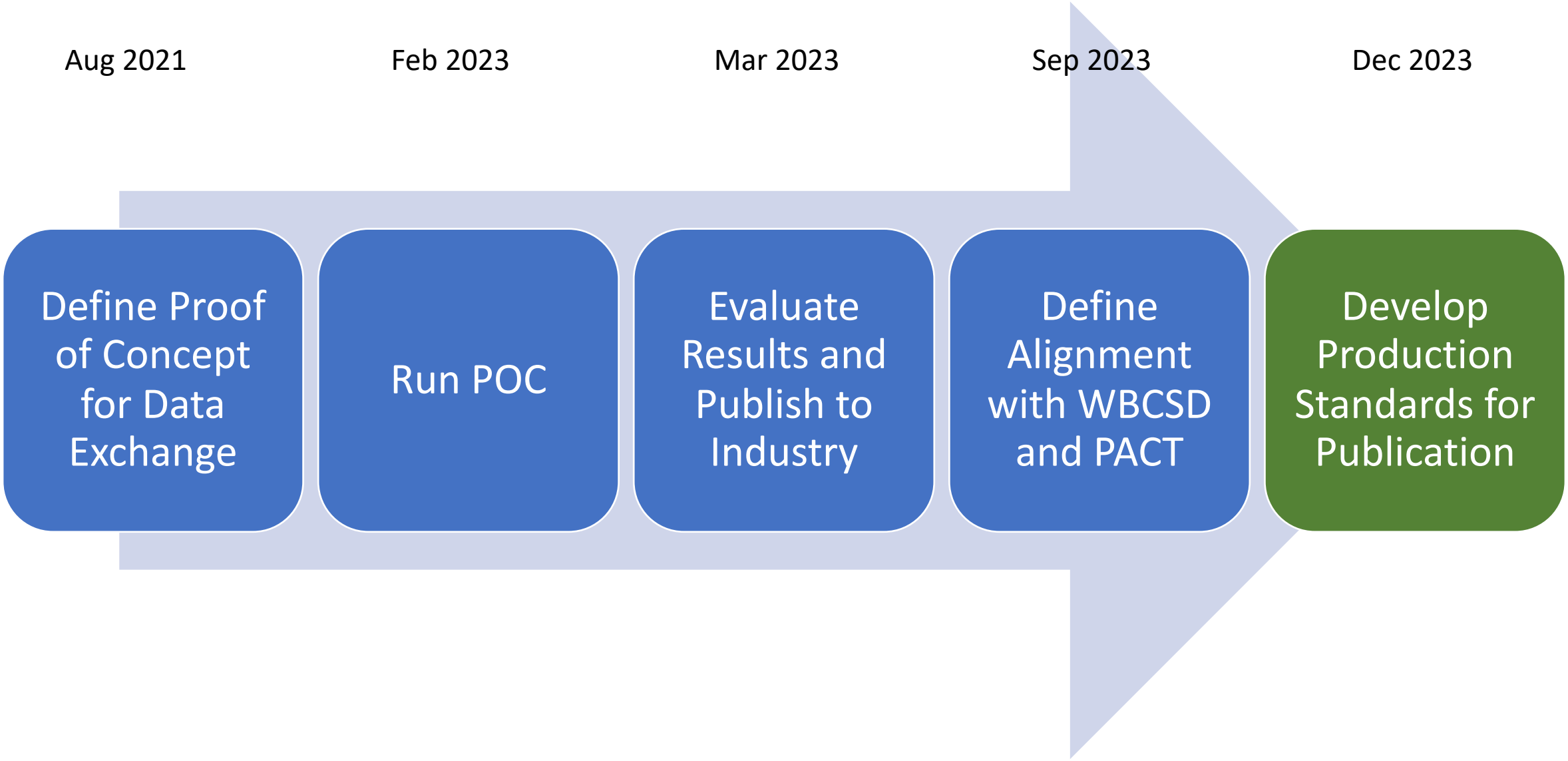
Chris Welsh – ETDX Workgroup Chair

START OF THE JOURNEY

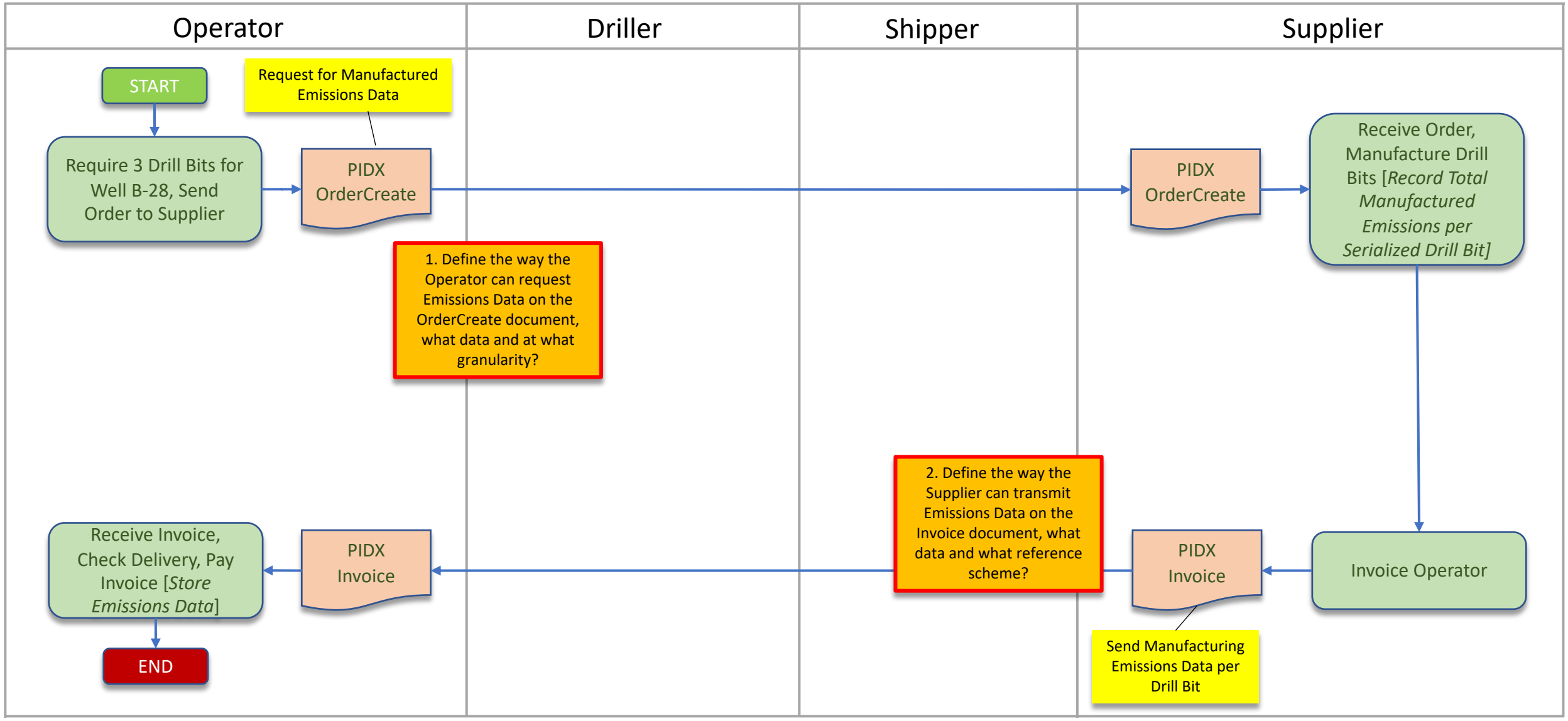


PROVE THE THEORY & DEFINE THE STANDARD

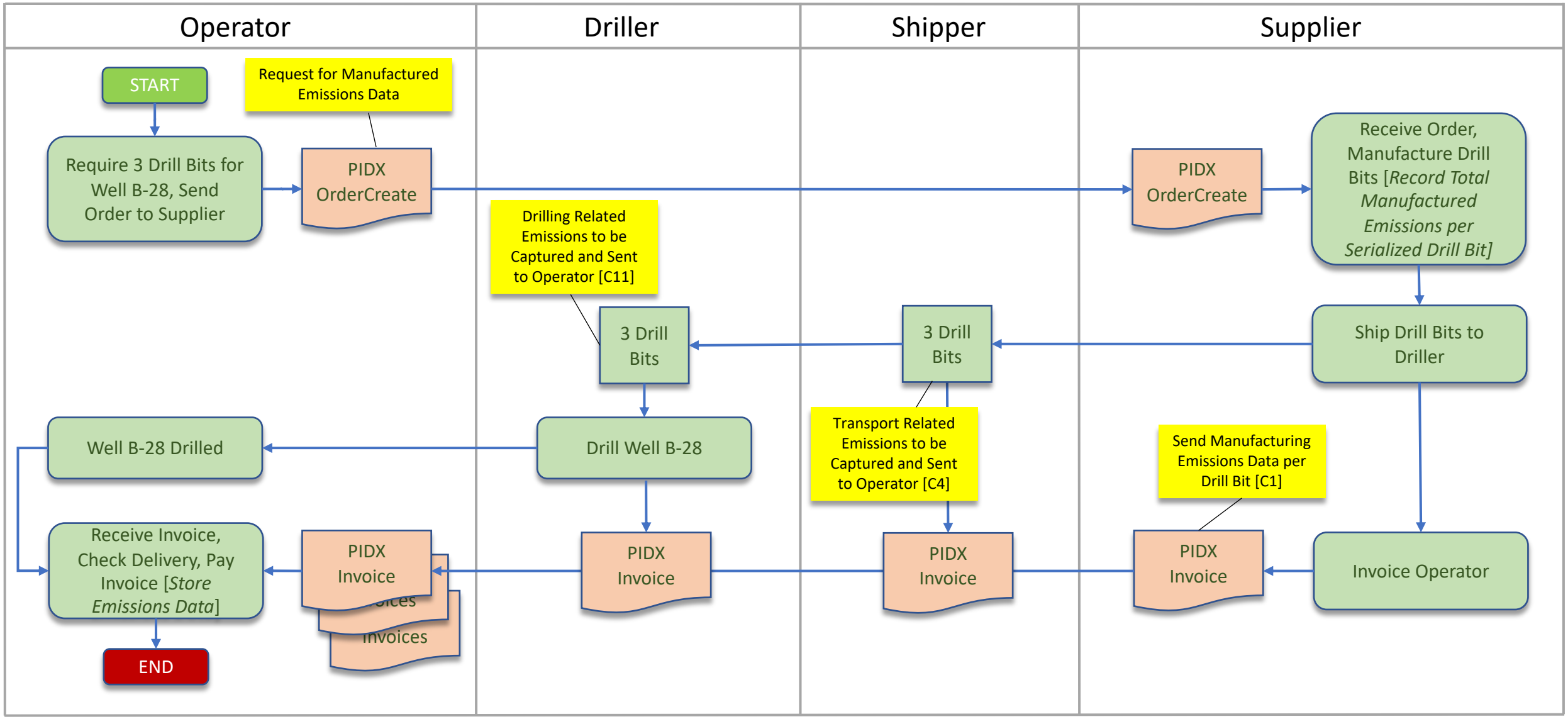
PIDX™ EMISSIONS TRANSPARENCY



PIDX DOCUMENT EXCHANGE



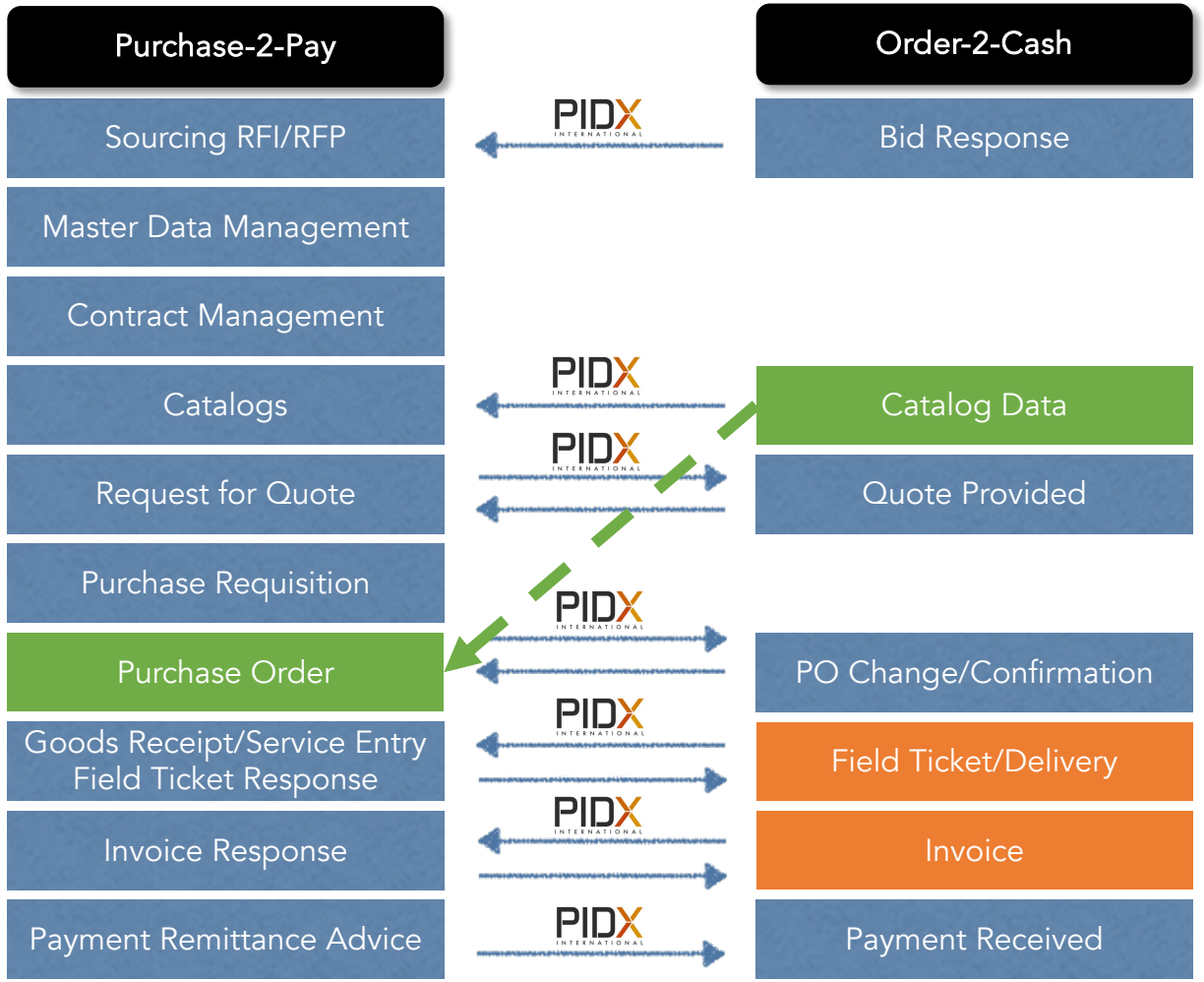
ART OF THE POSSIBLE



ORCHESTRATION OF SUPPLY CHAIN MESSAGES

PIDX EMISSIONS TRANSPARENCY

Operator (Buyer)



Supplier

POC BETWEEN OPERATOR AND SERVICE CO.

PIDX™ EMISSIONS TRANSPARENCY

Column C	UoM	Attribute #					Notes
		14	17	18	19	20	
		KG CO2e per KG of product	+/- %	Emission Methodology	Emission Verification & Validity	Scope & Category	
BARITE 4,1	not provided	0.180	84%	IPCC 2007 (AR4)	None	Scope 3 Category 1	
BENTONITE EXTENDER	not provided	0.279	89%	IPCC 2007 (AR4)	None	Scope 3 Category 1	
CALCIUM CARBONATE D151-10	not provided		N/A	GWP: IPCC 2013	According to ISO 14025:2006. PCR: Micronized stone from quarry-UN CPC 15200, 15320	Scope 3 Category 1	Proxy used: micronized limestone with selected granulometry lower than 200 µm.(CA150, CA40, CA150SMP)
LIME	20 KG & 400KG		N/A	EN15804:2012+A1:2013	According to ISO 14025. PCR 2012:01 Construction Products and Construction Services, Version 2.33, 2020-09-18. PCR 2012:01-Sub-PCR-H, Product category rules Cement and Building Lime, version 2.31, 2020-09-18	Scope 3 Category 1	
CLASS C CEMENT	not provided		N/A	GWP100, EN 15804. Version: August 2021	as per ISO 14025 and EN 15804+A2	Scope 3 Category 1	Proxy used: Class C acc. to API Spec 10A
CEMENT, CLASS A	not provided		N/A	U.S EPA TRACI v2.1 IPCC 2013 (AR 5)	According to ISO 14025:2006, ISO 21930:2017 (the core PCR) and the NSF product category rules for Portland, Blended, Masonry, Mortar and Plastic (Stucco) Cements (subcategory PCR)	Scope 3 Category 1	Proxy used: Portland Type I/II ASTM C150

Data source comments:

Cement Class A is supplier's data (single supplier - single plant - US location)
Cement Class C are supplier's data (single supplier - single plant - Germany location)
Lime is supplier's data (single supplier - single plant - Australia location)
Calcium Carbonate is supplier's data (single supplier - single plant - Italy location)
Product packagin not included in CO2e factor

Other findings:

List provided has line-items without UoM
List provided contain fluids (product blends) without fluid density reference

POC BETWEEN OPERATOR AND SERVICE CO.

POC Successful ☑

5000+ purchases
$14million+
Carbon footprint of around 3 million kg CO2e

POC BETWEEN OPERATOR AND SERVICE CO.

PIDX EMISSIONS TRANSPARENCY

Challenges

- Carbon footprint information is complex
  - UOMs
  - different facilities
- Need more Product Category Rules for O&G
- Sensitive information
- Some companies may not have the platform to exchange the info

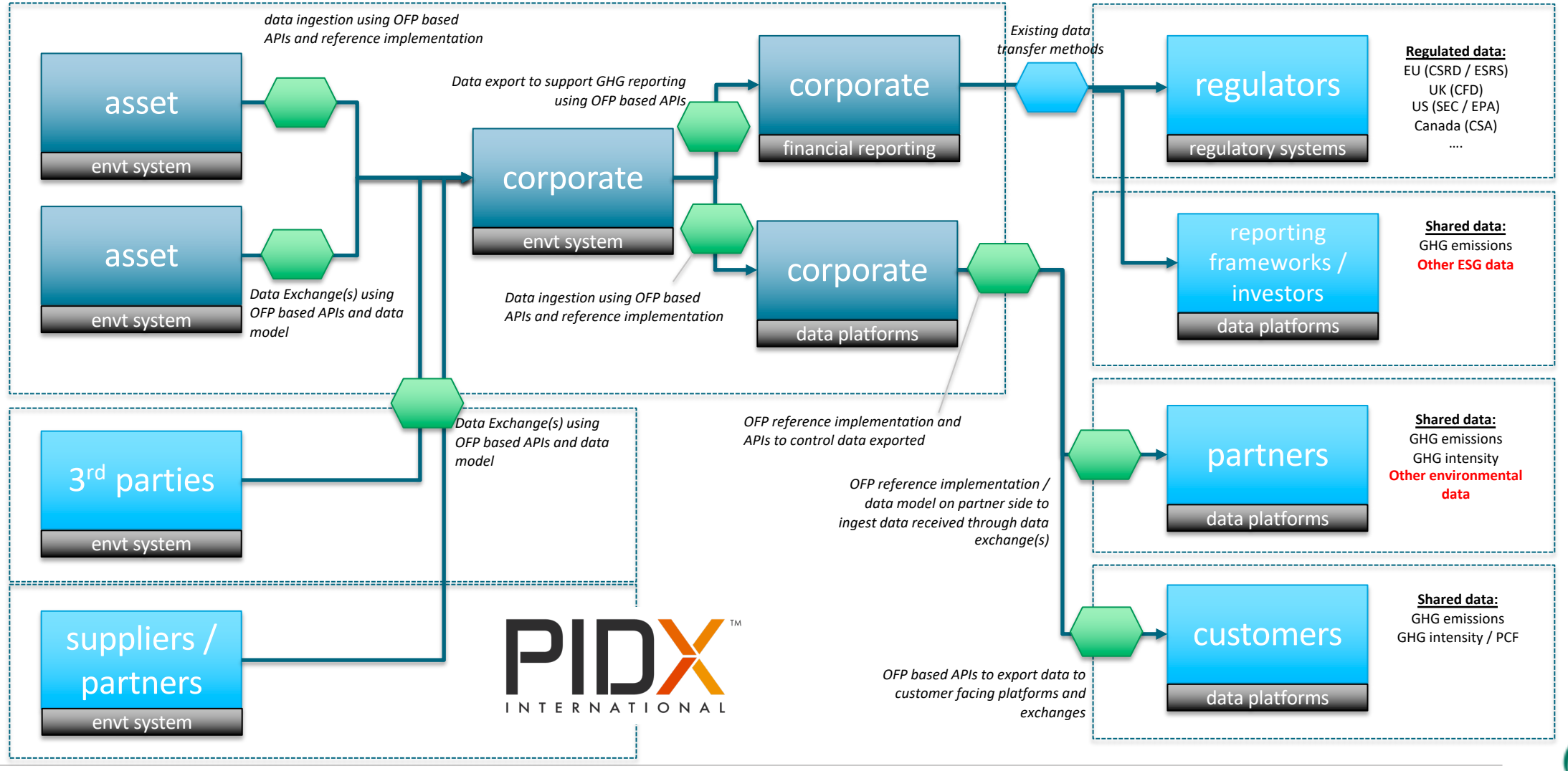
POC BETWEEN OPERATOR AND SERVICE CO.

Next steps

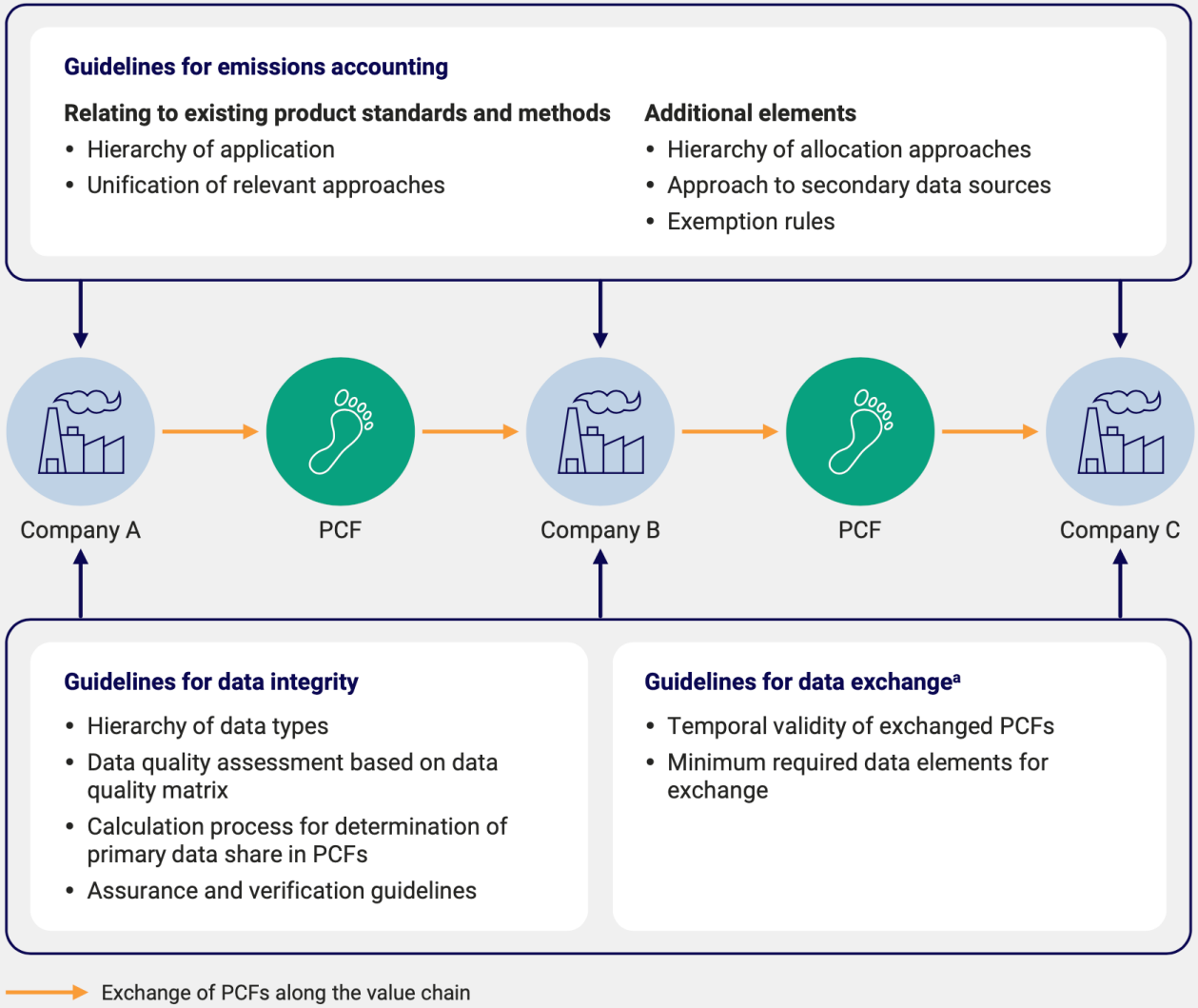
- Use draft PIDX schema to exchange data
- Involve other service companies and buyers
- Apply to other scope 3 categories
- Review compatibility with other standards – OFP, WBCSD, etc.

Crystalizing our use cases

OFP



REVIEW COMPATIBILITY WITH OTHER STANDARDS



a. Additional technological guidelines and mechanisms for standardized data exchange have been developed in parallel by the Pathfinder Network (e.g., technical data specifications, company onboarding mechanism, or governance structure for the extension of required data elements).

COMPATIBILITY WITH WBCSD PACT

PIDX EMISSIONS TRANSPARENCY

Technical Specifications for PCF Data Exchange (Version 2.0.0)

Living Document, 21 February 2023

This version:
https://wbcsd.github.io/tr/2023/data-exchange-protocol-20230221/

Latest published version:
http://wbcsd.github.io/data-exchange-protocol/v2/

Feedback:
public-dev@pathfinder.sine.dev with subject line "`[data-exchange-protocol] … message topic …`"

Editors:
Martin Pompéry (SINE Foundation) martin@sine.foundation
Cecilia Valeri (WBCSD) valeri@wbcsd.org

Abstract

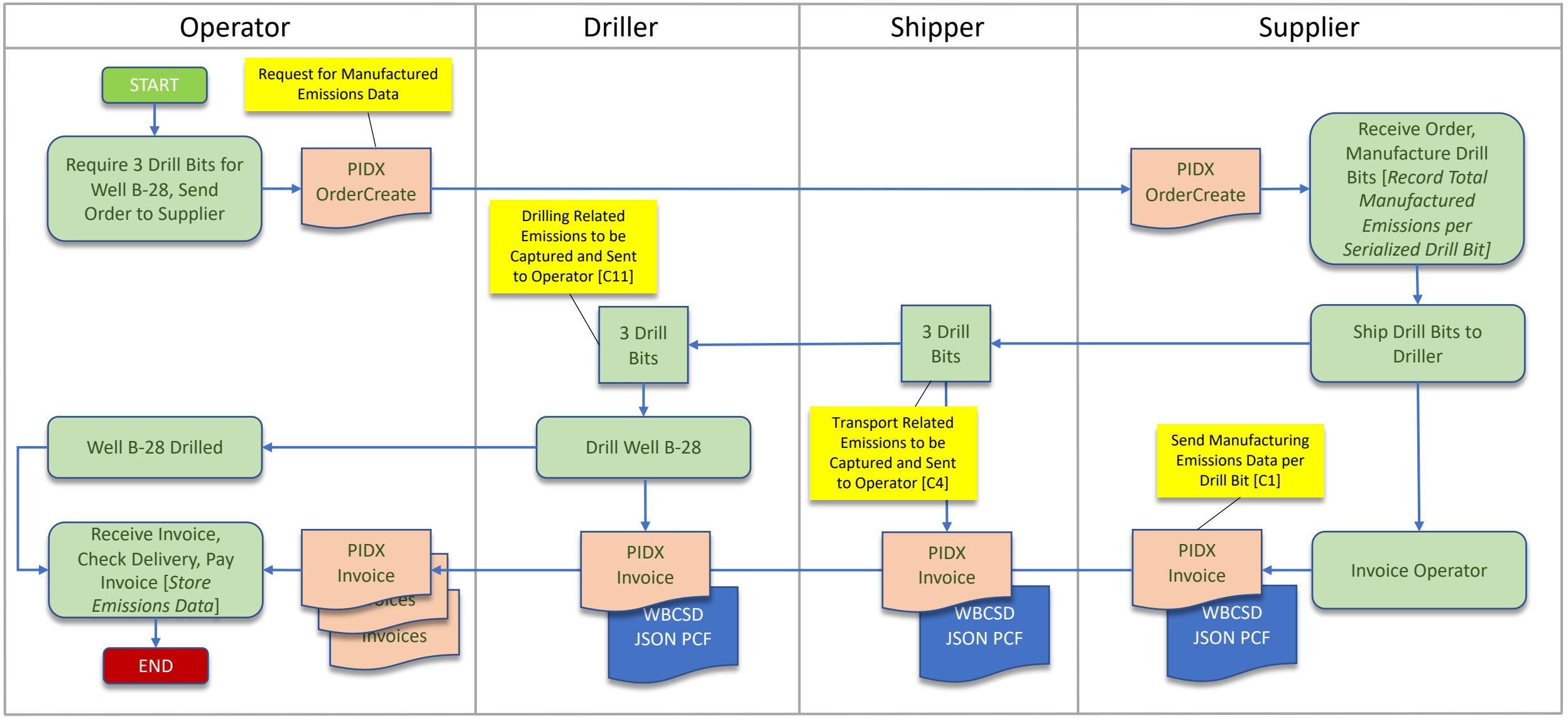
This document specifies a data model for GHG emission data at product level based on the Pathfinder Framework Version 2, and a protocol for interoperable exchange of GHG emission data at product level.

JSON Data Format

Exchange Using REST Web Services


```
{
  "data": [
    {
      "id": "d9be4477-e351-45b3-acd9-e1da05e6f633",
      "specVersion": "2.0.0",
      "version": 1,
      "created": "2022-05-22T21:47:32Z",
      "status": "Active",
      "companyName": "My Corp",
      "companyIds": [
        "urn:uuid:51131FB5-42A2-4267-A402-0ECFEFAD1619",
        "urn:epc:id:sgln:4063973.00000.8"
      ],
      "productDescription": "Cote'd Or Ethanol",
      "productIds": [
        "urn:gtin:4712345060507"
      ],
      "productCategoryCpc": "3342",
      "productNameCompany": "Green Ethanol",
      "comment": "",
      "pcf": {
        "declaredUnit": "liter",
        "unitaryProductAmount": "12.0",
        "pCfExcludingBiogenic": "0.0",
        "fossilGhgEmissions": "0.123",
        "fossilCarbonContent": "0.0",
        "biogenicCarbonContent": "0.0",
        "landManagementGhgEmissions": "0.01",
        "characterizationFactors": "AR5",
        "crossSectoralStandardsUsed": [
          "GHG Protocol Product standard"
        ],
        "productOrSectorSpecificRules": [
          {
            "operator": "EPD International",
            "ruleNames": [
              "ABC 2021"
            ]
          }
        ],
        "boundaryProcessesDescription": "End-of-life included",
        "referencePeriodStart": "2021-01-01T00:00:00Z",
        "referencePeriodEnd": "2022-01-01T00:00:00Z",
```

ART OF THE POSSIBLE - PRACTICAL



USING THE ATTACHMENT WITH WBCSD

Three formats of attachment available

- Inline Embedded Data
- Link to URN/URI
- Link to Envelope Attachment

Header Level or Line Level

- Choice on Aggregation at the Header Level

USING THE ATTACHMENT WITH WBCSD

Three formats of attachment available

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Link to Envelope Attachment

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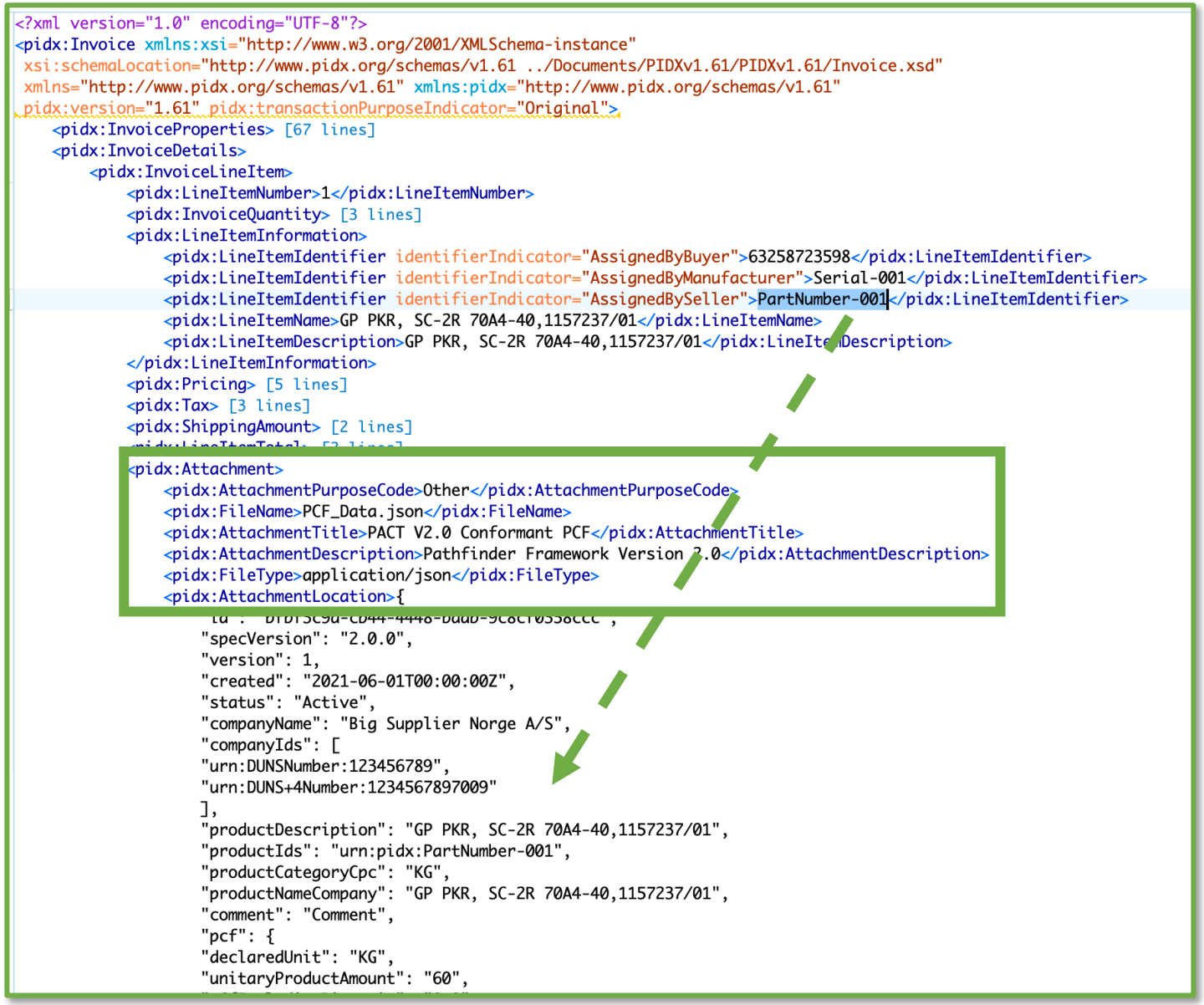
Choice on Aggregation at the Header Level



USING THE ATTACHMENT WITH WBCSD

Three formats of attachment available

- Inline Embedded Data
- Link to URN/URI
- Link to Envelope Attachment

```
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        <pidx:AttachmentPurposeCode>Other</pidx:AttachmentPurposeCode>
        <pidx:AttachmentLocation>https://www.pidx.org/api/displayPCF?pcfid=xyz123&amp;format=WBCSDV2.0</pidx:AttachmentLocation>
</pidx:Attachment>
```

Header Level or Line Level

- Choice on Aggregation at the Header Level

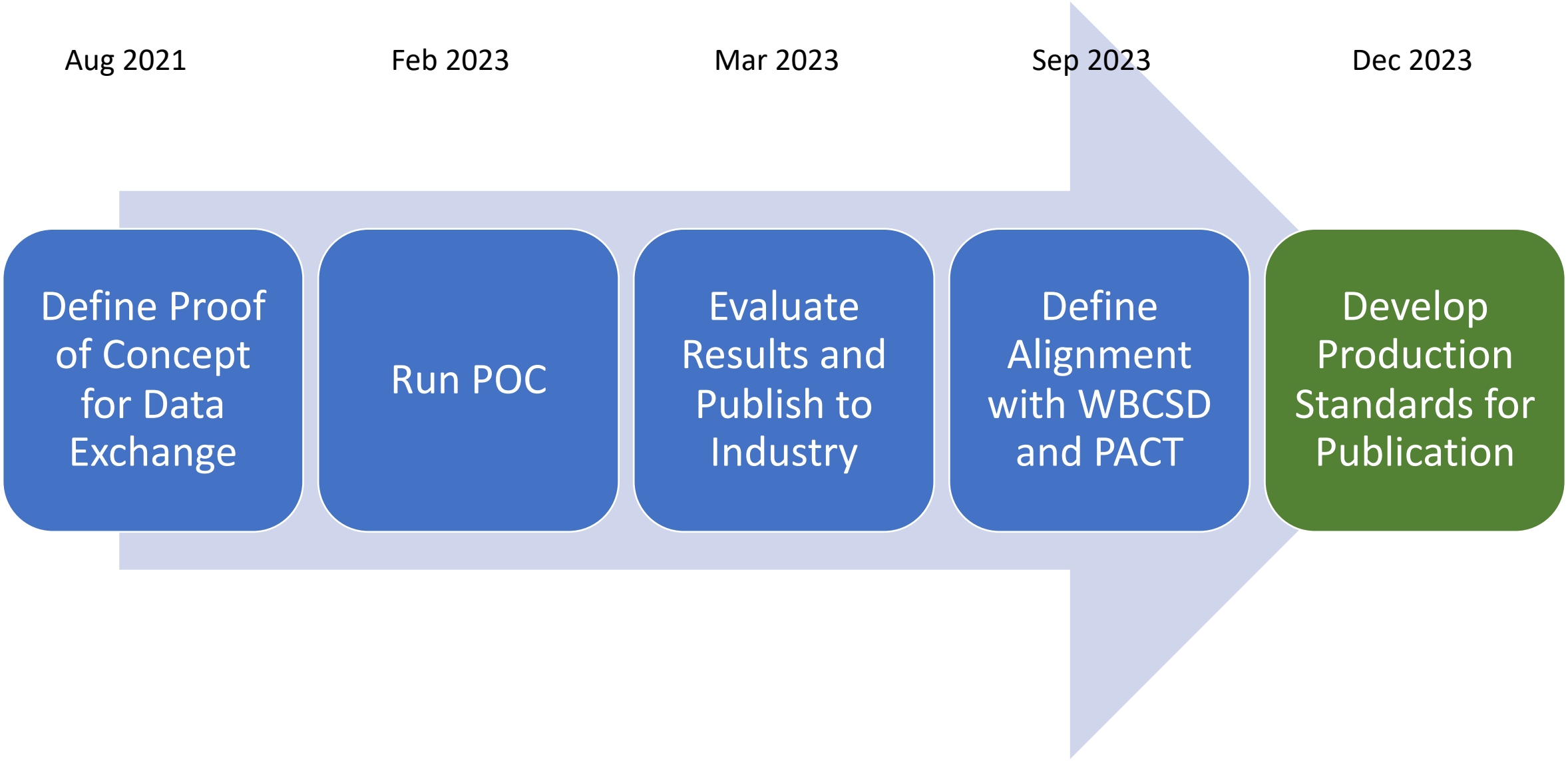
ADVANTAGES

PIDX™ EMISSIONS TRANSPARENCY

- Uses existing secure and trusted data transport ☑
- Industry partner IDs already defined ☑
- Uses an industry agnostic format ☑
- Supported by more industry companies ☑
- Users can test conformance to WBCSD format ☑
- Can be used in all versions of PIDX XML Standards ☑

PROVE THE THEORY & DEFINE THE STANDARD

PIDX™ EMISSIONS TRANSPARENCY



IMPLEMENTATION GUIDES

PIDX EMISSIONS TRANSPARENCY

PIDX INTERNATIONAL

Implementation Guideline
Petroleum Industry Data eXchange (PIDX)

PIDX Com.Pro.Serv. TASK GROUP

children	Name	Type	Use	Max
	AttachmentPurposeCode	**string**	**O**	**1**
	A code to indicate the purpose of the attachment.			
	Template			
	Other			
	FileName	**string**	**O**	**1**
	The name of the file in an attachment.			
	AttachmentTitle	**string**	**O**	**1**
	The title of the attachment.			
	AttachmentDescription			
	A free-form textual description of the attachment.			
	FileType			
	The type of the file in an attachment.			
	AttachmentLocation			
	The location of the attachment, such as a URL.			
parent(s)	InvoiceResponseLineItem			
	InvoiceResponseProperties			

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        "version": 1,
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        "status": "Active",
        "companyName": "Big Supplier Norge A/S",
        "companyIds": [
        "urn:DUNSNumber:123456789",
        "urn:DUNS+4Number:1234567897009"
        ],
```

INDUSTRY MASTER DATA

PIDX EMISSIONS TRANSPARENCY

Challenges

- Carbon footprint information is complex
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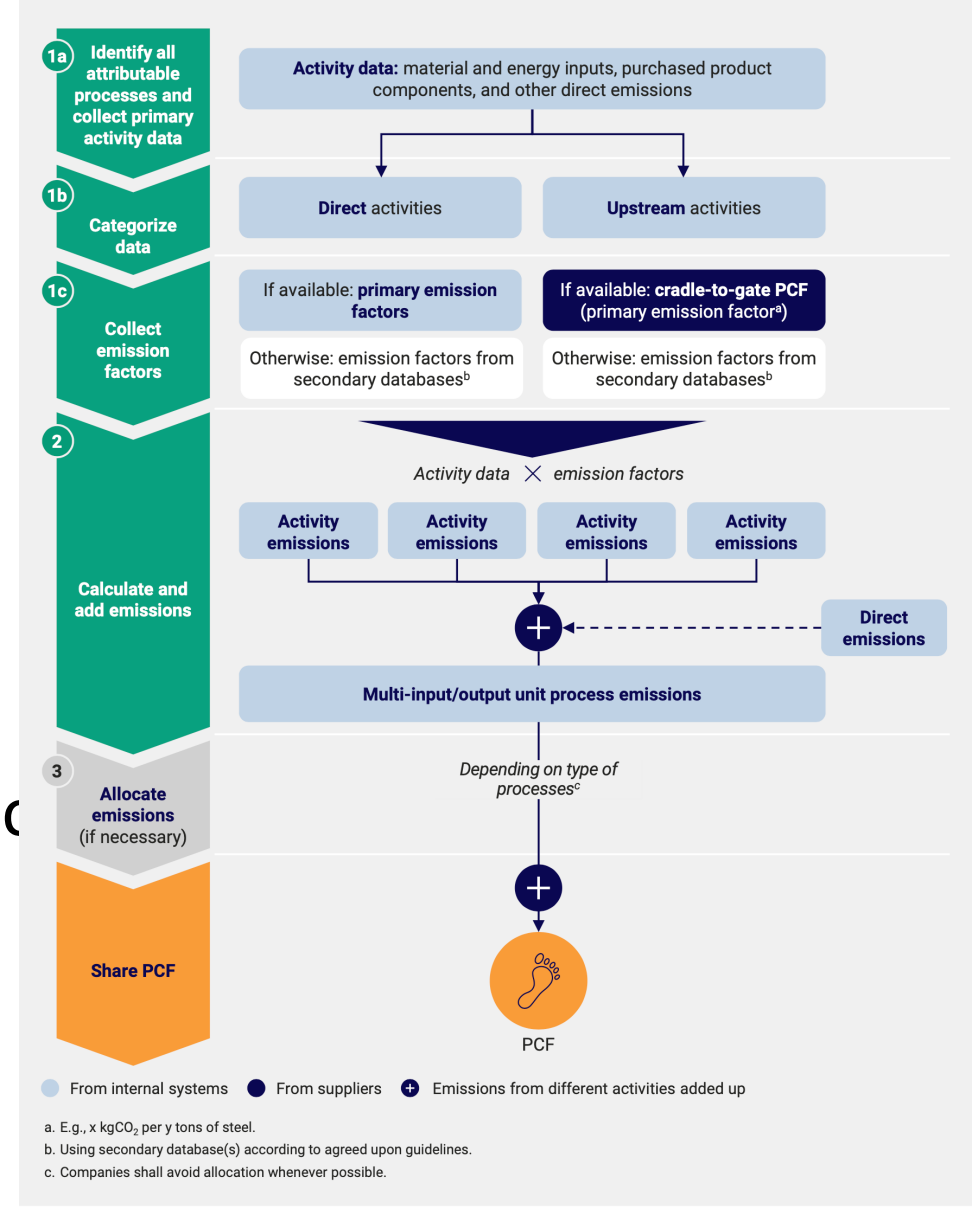

INDUSTRY PCF / PCR REPORISTORY

PIDX™
EMISSIONS TRANSPARENCY

PIDX™
INTERNATIONAL

PIDX Downstream Product Codes

PIDX, Inc Document ID: 04-101-15-45-2010
Version: V
Filename:PIDX-ProductCodes: 09_29_2022.xlsx

Code 1	Product definition 2	Description 3	Cetane/octane 4	genated/rbob type 5	Oxygenate percent % v 6	ditirized 7	Rvp percentage 8	gulatory oxy % 9	10	nenible/ssere (f/s) 11	ers 12	Sulphur content 13	n	1	2	3	4	5	6	7	8	9	10	11	M12	Comments 14	e code 15	Requester 16	Company 17	Date code assigned 18
A20	AVIATION GASOLINE			N		Y																				100/130 LOW LEAD				31-Dec-92
A21	Unbranded Aviation Gasoline 100/LL	AVIATION GASOLINE																								AVIATION GASOLINE		BRENT BOWDEN	SHELL	30-Apr-19
A25	AVIATION GASOLINE			N		Y																				100/130 HIGH LEAD				31-Dec-92
B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83		A	79-83	N	7.0-9.5		N	F	N		3	N	N	N	N	N	N	N	N	N	N	N	N	Ed79-83% ETHANOL/21-17% CaRFG3 CARB E85 fuel Class 2		STEVE WOOD	PHILLIPS 66	26-Mar-19
B01	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	Y				F	N		3													Ed85 85% ETHANOL/15% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	20-Jul-04
B02	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A	80	Y				F	N		3													Ed80 80% ETHANOL/20% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	20-Jul-04
B03	FUEL ETHANOL	ALTERNATIVE FUEL - Ed75		A	75	Y				F	N		3													Ed75 75% ETHANOL/25% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	20-Jul-04
B04	FUEL ETHANOL	ALTERNATIVE FUEL - Ed70		A	70	Y				F	N		3													Ed70 70% ETHANOL/30% REGULAR GASOLINE		HERMAN WISNESKI	ST. OF MINNESOTA	6-Jan-06
B05	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	Y				F	N		3													Ed85 85% ETHANOL/15% SUBGRADE 84 GASOLINE		MARGARET WARD	MAGELLAN	5-Dec-08
B06	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A	80	Y				F	N		3													Ed80 80% ETHANOL/20% SUBGRADE 84 GASOLINE		MARGARET WARD	MAGELLAN	5-Dec-08
B07	FUEL ETHANOL	ALTERNATIVE FUEL - Ed75		A	75	Y				F	N		3													Ed75 75% ETHANOL/25% SUBGRADE 84 GASOLINE		MARGARET WARD	MAGELLAN	5-Dec-08
B08	FUEL ETHANOL	ALTERNATIVE FUEL - Ed30		A	30	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed30 30% ETHANOL/70% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	4-May-10
B09	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed85 85% ETHANOL/15% PREMIUM GASOLINE		MARGARET WARD	MAGELLAN	8-Jun-10
B12	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed85 85% ETHANOL/15% CBOB-SUBGRADE CG 83		JEAN PICKETT	MAGELLAN	16-Sep-10
B13	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A	80	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed80 80% ETHANOL/20% CBOB-SUBGRADE CG 83		JEAN PICKETT	MAGELLAN	16-Sep-10
B14	FUEL ETHANOL	ALTERNATIVE FUEL - Ed75		A	75	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed75 75% ETHANOL/25% CBOB-SUBGRADE CG 83		JEAN PICKETT	MAGELLAN	16-Sep-10
B15	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A	85	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed85 85% ETHANOL/15% RBOB REG 85		JEAN PICKETT	MAGELLAN	16-Sep-10
B16	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A	80	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed80 80% ETHANOL/20% RBOB REG 85		JEAN PICKETT	MAGELLAN	16-Sep-10
B17	FUEL ETHANOL	ALTERNATIVE FUEL - Ed75		A	75	Y			N	F	N		3	N	N	N	N	N	N	N	Y	N	N	N	N	Ed75 75% ETHANOL/25% RBOB REG 85		JEAN PICKETT	MAGELLAN	16-Sep-10

INDUSTRY PCF / PCR REPORISTORY

PIDX™ EMISSIONS TRANSPARENCY

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PIDX™

EMISSIONS TRANSPARENCY

Please get involved!

Questions or Comments?