Standards adoption is an initiative from PIDX Innovation Day 2020

- New Work Group (WG 05) initiated in 2021
- Charter approved by Standards & Guidelines Committee June 25, 2021
- Approved by PIDX Executive Committee August 18, 2021
- Aparna Kakani nominated and elected as Chair January 19, 2022
  (confirmed at Annual Member Meeting 2022)
- Kickoff meeting on February 17, 2022
CHARTER

The Standards Adoption Council has been established to develop an adoption strategy at the time that a standards project is proposed, including (1) defining real-world use cases the standards seek to solve, (2) setting clear KPIs around standards adoption success, and (3) implementing proof of concepts (POCs) with Project Team participants prior to the voting and approval processes for standardization.
STANDARDS ADOPTION COUNCIL UPDATE

ADVANCE ADOPTION AND IMPLEMENTATION

1. Understand the current standards adoption
2. Understand the real use case and value for a standard definition
3. Get involved at the standard concept definition phase
4. Set KPIs when a standard is published
5. Understand the usage and adoption for a defined standard
status & actions

- Building into the standards adoption itself
- Survey: who is using PIDX standards and how?
- Testing of implementation with POC from PIDX Emissions Transparency Data Exchange (ETDX)
  -- PIDX v.1.7 (draft)
GENERAL INFORMATION

• 13 Questions: Developed by Standards Adoption Council, PIDX Downstream, S&G, and Executive Committee
• Survey Sent September 1, 2022
• Closed September 30, 2022 (4 Weeks)
• Sent to 20 PIDX Member Companies
• 10 Replies to Survey (50%)
• No Responses are Identifiable to a Specific Company
PIDX SURVEY—QUESTION 1

Do you use PIDX Standards as a

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer/Operator</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Seller/Supplier</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Network Provider</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Wholesaler</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Terminal Operator</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other (Please Specify)</td>
<td>2</td>
<td>• Third-Party Vendor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consulting Organization</td>
</tr>
</tbody>
</table>
PIDX SURVEY—QUESTION 2

Which of the following PIDX Standards do you use? (check all that apply)

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Shipping Notice</td>
<td>3</td>
</tr>
<tr>
<td>Bill of Lading Create/Response</td>
<td>1</td>
</tr>
<tr>
<td>Right to Lift</td>
<td>2</td>
</tr>
<tr>
<td>Load Delivery Receipt</td>
<td>1</td>
</tr>
<tr>
<td>Cementing Template</td>
<td>0</td>
</tr>
<tr>
<td>Custody Ticket</td>
<td>1</td>
</tr>
<tr>
<td>Field Ticket/FT Response</td>
<td>5</td>
</tr>
<tr>
<td>Inventory Balance/Balance Request</td>
<td>0</td>
</tr>
<tr>
<td>Invoice/Invoice Response</td>
<td>7</td>
</tr>
<tr>
<td>Order Create/Change/Response</td>
<td>6</td>
</tr>
<tr>
<td>Price Sheet</td>
<td>3</td>
</tr>
<tr>
<td>Quote/Notification/Request</td>
<td>1</td>
</tr>
<tr>
<td>Request Requisition Return</td>
<td>0</td>
</tr>
<tr>
<td>PDXRv1 (TABSv1)</td>
<td>1</td>
</tr>
<tr>
<td>PDXRv4 (TABSv4)</td>
<td>1</td>
</tr>
<tr>
<td>PIDXv5xx</td>
<td>2</td>
</tr>
<tr>
<td>PDXBv2 (PetroExv2_)</td>
<td>1</td>
</tr>
<tr>
<td>PDXBv3 (PetroExv3)</td>
<td>1</td>
</tr>
</tbody>
</table>
What version(s) of the standard(s) do you use? (check all that apply)

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0 PIDX Schemas</td>
<td>3</td>
</tr>
<tr>
<td>V1.03 PIDX Schemas</td>
<td>0</td>
</tr>
<tr>
<td>V1.21 PIDX Schemas</td>
<td>2</td>
</tr>
<tr>
<td>V1.31 PIDX Schemas</td>
<td>0</td>
</tr>
<tr>
<td>V1.41 PIDX Schemas</td>
<td>0</td>
</tr>
<tr>
<td>V1.51 PIDX Schemas</td>
<td>2</td>
</tr>
<tr>
<td>V1.61 PIDX Schemas</td>
<td>1</td>
</tr>
<tr>
<td>V1.62 PIDX Schemas</td>
<td>4</td>
</tr>
<tr>
<td>PIDX Downstream V.3.0</td>
<td>1</td>
</tr>
<tr>
<td>PIDX Downstream V.4.0</td>
<td>1</td>
</tr>
<tr>
<td>PIDX Downstream V.5.01.00</td>
<td>1</td>
</tr>
<tr>
<td>PIDX Downstream V.5.01.01</td>
<td>1</td>
</tr>
<tr>
<td>PIDX Downstream V.5.02.00</td>
<td>0</td>
</tr>
<tr>
<td>PIDX Downstream V.5.02.01</td>
<td>0</td>
</tr>
<tr>
<td>PIDX Downstream V.5.02.02</td>
<td>1</td>
</tr>
<tr>
<td>EDI Standards</td>
<td>1</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>2</td>
</tr>
</tbody>
</table>
PIDX SURVEY—QUESTION 4

How do you access PIDX standards? (check all that apply)

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Download individual standards from pidx.org</td>
<td>3</td>
</tr>
<tr>
<td>Download schema bundle from pidx.org</td>
<td>6</td>
</tr>
<tr>
<td>Download Downstream Codes from pidx.org</td>
<td>1</td>
</tr>
<tr>
<td>Use the Petroleum Industry Data Dictionary (PIDD)</td>
<td>1</td>
</tr>
<tr>
<td>Other (Please Specify)</td>
<td>0</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>2</td>
</tr>
</tbody>
</table>

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Do you produce your own PIDX documents, or outsource to other third-party vendors?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce my own</td>
<td>8</td>
</tr>
<tr>
<td>Outsource to third-party vendors</td>
<td>2</td>
</tr>
<tr>
<td>If using a third-party vendor, which do you use? (please specify)</td>
<td>0</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: More than one option could be selected for this question. Some of the respondents who chose “produce my own” also selected “outsource to third-party vendors.”
PIDX SURVEY—QUESTION 6

What are the benefits of using the PIDX standards for buyers/operators, network providers, sellers/suppliers, wholesalers, terminal operators, etc? (Check all that apply)

Answer Choices
- Consistent and standardized messaging: 8
- Ease of use: 4
- Quick and fast implementation: 7
- Backward compatibility: 5
- Interoperability between various partners: 8
- Minimize adoption cost: 7
- Scaling the solution: 7
- Other (please specify): 0

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Are there any areas where PIDX could help develop a standard for the industry?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>If yes, please specify</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
| If yes, please specify | 2 | • REST API and JSON standards  
|                 |           | • Resource management of loading terminals – availability, time slot booking |

Skipped Question 2
**PIDX SURVEY—QUESTION 8**

### How can existing PIDX standards be improved? (check all that apply)

- Ease of access/improved navigation on pidx.org: 22.22%
- Descriptions or guidance on what the standards are used for (process flow): 66.67%
- More usage guidelines: 55.56%
- Training or webinars on standards: 33.33%
- Other (Please specify): 33.33%
- More use cases: 22.22%

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>If yes, please specify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of access/improved navigation on pidx.org</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Descriptions or guidance on what the standards are</td>
<td>6</td>
<td>process flow</td>
</tr>
<tr>
<td>used for (process flow)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More usage guidelines</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>More use cases</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Training or webinars on standards</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>2</td>
<td>Deprecate old versions and field options</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>1</td>
<td>CPDC</td>
</tr>
</tbody>
</table>

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If you indicated corrections are required to the standards, please provide detail below:

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answered</td>
<td>1</td>
<td>• It is difficult to find older schemas on the site. Descriptions/process guidelines for some standards are nonexistent. There is no training available. Webinars (if you could call them that) seem to be limited to taking place during conferences (which typically have a theme and don't really address functional issues).</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
**PIDX SURVEY—QUESTION 10**

What are the standards used for your B2B transactions data format?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>Other XML (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UBL</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>PIDX</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>JSON</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Other XML (please specify)</td>
<td>2</td>
<td>• v5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• xCBL</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note: More than one option could be selected for this question. Some of the respondents who chose “PIDX” also selected other options as well.
PIDX SURVEY—QUESTION 11

Are you aware of any blockchain implementations in the Energy Industry?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
| If yes, what are the benefits for operators, providers, and/or suppliers? | 2 | - Still in the process of formulating the full range of benefits  
                                            - one source of truth, accessibility  
| Skipped Question | 1         |          |
Are you aware that PIDX is actively developing emissions reporting standards? To learn more about the PIDX Emissions Transparency Data Exchange, visit https://pidx.org/teams/join-a-pidx-team/

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>Yes</td>
<td>6</td>
</tr>
<tr>
<td>Skipped Question</td>
<td>2</td>
</tr>
</tbody>
</table>
PIDX SURVEY—QUESTION 13

In which regions are you using PIDX standards? (check all that apply)

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific</td>
<td>3</td>
</tr>
<tr>
<td>Europe</td>
<td>7</td>
</tr>
<tr>
<td>North America</td>
<td>10</td>
</tr>
<tr>
<td>Latin America</td>
<td>4</td>
</tr>
<tr>
<td>Australia</td>
<td>3</td>
</tr>
<tr>
<td>Middle East</td>
<td>3</td>
</tr>
</tbody>
</table>
CONCLUSION

- No input from Buyer/Operator, Wholesaler, Terminal Operator – how do we reach these audiences?
- Explore retiring standards that are no longer in use
- Explore conversion of XML standards to JSON/REST API
- Look at new areas and topics for standardization
- Outreach efforts to evaluate webinars and training to promote the use of PIDX standards
- Expanding our reach in Australia, Middle East, Asia-Pacific
NEXT STEPS

- Brainstorm Plan for PIDX Website Metrics
- Mandatory Fields to track:
  - Name, company, email address
- Download made available via email instead from the website
QUESTIONS?