How PIDX Can Remain Relevant

For more than 30 years, PIDX has developed and promoted B2B e-Commerce standards for the oil and gas industry, but it needs to change.

July 16, 2018
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The Petroleum Industry Data eXchange, Inc. ("PIDX International") defines itself as "a global forum for delivering the process, information and technology standards that facilitates seamless, efficient electronic business within the oil and gas industry and its trading community."[i] Over the years, PIDX has developed a set of electronic document standards for B2B e-commerce in the Oil and Gas industry. These standards have been adopted primarily by the larger industry players in the US and Canada. Global adoption, however, has been limited to a few multi-national oil companies based in North America.

In the past decade or so, PIDX has missed opportunities to use its influence in the development and adoption of e-commerce standards globally. CFDI in Mexico and PEPPOL in Europe are two examples where PIDX leadership did not enter the conversation until it was too late to have an impact. As a result, PIDX standards are being relegated to a North American outlier, and global oil & gas corporations are forced to deal with multiple electronic commerce standards around the world. Blockchain technology is about to further complicate the prospect of B2B e-commerce interoperability in oil & gas.

So can PIDX stay relevant in an environment with multiple government-mandated e-commerce standards? Can PIDX as an organization add value to oil & gas B2B e-commerce? Has PIDX become a dinosaur whose time has passed?

A Short History of PIDX

In 1987, the American Petroleum Institute (API) created a standards committee called the Petroleum Industry Data eXchange, or PIDX, to develop e-commerce standards for the US oil and gas industry. Originally, the PIDX standards were adaptations of ASC X12 EDI transaction sets, some of which are still in use today.

In 2002, PIDX published a set of standard XML schemas – PIDX V1.0. 16 years later, these are the schemas still used by the vast majority of PIDX adopters.

In 2010, API decided to exit the e-commerce standards business and focus on industry lobbying. An independent 501(c)(3) corporation called PIDX, Inc. (aka PIDX International) was formed by members of the PIDX committee. By 2014, ownership of all API PIDX standards and other related intellectual property had been transferred to PIDX, Inc.[ii]

Since 2014, PIDX has functioned as an independent non-profit standards body, operated primarily by volunteers from member companies, with only one or two paid employees.

PIDX: An Organization Stuck in the Past

While PIDX technically adopted an updated set of standards (v1.61) in 2015, they changed very little from the originals. Because of this perceived lack of value, PIDX users have been slow to adopt the new version and still operate primarily on the original 2002 schemas.

Since its adoption of XML technology in 2002, PIDX has resisted expanding standards to increase adoption. JavaScript Object Notation (JSON) and Web Services are but two of the technologies that have been ignored by the PIDX organization, even though nearly all PIDX members use these technologies elsewhere within their companies. PIDX is only now beginning to evaluate blockchain technology and where it might fit into the PIDX standards & guidelines.

In the meantime, Mexico established the Comprobantes Fiscal Digital por Internet (CFDI) in 2004, and the European Union initiated the Pan-European Public Procurement On-Line (PEPPOL) project in 2008. Asia is beginning to adopt the PEPPOL standard[iii] and Procure-to-Pay (P2P) experts have been looking at blockchain technology for nearly 2 years.[iv]

These developments are making PIDX less and less viable as a global set of standards each day.

So What's Wrong Here?

Originally, PIDX was a committee under the control of the American Petroleum Institute, an organization that could provide high-level oversight and guidance. When PIDX was spun off as an independent company, owned and operated by its members, that guidance was lost.

Since the split from API, PIDX, Inc. has operated on revenues generated by membership dues. However, the organization has struggled to articulate a value proposition that will attract new members, and retain existing ones (the recent addition of ExxonMobil[v] is the exception rather than the rule). Since the beginning of 2017, PIDX membership has dropped by nearly a third.

This revenue limitation means that PIDX is operated primarily by a staff of volunteers from member companies – volunteers who are paid by their employers. Naturally, these volunteers tend to operate in their employers' best interests, rather than the interests of the industry as a whole. This structural issue explains the lack of progress and innovation displayed by PIDX, especially in the past decade or so. For new standards to even be considered for development, proposals must be sponsored by three member companies, then approved by the Standards and Guidelines Committee, and finally approved by the Executive Committee. A proposal that doesn't pass these last two gauntlets will never see the light of day.

These committees are populated and controlled by volunteers from a small number of highly-motivated member companies. Any standards proposal that does not immediately benefit these member companies faces a difficult road to adoption. Rather than looking to evolve the PIDX standards for wider adoption, PIDX members tend to focus on the cost of moving existing PIDX integrations to new standards.

Meanwhile, the rest of the world, unencumbered by existing B2B e-commerce operations, moves to adopt current technology in new standards that are largely incompatible with PIDX.

The Way Out: Options

There are three options that PIDX can choose to follow. PIDX can either continue down its current path of decreasing global relevance, transfer the PIDX standards to another standards body and close down, or drastically reorganize the structure of PIDX so that it reflects the best interests of the industry rather than the interests of a few vocal members.

Option 1 – Business As Usual

If PIDX continues down its current path, its influence as a "global" standards body will decrease, and its membership rolls will continue to shrink. At the same time, other competing standards will be adopted, much as the PEPPOL standard is being adopted in Asia. PIDX will become (if it hasn't already) a "legacy" standard much like X12 EDI, though without such a large legacy footprint.

Option 2 – Shut Down

PIDX was originally patterned after the Chemistry Industry Data eXchange (CIDX). CIDX was a trade association and standards body focused on realizing transactional efficiency throughout the global chemical industry supply chain[vi]. In 2008, CIDX transitioned its standards and operations to the Open Application Group, Inc. (OAGi) and the American Chemistry Council's Chemical Information Technology Center (ChemITC). CIDX then ceased to exist as a corporation. PIDX could choose to again follow CIDX' lead.

Option 3 – Adapt and Change

For PIDX to remain relevant as an independent standards body, it must drastically reorganize so that it can become truly 'independent'. As long as a small number of large North American companies control the direction of "global industry standards", adoption will never truly be global. PIDX will become a one-off standard for those large corporations with existing investments in a set of 16 year old standards.

The Best Choice – For PIDX and the Industry

PIDX standards have been valuable in reducing the procure-to-pay / order-to-cash costs in the oil and gas industry. A vibrant, forward-thinking, and truly independent industry standards body could build on these past accomplishments, but PIDX needs drastic changes to become that organization.

These changes include increasing revenue through individual memberships, certification programs, and higher corporate dues (coupled with a well-defined value proposition). A paid development and training staff would keep standards development on a

predictable timetable, keep the standards from being too company-specific, and would provide professional documentation that would ease the pain of adoption.

PIDX needs to accept the reality of co-existing with governments-mandated e-Commerce standards designed to fit many different industries. Incorporating country-specific documents such as CFDI can ensure that PIDX standards are not seen as being in conflict with those government mandates.

PIDX standards need to be applicable, not only to multi-national corporations, but also to SME's – small and medium sized enterprises. While the multi-nationals have dragged some of the SME's along with them, much of the business of pulling oil and gas from the ground involves transactions between small businesses. PIDX standards are currently perceived as too expensive and too complicated to implement for companies without a full-blown IT department.

Finally, the rules and procedures around standards and guidelines development must be changed. The process is too closed in the initial stages. Potentially valuable standards projects are never even explored because a few powerful members can veto them with only the vaguest of justifications. Very few standards proceed to a full membership vote, where they are nearly always approved unanimously. A process is needed that will allow standards, particularly around new technologies, to be fully explored before they are approved or rejected.

The Time is Now
PIDX has a long and rich 30 year history of reducing costs in the oil and gas industry. Current advances in technology – including the arrival of internet access to remote parts of the world, the Internet of Things, and Blockchain – make the need for a vibrant and respected standards body more important now than ever. PIDX is not in a position to fill that need today, but it could be. PIDX needs to take a close look at its successes and failures, especially since 2014, and make the changes necessary for the organization to benefit the industry going forward.

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About Trigo Ventures, LLC

Headquartered in Texas, Trigo Ventures, LLC (www.trigollc.com) is an IT consulting firm specializing in the implementation of B2B e-Commerce in the global upstream oil and gas industry. Trigo Ventures evaluates current systems and processes, and applies industry best practices and standards to align business objectives with organizations in the most cost-effective manner possible. Don't go it alone. Trigo Ventures can help.

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i   http://www.pidx.org/about-pidx/

ii   http://www.pidx.org/pidx-acquires-intellectual-property-from-api/

iii   https://www.opengovasia.com/articles/singapore-adopts-peppol-standard-to-launch-nationwide-e-invoicing-framework

iv   http://spendmatters.com/2016/11/09/blockchain-future-p2p-networks/

v   https://globenewswire.com/news-release/2018/06/26/1529686/0/en/ExxonMobil-Joins-PIDX.html

vi   https://www.service-architecture.com/articles/xml/chemistry_industry_data_exchange_cidx.html