

**1. PROPOSED PROJECT TEAM/STUDY NAME**

Joint LEAP/PIDX Project to extend LoadingDeliveryReceipt for barges, primarily for European Barges in Amsterdam/Rotterdam/Antwerp and further up the Rhine.

**2. EXECUTIVE SUMMARY**

Building on functional design work already done by LEAP (Leadership for Energy Automated Processing – [www.energyleap.org](http://www.energyleap.org)), PIDX would extend their LoadingDeliveryReceipt standard in order to capture data elements not currently available in the schema. These data elements will likely include additional enumerations to the Activity\_Type but also possibly new data elements to the schema itself. The project will try to leverage additional enumerations as much as possible but it may not be possible to avoid new data elements.

The project team on the ‘LEAP-side’ is made up of representatives from BP, Chevron, Shell, Total, Vopak and a software services company named Adjoint. Most of those above companies have expressed an interest in processing barge movements straight-through to a greater extent into their ETRM systems as well as into their demurrage calculation processes.

The latest LEAP barge electronic movement document template as of July 2018 is available as an exhibit to this document.

**3. DESCRIPTION**

PURPOSE	<p>Although the current PIDX schema technically would support barge movements, the LEAP effort identified several additional data elements that were specifically needed to support barge processes involving settlement and demurrage calculation.</p> <p>(Demurrage is the liquidated damages that are claimed by barge owners for delays in completing their operations within an agreed time. These claims are often ‘passed down’ a chain of title when there are more than two companies in a chain of title on a specific barge operation)</p> <p>The LEAP effort was started in January 2018 and only recently approached PIDX directly to engage in the possibility of extending the</p>
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	<p>existing LoadingDeliveryReceipt schema rather than creating and publishing a brand-new XML standard.</p>
<p>SCOPE</p>	<p>The joint LEAP/PIDX effort will begin with the latest version of the LoadingDeliveryReceipt and the latest version of the LEAP Electronic Movement Document functional design documents. A Gap Analysis will be completed that will compare the existing LoadingDeliveryReceipt schema with the data requirements identified by the LEAP working group.</p> <p>Based on the Gap Analysis, edits to the existing LoadingDeliveryReceipt will be made. Where possible, additional enumerations will be added rather than adding new data elements. For example, we expect that additional ActivityType enumerations will be added in order to permit the various Timesheet and Reasons for Delay that are required for the LEAP needs.</p>
<p>GOALS</p>	<p>Digitization and elimination of unnecessary keystrokes is a key goal of many LEAP and PIDX members. A successful creation and implementation of a barge movement document standard will allow oil trading companies to ‘consume’ movement document data (volumes, products, locations, timesheet events, etc) and automatically update their settlement, inventory, and demurrage systems.</p> <p>At first, we expect this automation to occur between a terminal and the position holder at that terminal, but as the market evolves, we expect that an ecosystem of applications will be built to allow market participants to share these movement documents electronically on platforms or blockchains such that the entire chain of title and custody (where appropriate) can send, receive, and process these movement documents.</p> <p>We see parallels to what has happened in the truck and rail industries in North America and beyond and want to encourage those developments in the European Barge industry.</p>

*Identify criteria for success of the deliverables/specification as deployed in industry.*

*Identify how the proposed deliverables/specification relates to existing or under development deliverables/specifications. Identify how these will relate to each other.*

*Identify the integral sets of specifications that will be created or modified by the proposed work effort. (See 8.0 Initial Contributions)*

- The PIDX LoadingDeliveryReceipt

*Identify the expected useful life of the proposed deliverables / specification, e.g. estimated retirement dates or circumstances.*

- The extension of the LoadingDeliveryReceipt XML standard will encourage the creation of an ecosystem of both company-built applications as well as third party data services driven by blockchain, cloud computing, and future delivery mechanisms.

## BACKGROUND

*Identify how this work is specific to the energy industry and to the primary area of focus for PIDX. Identify other sources for aspects of the required solution that are not industry specific.*

- This would be an extension of the existing PIDX LoadingDeliveryReceipt XML schema to increase its usability for European Barges.

*Identify the solutions that currently exist in the area of the proposal. Identify competing technologies/solutions.*

- The most relevant service that is currently in use in the industry is CargoDocs for Barges by ESSDOCs. <https://www.essdocs.com/solutions/cargodocs/docex/electronic-barge-receipts>
- However, we do not believe that this is a 'competing technology' since in reality we would hope to partner with ESSDOCs and their customers in order for them to adopt the new PIDX/LEAP standard and permit even more STP automation in the industry.

*Identify other organizations that are doing similar work. Identify what they are doing and why additional work is needed. Identify how the proposed work effort will coordinate with related work efforts.*

- Individual 'pairs' of organizations have explored EDI transfer of movement information among terminals and their customers. However, our vision is a standard that would be widely adopted within the European Barge industry. We believe that there is no analogous effort at this time.

*Identify the industry organizations/groups who want this deliverable / specification.*

- The LEAP working group is currently made up of BP, Chevron, Shell, Total, Vopak and a software services company named Adjoint.

*Identify all of the stakeholders of which you are aware.*

*Identify the stakeholders who are willing to join the work effort. (See Sponsor & Participants)*

- BP and Shell have confirmed that they are willing to sponsor this initiative within PIDX.

## PROPOSAL

The LEAP Electronic Movement Document for European Barges is attached for your reference.

Use Cases:

- 1) Barge loading single product from single origin terminal, delivering to a single customer at a single destination terminal. (RESULT: One document)
- 2) Barge loading two products from single origin terminal, delivering to a single customer at a single destination terminal. (RESULT: Two documents)
- 3) Barge loading single product from a single origin terminal, delivering to two separate destination terminals (RESULT: One document showing the first destination terminal)
- 4) Barge discharging single product for single customer into single destination terminal (RESULT: One document)
- 5) Barge discharging two products into single destination terminal (RESULT: Two documents)
- 6) Barge discharging one product into single destination terminal for two separate customers (RESULT: Two documents)

#### 4. BENEFITS

Oil trading companies who buy and sell oil products shipped on barges within Europe will take advantage of the following benefits:

- Faster updates to their inventory, settlement, and demurrage systems
- Elimination of keystroke errors in updates to their inventory, settlement, and demurrage systems
- Ability to redeploy resources who would otherwise spend time rekeying barge receipt data

All Market participants for European Barge trading (terminal operators, barge owners, oil trading companies, surveyors, brokers, and financial intermediaries) would all potentially benefit from an ecosystem of one or more platforms or blockchains that would allow parties to electronically create, transmit, and consume electronic movement documents. The current model of paper-based and nonstandard movement documents is a barrier to the development of these systems.

#### 5. SPONSORS AND PARTICIPANTS

PIDX member/company sponsoring development of these specifications/this project:

Member	Company
To be provided	

The following PIDX members/companies are participants in the development of these specifications:

Member	Company
To be provided	

Mail distribution list required?	No
Please provide the name of the mail distribution list:	NA

6. DELIVERABLE SCHEDULE

Component	Status	Estimated Completion Date
<i>Gap Analysis of LEAP Electronic Movement Document and LoadingDeliveryReceipt</i>	<i>In progress</i>	<i>August 1, 2018</i>
<i>Edits to the LoadingDeliveryReceipt</i>	<i>Not Started</i>	<i>September 1, 2018</i>

7. ANTICIPATED COMPLETION DATE

8. INITIAL CONTRIBUTIONS

Document Name	Type of Document	Document Source
<i>LEAP Electronic Movement Document for European Barges</i>	<i>PDF Document</i>	<i>LEAP</i>

9. PIDX RESOURCE REQUIREMENTS

Minute taking	<i>0</i>
Facilitation	<i>0</i>
List other activities	<i>0</i>

Assuming that we will run this as a joint project, Kevin Jandora from LEAP could perform the tasks around meeting setup and facilitation as well as minute-taking. Otherwise assume the 'typical' amount of time commitment for a 3 month-long effort with weekly meetings.

Planned activity	Number per month	Number of months	Duration (hrs)	PIDX Time (hrs)
Conference calls	<i>4</i>	<i>3</i>	<i>1</i>	<i>1</i>
Face to face meetings	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>

Total PIDX staff time required for this project.	
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**10. SPONSORING MEMBER/WORK GROUP/SUBCOMMITTEE**

This specification has been submitted by Marc Battistello, Baker Hughes on behalf of the Downstream Work Group/Sub-Committee.

The chair of this Work Group/ Sub-Committee has reviewed this submission for completeness and understands this particular Work Group/ Sub-Committee is the Sponsoring Work Group/ SIG, responsible for the communication process. This does not mean the Chair or Work Group/ SIG is approving the actual work or its inclusion in any specification.

Chair Approval: Marc Battistello, Baker Hughes  
Date: September 13, 2018

**11. PIDX EXECUTIVE COMMITTEE**

Upon review by the PIDX Executive Committee, this Project Team Proposal (PTP) is:

Approved

Denied

Requires additional information

If “Denied” or “Requires additional information, please provide details:

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September 26, 2018  
Date