# PIDX – The Next Decade: Addressing Lower for Longer

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PIDX Executive Committee

The PIDX Mission

❖ PIDX mission – "provide 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"

❖ Deliverables to date - standards in areas like master data, invoicing, price sheet, purchase orders, and shipping
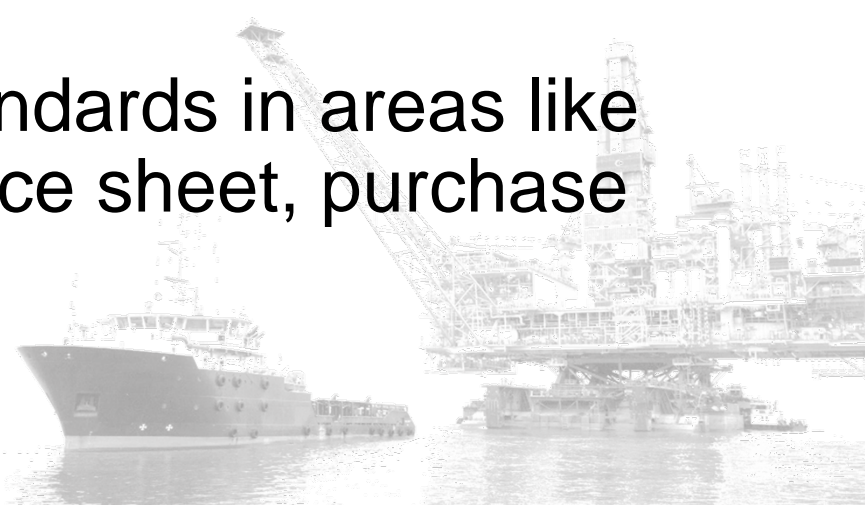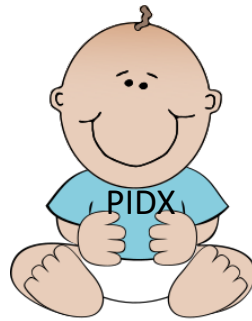
A little History

PIDX was born in 1987 as a Committee within the American Petroleum Institute, and…

❖ Oil was $38/BBL (current $)

❖ News: Iran-Contra Affair, then Iran fires missiles at USS Stark, and US destroys Iranian oil platforms

❖ Dow Jones tops 2700 (August) before Black Friday (October) sees it drop to 1750 – down 35%

❖ Starbucks opens first stores outside Seattle (<40 total)

❖ US-Canada sign NAFTA precursor, and Europe passes the Single European Act (EU precursor)

❖ Microsoft releases Windows 2.0

PIDX Graduates

At age 23, PIDX is spun off from API in 2010, and…

❖ Oil was $90/BBL (current $)

❖ News: Deepwater Horizon, The Arab Spring begins, 24-hour flight of solar powered plane, Tesla IPO

❖ Sovereign debt crisis - €110B Greek and €85 Ireland bailout

❖ Dow Jones reaches 10,000 (after 2008 crash from 14,000)

❖ Starbucks opens 16,000th store

As PIDX turns 30, now what?

Some things in the world are the same, but others so very different

❖ Oil at $50/BBL

❖ News: Brexit, ISIS/Syria, US-Cuba normalization, Iranian Nuke deal, Deepwater Horizon (the movie), toxic US presidential election.

❖ Dow Jones at 18,000, but with fears of another crash

❖ Starbucks exceeds 24,000 stores

…so what does this mean to PIDX?

Forward Focus for PIDX

❖ Imperative that we drive further efficiency and value creation to succeed in Oil & Gas, just like other industries have done before us

❖ PIDX must account for continued industry uncertainty (oil price, politics, economic factors) and certainty (technology change, cost pressures, pressure on fossil fuels)

❖ PIDX's CEO and Strategic Initiatives Committee kicked-off a team to re-evaluate PIDX's mission

- PIDX must be valuable to its members
- We want input from the broader Oil & Gas community

Following in the Footsteps

High margin industries tend to have pricing premiums due to differentiation from brand & intellectual property, while lower margin industries tend to be commodities more driven by efficiency and scale.

What can we learn from what other industries done?

Industry Name	Net Margin
Bank (Money Center)	24.48%
Banks (Regional)	24.33%
Financial Svcs. (Non-bank & Insurance)	22.30%
Drugs (Pharmaceutical)	17.52%
Entertainment	14.97%
Information Services	14.00%
Software (Entertainment)	13.08%
Hotel/Gaming	12.62%
Software (System & Application)	11.84%
Heathcare Information and Technology	9.09%
Restaurant/Dining	8.99%
Insurance (Life)	7.70%
Food Processing	6.86%
Household Products	6.67%
Retail (Building Supply)	6.65%
Total Market	6.40%

Industry Name	Net Margin
Apparel	6.27%
Insurance (General)	6.20%
Computer Services	5.95%
Office Equipment & Services	5.64%
Electronics (Consumer & Office)	5.49%
Auto Parts	5.36%
Oil/Gas (Integrated)	5.34%
Telecom. Services	5.18%
Construction Supplies	5.17%
Trucking	4.19%
Packaging & Container	3.91%
Retail (Distributors)	3.84%
Oil/Gas Distribution	3.53%
Retail (Automotive)	3.43%
Auto & Truck	3.36%
Farming/Agriculture	3.12%
Retail (Online)	3.01%
Oilfield Svcs/Equip.	2.76%
Publishing & Newspapers	2.52%
Retail (General)	2.44%
Food Wholesalers	1.13%
Chemical (Basic)	-3.12%
Steel	-4.63%
Coal & Related Energy	-23.47%
Oil/Gas (Production and Exploration)	-54.71%

Blue = commodity driven industries

Source: NYU Stern School (1/2016). Sample of 95 industries shown.
http://www.stern.nyu.edu/~adamodar/New_Home_Page/data.html

Potential PIDX Opportunities

❖ Auto Quote-to-Requisition Standard

❖ Internet of Things (IoT) enabled smart assets

❖ Automated light "master data" based off supplier ESN

❖ Operationalize "factory oil field" in high-volume, standardized onshore operations

❖ Other concepts

Auto Quote-to-Requisition Standard

Opportunity: Supplier sends a quote to a buyer that can be reviewed compared to other quotes, and converted to a requisition & PO seamlessly, regardless of systems.

Seller   **Buyer**

Quote   Quote   Req.   PO   PO
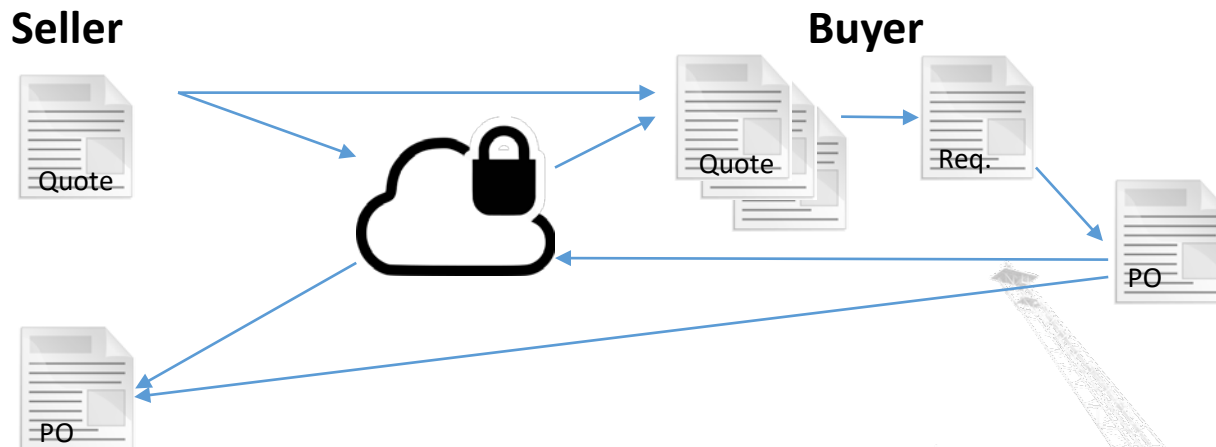
❖ Speed and accuracy of visibility to data, quote comparison, and award

❖ Labor savings on data entry

❖ Ease of deployment (no proprietary eCommerce solutions)
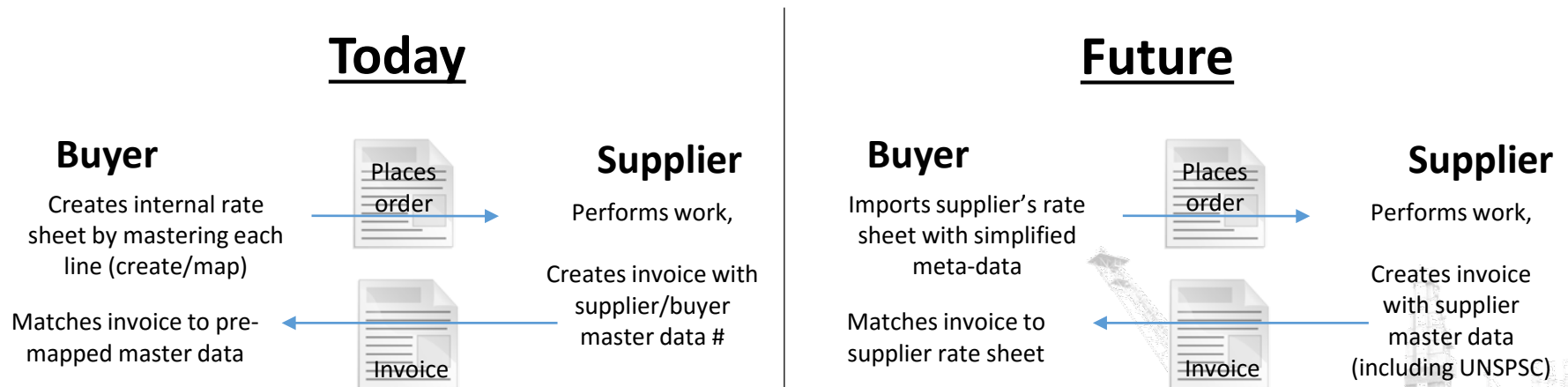
IoT Enabled Smart Assets

Opportunity: Sensor enabled equipment in the field that assess what actions will be needed, and takes action to initiate service and confirm for payment.
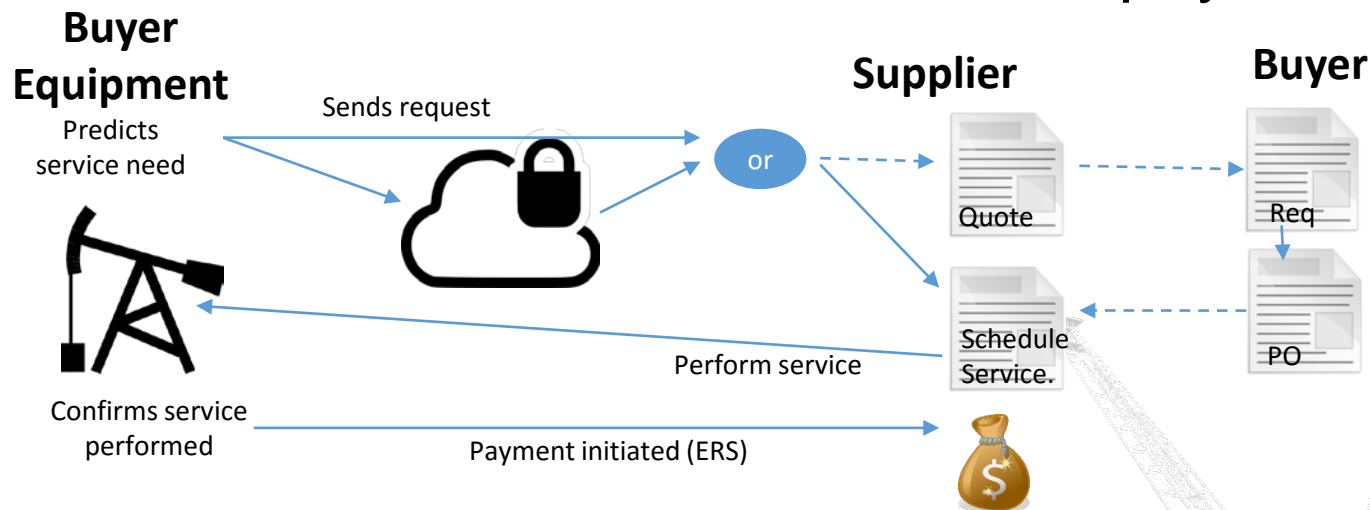
❖ Allow resource optimization through pre-scheduling

❖ Minimize downtime, labor waste, and material stock/obsolescence

❖ Increase visibility to future spend requirements

"Light" Master Data

Opportunity: Buyers capturing essential data on materials and services to map them for basic analysis without needing internal master

Today

Buyer

Creates internal rate sheet by mastering each line (create/map)

Matches invoice to pre-mapped master data

Places order

Invoice

Supplier

Performs work,

Creates invoice with supplier/buyer master data #

Future

Buyer

Imports supplier's rate sheet with simplified meta-data

Matches invoice to supplier rate sheet

Places order

Invoice

Supplier

Performs work,

Creates invoice with supplier master data (including UNSPSC)

❖ Allow resource optimization through reduced need to create internal masters

❖ Could lead to more standardization of spend analysis, spares management, and compliance

Operationalize "Factory Oil Field" Standardization

Opportunity: High volume, repetitive drilling programs enable leveraging of processes and standards such as MRP & scheduled services

Auto

Custom built

Mass-produced, only in black

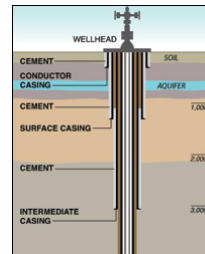Highly standardized, but millions of combinations

Oil

Annual drilling & maintenance plan

Highly standardized well-designs, but millions of combinations to fit the need

- Improved material planning
- Buyer/supplier Integrated services planning
- Reduced maintenance risk
- Improved learning curves

❖ Optimize supplier capacity utilization for lower costs

❖ Able to lock in "A-team" resources with better commitments

❖ Able to optimize stock better than just min/max planning

Other Concepts

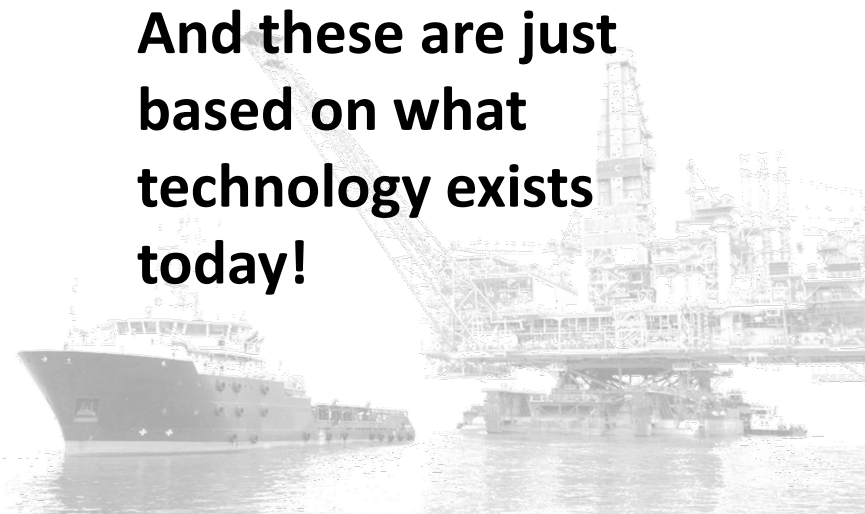*"Alexa, order me a frac crew for Well 305D2 for next Tuesday"*

Drone scans pipeline, sensors pick up an anomaly, orders a work crew or specialized drone to the site.

"I, John Doe, confirm receipt of field ticket 45776A"

Voice recognition verifies buyer acceptance of digital field ticket

And these are just based on what technology exists today!

Closing

❖ There is still a lot of opportunity to improve this industry, and many of the best ideas will team collaboration & standards to make them reality

❖ We can borrow great ideas from other industries, but Oil and Gas people will have to adapt and deploy them

❖ There are likely next generation ideas that haven't been executed yet by anyone