

LIQUID RECYCLING

used oil | parts cleaning | anti-freeze | filters & absorbents | wastewater | chemicals

2016 NORA Annual Conference & Trade Show

Kohala Coast, Big Island of Hawaii
November 9-12, 2016

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SESSION TOPICS

When will Oil Break Out of the \$40 Funk?

For the last two years oil has been hovering around \$40/barrel compared to levels twice that high for the three years prior to that. The oil market has tremendous impact on how NORA membership operate their businesses and plan for the future. Is oil going to stay at \$40 or are there fundamentals indicating change is on the way? An industry expert will inform attendees what they believe the market will look like in the next three to twelve months. This will help member prepare their companies to succeed.

Used Oil Market Trend & Price Survey: Understand Your Market

NORA is planning on conducting the first ever survey of market trends and pricing data related to the used oil market. The information will be collected and compiled by the association and then distributed to members. At the conference, you will have the opportunity to learn about this program and have input on what type of data will be collected. (This program has been carefully crafted to comply with the Nation's anti-trust laws and has been reviewed by a legal counsel).

Explore the Big Island

To avoid confusion with the name of the entire state, the Island of Hawaii is often called the "Big Island". It is the youngest and largest island in the Hawaiian chain and home to one of the most active volcanoes in the world, black sand beaches and 8 of world's 13 different climate zones each with unique ecosystems. Explore with the following tours:

Tuesday, November 8

Twilight Volcano Tour

Journey through Hawaii Island's incredible range of ecosystems and climate zones before experiencing first-hand the phenomena that makes it all possible – an erupting volcano. This in-depth experience takes you off-the-beaten path to sites unknown to most visitors.

Wednesday, November 9

Kohala Waterfall Adventure

Immerse yourself in stunning private waterfalls, tranquil streams, scenic coastlines and rugged valleys on this North Kohala adventure. Kick off the fun with an off-road drive to an exclusive trailhead.

Thursday, November 10

Coffee, Chocolate, & Brew

Indulge your taste buds and experience the more sumptuous side of Kona. Visit three local companies who have helped put Kona "on the culinary map" by producing delicious 100% Kona coffee, decadent chocolate confections and island fresh ales. Go behind the scenes to learn (and taste) how they've each mastered their respective crafts.

To register for these tours, go to noranews.org or call the NORA office at 703-753-4277.

Clinton or Trump: How the 2016 Election will Affect NORA Members

The NORA Conference will take place two days after the Presidential Election. A comprehensive analysis of the election results and what they mean for American businesses and our industry will be provided. If the Democrats take over the Senate, who will be in charge of environmental legislation? What can we expect at EPA if Donald Trump is elected? Will there be more (not less) Washington gridlock regardless of who is elected President? What is the future of the Republican Party if Trump is defeated?

Industry Roundtable: A Look into the Next 12-24 Months

Flat oil prices. Industry consolidation. Changing end-user markets. NORA is bringing together an all-star panel of industry leaders to assess the current state of the industry and what it will look like over the next 12-24 months. This is a must attend for the strongest companies that are looking to survive and thrive by gaining robust insight into the market. This panel will be moderated by NORA's Executive Director.

Monitoring Critical Machinery Health and Reliability with the Industrial Internet of Things

As the Industrial Internet of Things (IIoT) gains popularity, the cloud of confusion around it seems only to grow. What is the Industrial Internet of Things? What kind of data does it create and what value does it add to the business? Most importantly, how does that relate to the lube, fuel and refining markets? Businesses are quickly putting together their IIoT strategies to insure critical uptime and improve machine reliability and those who don't are losing market share. The presentation will include a case study piece from an IIoT user.

Introducing NORA SocialLink: Year-round Networking Made Easy

The greatest value of NORA membership is networking which leads to business development and greater knowledge of your industry. However, most NORA networking has been concentrated around the various events the association hosts. That is until now. NORA has developed a first of its kind solution that will allow members to utilize social media and mobile integration to allow members to easily stay connected every day.

Learn how you can use NORA's new SocialLink to easily build stronger connections throughout the industry to help grow your business and gain the information you need to effectively run your business by leveraging the NORA network.

Government Affairs: Executive Summary

2016 has been a very active government affairs year. The current and future health of the industry that responsibly recycles used oil and related materials is largely dependent on the regulatory environment. This session will provide a high level view of the major government affairs projects NORA has addressed in 2016 and how they affect your business.

Monitoring Critical Machinery and Reliability with the Industrial Internet of Things

By: Dan Yarmoluk

Introduction

As the Industrial Internet of Things (IIoT) gains popularity, the cloud of confusion around it seems only to grow. What is the Industrial Internet of Things? What kind of data does it create and what value does it add to the business? Most importantly, how does that relate to the lube, fuel and refining markets?

The Industrial Internet of Things is the great disruptive force of this decade and as technology has advanced, the cost of adoption has decreased. In fact, businesses are quickly putting together their IIoT strategies to insure critical uptime and improve machine reliability and those who don't are losing market share.

Remote monitoring of industrial processes and equipment health is perhaps the best example of how the IIoT can be integrated into the industrial sector. By adding sensors to industrial products like pumps, valves, filters, or motors, businesses are able to keep an eye on their critical assets from anywhere in the world. This data can tell an operator if a piece of equipment is not operating properly, has completed the requisite number of cycles, or has completely failed. Analysis of the data created can result in reduced downtime, predictive maintenance, and a fine tuning of overall processes. The Industrial Internet of Things is not only up in the cloud - the power of data and analytics can be delivered right to a computer on an operator's or owner's desk and change how business is done forever.

IIoT Technology Stack

The IIoT technologies are put together in what some term as a stack, because they build on each other. One version of that stack is shown in the diagram below. Essentially, sensors emit data to the cloud where data reporting, data analysis and a variety of specialty applications are utilized to produce meaningful information. That information, in turn, is used to influence human behavior, such as driving route optimization or improved maintenance scheduling, to optimize business performance.

The application of this stack of technologies can get tricky and integration can become difficult. Choosing partners to assist with the technology deployment becomes critical to insure the success of any IIoT program a business is considering undertaking.

Example Industrial Use Cases

The possible IoT applications in an industrial setting are vast. Here is a short list to get started.

A. Manufacturing

The manufacturing industry is rife with opportunities for a successful IIoT deployment. First, there are many different critical operations that can be monitored to reduce downtime on a factory floor. Second, these critical operations are generally so big that the monitoring cannot be efficiently done by visual inspection only. By monitoring several machines all on one dashboard, all of a factory can be seen together on one screen.

B. Industrial Pumps and Valves

Pumps are the lifeblood of many industrial processes. Without pumps operating at their peak, valuable production capacity is lost. Continued wear and tear can lead to unexpected downtime. Monitoring industrial pumps or smart pumping systems for cycles completed, unexpected vibration, or high temperatures can indicate unusual operating conditions. This allows for a service technician to be sent before the operation is shut down completely.

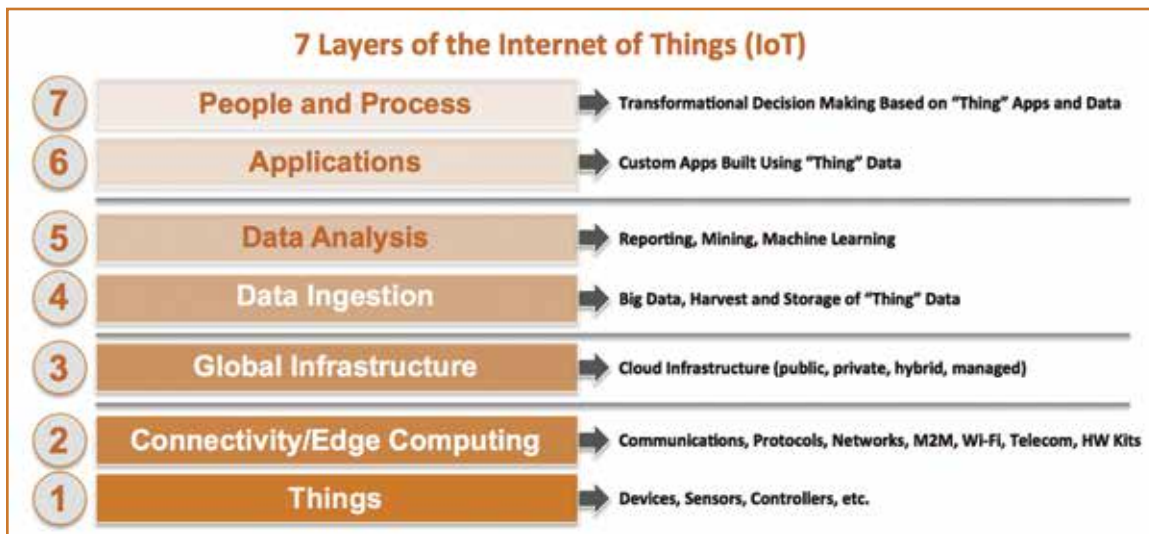
C. Vibration

Used especially in motors and other manufacturing machinery, measuring vibration can be a strong indicator of an oncoming problem. As the vibration in devices continues to grow stronger, it can mean that a device is dangerously close to failure. Catching this change early enough in the process means that a service technician can be dispatched to the site to fix the problem before a complete breakdown.

D. Fluid and Flow

A pressure drop across a valve could indicate a ruptured seal or a pressure increase could mean a blocked filter. A higher temperature could mean a problem somewhere in the production process. Having these data points means that a problem can be solved before there is a loss of quality in product or a shutdown of a factory floor.

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E. Temperature and Humidity

Temperature and humidity variations can mean many different things for different applications. Perhaps food ingredient supplies will spoil if above a certain temperature. Maybe crops will grow mold if it gets too humid. A motor will stop functioning if it gets too hot. Throughout all of these scenarios, IIoT technologies can gather this data and alert a problem through preset parameters.

Business Process/Business Model Disruption

The IIoT alone does not create efficiencies or optimize services on its own. Instead it is up to the businesses to include the new IIoT data in their business processes in such a way that they transform how business is being done today. Being able to change predictive maintenance to completely avoid expensive downtime is an example of business transformation that is actually happening for industrial customers today, like those in the fuel and lube businesses. It's important to note that the value of the Internet of Things does not come from connected devices, but rather from the ability to extract, mine, organize, and influence action from the information stemming from connected device data.

When thinking of the Internet of Things or connected products, it's easy to think of the hyper-connected world of gadgets today - whether it be smart phones, refrigerators, or toothbrushes that appear to have non-essential and cool product features for the technophile. When looking at the world of sensors, internet-enabled products, and cloud computing, it's a bit harder to truly comprehend the enormity of what's happening at a fundamental level, that being, the definition of business value and how IoT will affect every business going forward.

Even new business models will emerge based upon an ongoing relationship, outcome-based approach to doing business. The subscription and membership economy is becoming a dominant model in many applications - think Netflix - with less ownership of the solution and more leasing or subscribing to a service. It becomes easier to think about this in the world of oil recycling where the future could be a world of contracts built out upon data that is captured in the cloud for both the user and recycler to see. SaaS (Software as a Service)

is morphing into things like SeaS (Sensor as a Service). For the scrappy independent business owner, considering this shifting landscape and embracing it could lead to significant gains and huge disruptions in the fuel, lube and recycling industries.

Dan Yarmoluk is an IoT Business Development Executive for ATEK Access Technologies' AssetScan product line. Dan has a technical background in OEM product design with batteries, chargers and sensors. He can be reached at dyarmoluk@atekcompanies.com. More information can be found at www.AssetScan.com. Meet ATEK at booth #306 at the 2016 NORA Conference and Trade Show. ■

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