MIMOSA/OpenO&M OIIE Meeting to Discuss Industry Digitalization
Nov. 16, 2017
Introduction

Ken Dunn:
Director Information and Data Architecture, BP
Chairman of Board, MIMOSA
Secretary Information Standards Sub-Committee IOGP
OPEN INDUSTRY DIGITALIZATION FORUM!

This free OPEN FORUM is organized by MIMOSA and hosted by SAP to help attendees learn more about using standards to manage your supplier ecosystem with the SAP Asset Intelligence Network (AIN). Lunch sponsored by BP.

**When:** November 16, 2017

**Objectives**

1) Hear why this is important from your industry peers
2) See how to use standards to improve interoperability
3) Learn more about how SAP AIN uses standards
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 AM</td>
<td>Welcome / Opening / Safety Moment</td>
<td>Ken Dunn, BP</td>
</tr>
<tr>
<td>9:00</td>
<td>Keynote Speaker – Industry Digitalization and the OIIE</td>
<td>Alan Johnston, MIMOSA/OpenO&amp;M</td>
</tr>
<tr>
<td>9:30</td>
<td>Standardizing the Military</td>
<td>Jim Colson – U.S Army Logistics Support</td>
</tr>
<tr>
<td>10:00</td>
<td>OIIE ILAP POC</td>
<td>Robert Skaar, Statoil (Remote)</td>
</tr>
<tr>
<td>10:30</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Achieving Interoperability thru Digitalization</td>
<td>Marcus Stumpner, Professor, Univ S.A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Co-Op Research Center for Interoperability</td>
</tr>
<tr>
<td>11:30</td>
<td>An OEMs Perspective on Standardization</td>
<td>Greg Serangeli, Caterpillar</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>12:30</td>
<td>Digitalization in Material Management</td>
<td>Peter Eals, ECCMA</td>
</tr>
<tr>
<td>1:00</td>
<td>Condition-Based Maintenance and Standardization</td>
<td>Pak Wong, PdMA</td>
</tr>
<tr>
<td>1:30</td>
<td>Industry Data Sheets as a Digitalization Enabler</td>
<td>Ron Montgomery, Interoperability Consultant</td>
</tr>
<tr>
<td>2:00</td>
<td>SAP Perspective on Interoperability / OIIE</td>
<td>Mark Pyatt, SAP</td>
</tr>
<tr>
<td>2:30</td>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>3:00</td>
<td><strong>PANEL DISCUSSION: Value Impact of Digitalization based on OIIE</strong></td>
<td>Barb, Ken, Greg, Jim [James Fort moderates]</td>
</tr>
<tr>
<td>3:30</td>
<td>Joint Working Group for Interoperability</td>
<td>Barb / Manoj, DOW Chemical</td>
</tr>
<tr>
<td>4:00</td>
<td>Introduction to MIMOSA OIIE POC (OGI Pilot)</td>
<td>Alan Johnston, MIMOSA/OpenO&amp;M</td>
</tr>
<tr>
<td>4:30</td>
<td>End of Day Wrap-Up</td>
<td>Ken Dunn, BP</td>
</tr>
</tbody>
</table>
MIMOSA Members Meeting Agenda

Friday, Nov. 17

8:00  Report back from MIMOSA Technical Committees   Leads

8:30  CFO Report   Cliff Pederson

9:00  Website Status / Update   Markus Stumpner, University S.A.

9:30  Proposal for Revisions to Office Holder Structure   Alan / Ken (TBD)

10:00  Break

10:30  CEO Report   Alan

11:00  Board of Director Elections   Ken

12:00  Board Meeting   Ken

Election of Officers

12:30  Board Meeting / Report to Members   Ken / Alan

1:00  Adjourn

* Call for Nominations for Board Positions in Advance of the meeting
Safety Moment
Occidental Piper Alpha disaster – 6th July 1988

- A minor failure in a maintenance handover procedure caused a condensate leak which ignited
- Escalated due to a sequence of events
- 167 men died, total loss of the platform
We must never trivialise safety
We must learn from disasters

"Piper Alpha oil rig fire" by Source (WP:NFCC#4). Licensed under Fair use via Wikipedia

- [https://www.youtube.com/watch?v=BdRcALtA8CE](https://www.youtube.com/watch?v=BdRcALtA8CE)
- [https://www.youtube.com/watch?v=HCkvRrlsZ08](https://www.youtube.com/watch?v=HCkvRrlsZ08)
Safety Moment – Information and the “Swiss Cheese” Model

- Piper Alpha is a classic “Swiss Cheese” series of escalating problems
- Information is not one of the slices, or layers of defence
- “Information touches every discipline”
  - Engineering, Construction, Commissioning, Operations…
  - In fact, it is involved with every layer
Information and barriers for safety

- Trusted information of known provenance, quality and accuracy
  - Tells you where the holes are
  - Tells you how big the holes are
  - Helps you to make the holes fewer and smaller
  - Build-in appropriate checks and balances

- Slices from the same piece sometimes have holes that line up
  - Culture, groupthink, blind spots, etc
Opening
BP at a glance

72 countries

74,500 employees

$2.6bn underlying replacement cost profit (2015 $5.9bn)

17,810 million barrels of oil equivalent – proved hydrocarbon reserves†

3.3 million barrels of oil equivalent per day – hydrocarbon production† (2015 3.3mmboe/d)

1.7 million barrels of oil refined per day (2015 1.7mmb/d)

† On a combined basis of subsidiaries and equity-accounted entities.
Our strategy

Shift to gas and advantaged oil in the upstream Market-led growth in the downstream Venturing and low carbon across multiple fronts Modernizing the whole group

- Invest in new large-scale gas projects, pursue quality oil projects in core basins and seek out new opportunities in selected regions.
- Build competitively advantaged businesses in manufacturing and expand our marketing businesses.
- Pursue new ventures and partnerships to meet rapidly evolving technology, consumer and policy trends, and develop cross-business solutions to create new opportunities or strengthen our existing relationships.
- Simplify and modernize so we can continue to compete and seize new opportunities with our partners and stakeholders in a changing world.
The foundations for strong performance

Safe, reliable and efficient execution

Operational excellence is essential to our success. Good safety leads to reliable operation of our assets, greater efficiency and ultimately better financial results.

Distinctive portfolio with optionality

Around the world, we are investing in upstream projects – expected to deliver operating cash margins 35% better than 2015 levels. We are driving sustainable competitiveness in our downstream business, with a focus on customers, cost efficiency and margin capture.

Focused on delivering competitive returns

In 2014 we set out our financial framework in response to the sharp decline in the oil price. The framework underpins our commitment to sustain the dividend for our shareholders. We have been meeting those expectations each year – and even reaching our cash cost reduction target a year early. We also reduced our upstream and downstream headcount by a total of 6,000 in 2016 – a reduction of 17% since 2014.
**Terminology**

**Digitization** can be defined as creating digital versions of previously analog or physical items. An example would be creating a digital work order that was previously a paper work order. This is really the beginning step for an asset management company to go digital.

**Digitalization** on the other hand, is the use of digital technologies to change a business model and provide new ways and opportunities of doing business; For example, utilizing data from the digital work order you produced via digitization to improve current business processes. Digitalization is essentially a transformation within a company that utilizes digital technologies and data to improve the way things are done.

**Digital transformation** is a more holistic view, in that it not only focuses on digitizing and digitalizing, but also focuses on how to implement these changes throughout an organization. It engages the entire company and the people that make up the company, rather than just the processes and the data that are part of the company.

[Email: carina.sturm@viziya.com]
Digital Offering

For Digital

An operational backbone is not enough.

A digital offerings platform takes a company from digitized to digital.

Digitalization: Digital asset tracks the physical asset throughout the life-cycle
Digitalization: Information flows between systems are fully digital
Digitalization: End-to-end exploitation of the Industrial Internet of Things
Ecosystem Digitalization

Digitalization: Information and business flows between parties are digital
BP Interoperability Objectives

- The BP Interoperability Program will deliver integrity of asset information across a wide range of operations systems.

- Through collaboration with software vendors and other owner operators, drive the adoption of the **Open Industrial Interoperability Ecosystem (OIIE)** as the industry standard solution architecture.

- Drive to production deployment as soon as possible through POC work in the **OGI Pilot environment**.