

# IPA-MIMOSA OIIE Capital Projects Working Group Meeting #6 – 5/18/2021

Deborah J. McNeil (Independent Project Analysis, Inc.)

Alan Johnston (MIMOSA)

Dr. Matt Selway (University of South Australia)

Dr. Karamjit Kaur (University of South Australia)

Von Gusa (GUSA Consulting Services)

Luke Wallace (Independent Project Analysis, Inc.)

# OIIE Capital Project Working Group: 05-18-2021 Meeting Agenda

---

- Share the OIIE Capital Project Working Group Purpose
- Brief Overview of where we've been - Review Meeting #1 - #5 Results
- Sub-team updates:
  - Cost Estimating
  - RFI/ RFI Response
  - Asset Installation
- Better Understand the Deliverables – Q/A Session
- Key Issue Discussion
- Define OIIE Capital Project WG Next Steps

# OIIE Capital Project Working Group Leaders

## IPA



### Deborah J. McNeil

Director, IPA Capital Solutions  
And Digitalization  
[dmcneil@ipaglobal.com](mailto:dmcneil@ipaglobal.com)



### Luke Wallace

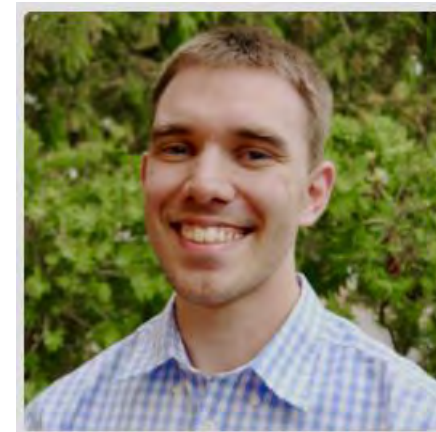
Senior Consultant  
[lwallace@ipaglobal.com](mailto:lwallace@ipaglobal.com)

## MIMOSA



### Alan Johnston

President, MIMOSA  
[ajohn@mimosa.org](mailto:ajohn@mimosa.org)



### Dr. Matt Selway

Research Fellow,  
University of South Australia  
[Matt.Selway@unisa.edu.au](mailto:Matt.Selway@unisa.edu.au)

## Open Industrial Interoperability Ecosystem (OIIE) Capital Project Working Group Purpose

---

This working group will meet **monthly** to help **align the efforts of owner companies**; engineering, procurement, and construction (EPC) firms; industry standardization organizations (e.g., IOGP/CIFHOS, ISA, MIMOSA) and international standards organizations (ISO, IEC, etc.).

All participants will work together to set the owner/EPC firm priorities for **interoperability** solution delivery to enable pragmatic industry digital transformation on a timely basis.

~57 Owner Companies  
Across Multiple Industries

# Activities To Date

Began Monthly Meetings

Kick-off  
11-4-20

Meeting #2  
12-17-20

Meeting #3  
2-22-21

Sub-Team  
Meetings 3/9/21

Meeting #4  
3-16-21

Meeting #5  
4-20-21

Participation	#
Invited	380
Registered	218
Attended	103

Participation	#
Invited	380
Registered	79
Attended	34

Participation	#
Invited	380
Registered	188
Attended	111

Participation	#
Invited	290
Registered	111
Attended	40

Participation	#
Invited	290
Registered	152
Attended	39

Participation	#
Invited	290
Registered	100
Attended	38

- Charter Review
- Challenge Description
- Methodology Overview
- Initial Opportunity Identification

- Detailed Methodology Presentation
- Detailed Brainstorming Breakouts
- **180 Opportunities ID'd**

- Detailed Methodology Presentation
- **Began work on Top 3 Opportunities** (Breakouts)

- *Continued work on Top 3 Opportunities in Sub-teams*

- *Dug Deeper on Business Use Case Deliverables*

- Shared sub team progress
- Discussed scope of OIIE OGI Pilot Phase 3.3

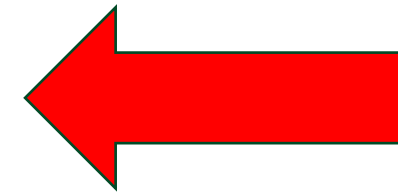
Meeting Slides For all Previous Meetings Can Now be Found on:  
<https://www.ipaglobal.com/event/digitalization-ipa-mimosa-oiie-capital-project-working-group-meetings/>

Meeting Slides For all Previous Meetings Can Now be Found on:  
<https://www.ipaglobal.com/event/digitalization-ipa-mimosa-oiie-capital-project-working-group-meetings/>

### 2021 MEETING SCHEDULE

- November 4, 2020 – [View Meeting Slides](#)
- December 17, 2020 – [View Meeting Slides](#)
- February 16, 2021 – [View Meeting Slides](#)
- March 16, 2021 – [View Meeting Slides](#)
- April 20, 2021 – [View Meeting Slides](#)
- May 18, 2021
- June 15, 2021
- July 20, 2021
- August 17, 2021
- September 21, 2021
- October 19, 2021
- November 17, 2021
- December 21, 2021

In Lower Left Hand Corner  
Of Web Page



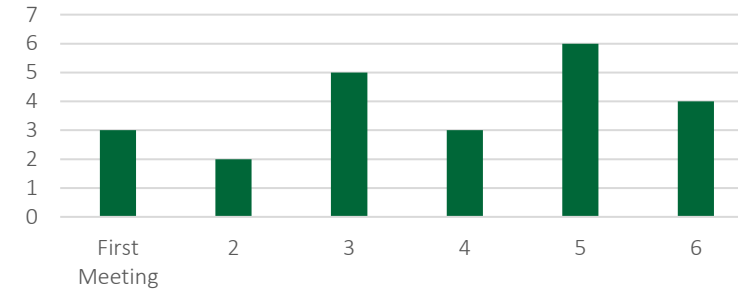
# Poll - Please use CHAT Window and Answer the following questions

Question 1 :  
 Counting this meeting, I have been able to attend \_\_\_\_\_ Large Team Meetings

- (Answers -
- 1 - This is my first meeting
  - 2
  - 3
  - 4
  - 5
  - 6



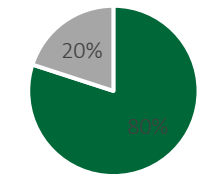
# of Meetings Attended



Question 2: I (have or have not) been able to attend a sub-team working meeting.



% Able to Attend a Subteam Meeting



■ Have ■ Have Not

Question 3: I think more people would get involved if...

- We moved meeting forward an hour (5)
- Changed timing of meeting but no perfect time (2)
- Less confusion when the larger meeting gets cancelled but the sub team is expected to continue

Sub- Team Report Outs



# Sub-Team Updates as of 5/17/21

---

## Subteams 1&2 – Cost Estimating – (Von Gusa/ Luke Wallace)

- IPA/MIMOSA are continuing to better define common cost estimating work process(es) to baseline and guide the sub-team 1&2 smaller working group, and broader sub-team, we expect this in the next week (Monday 5/24/21).
- Have identified and received commitments 2 of 6 identified and evolving potential members (not including the IPA/MIMOSA facilitators) for the smaller working group to develop the strawman work process(es). First meeting to be scheduled NLT Wednesday - 5/26/21
- Have developed a draft charter for the sub-team 1&2 smaller working group

The intent of this teams focused effort is to create a “strawman” of the industry good practice regarding the cost estimating process at a level of detail (granularity) to allow for identification of data and data management that can be improved (both internally to the company or industry and externally). At the same time these industry good practices need to be at the right level to allow for adoption across the industry and represent what your company’s, industry, group or other entity you are presently doing regarding practices and processes. Therefore, this group will be leveraging the individual team members and publicly available representations and existing industry good practices and processes to develop the strawman.

- A parallel part of the process is to align data definitions, work process and typical Code of Accounts *as part of the smaller working group*
- Followed by taking output/results and guidance from the small working group to the larger sub-team 1&2 and then developing the Use Cases at the sub-team level – *Identify who is working the cost estimating / project controls area of your company/business.*
- There will be a scheduled June call for the larger sub-team 1&2 to update on the small working group progress.

# Sub-Team Updates as of 5/18/21

## Subteam 3 – RFI/RFI Response- Capital Supply Chain (Karamjit Kaur)

Have had 5 sub-team meetings –

Meeting every Tuesday

See Details in Meeting Addendum

### OIIE Purchasing Use Case Scope

#### In Scope

- ✓ Process of Purchasing up to the point where Purchase Order (Digital version) is submitted and ACK is received containing estimated shipment date etc.
- ✓ Identify contents to be sent as part of the RFI and RFI responses
  - ✓ Any documents (both machine interpretable and otherwise) to be sent as part of these RFI and RFI responses
- ✓ Include the data exchanged as part of RFI process as part of Purchase Order

#### Out of Scope

#### (separate OIIE Use Cases)

- × Make/model matchup process
- × Logistics aspect of Purchasing
- × Receiving process
- × Inspection processing
- × Cost estimation(Pricing) aspect of Purchasing
  - × RFP/RFP response
- × Payment processing
- × Change(s) in Purchase Order
- × Evaluation and Selection of quote
  - × After receiving RFQ Responses
- × Supplier Management
  - × Managing list of preferred suppliers etc.

## Sub-Team Updates as of 5/18/21

---

### Subteam 4- Asset Installation – Capital (Matt Selway)

- ✓ Have end to end workflow defined –
- ✓ Identified user stories across the flow
- ☐ Working through defining priorities –
- ☐ discussion underway on where to focus first

Tuesday – 8 am EST every other Tuesday – 5/25 next meeting

## Sub-Team Updates as of 5/18/21

---

New – Subteam 5 -- Prioritization and Value Case Definition – enablers –  
Deb McNeil

Goal- to stay focused on right priorities- economy of scale areas

Initial Meeting being scheduled

Check-

---

Access to MIMOSA TEAMS work area –

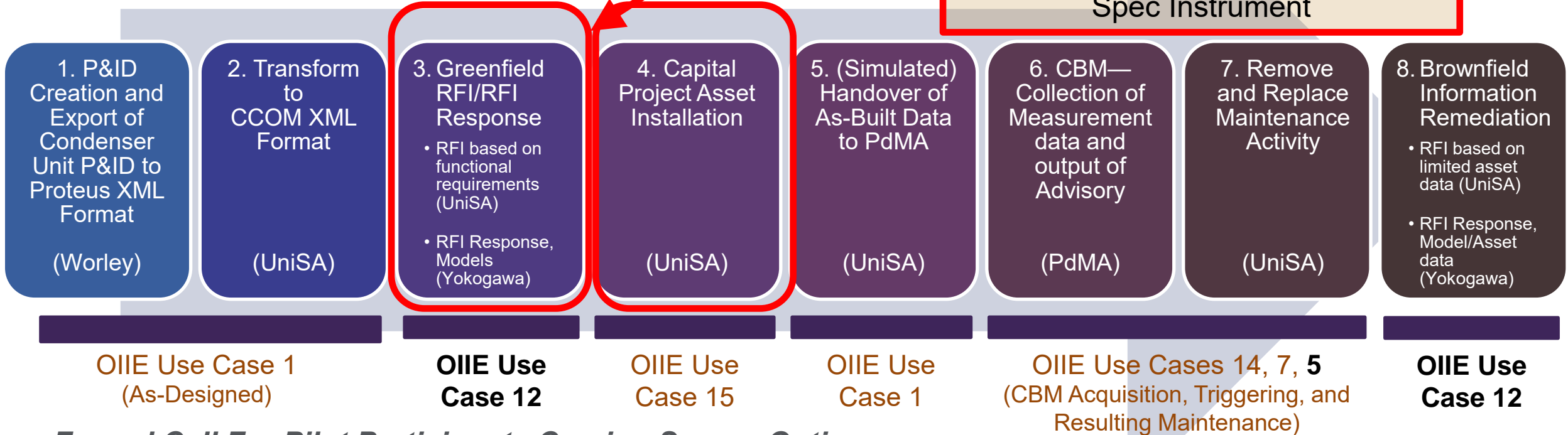
Anyone needing an invitation contact Matt Selway:

[Matt.Selway@my.unisa.edu.au](mailto:Matt.Selway@my.unisa.edu.au)

# OIIE OGI Pilot Phase 3.3 - Starts Adding AWP (IWP) and CFIHOS

Updating 2 existing OIIE Use Cases and inserts a new OIIE Use Case focused on Purchasing, then follow the existing OIIE Use Cases shown here. **Relevant IOGP JIP33 Specifications and CFIHOS RDL are being added along with AWP requirements for IWPs.**

**Insert New OIIE Use Case**  
 1. Purchasing  
 IEEE Std 841/IOGP-JIP33 S-733D  
 Low Voltage Electric Motor and ISA  
 Spec Instrument



**Formal Call For Pilot Participants Coming Soon – Options**

1. Full Participation (Join MIMOSA and have a Voice and full access)
2. Audit the Pilot (Monitor progress)
3. Join through a Partner organization (e.g. NERA, etc)

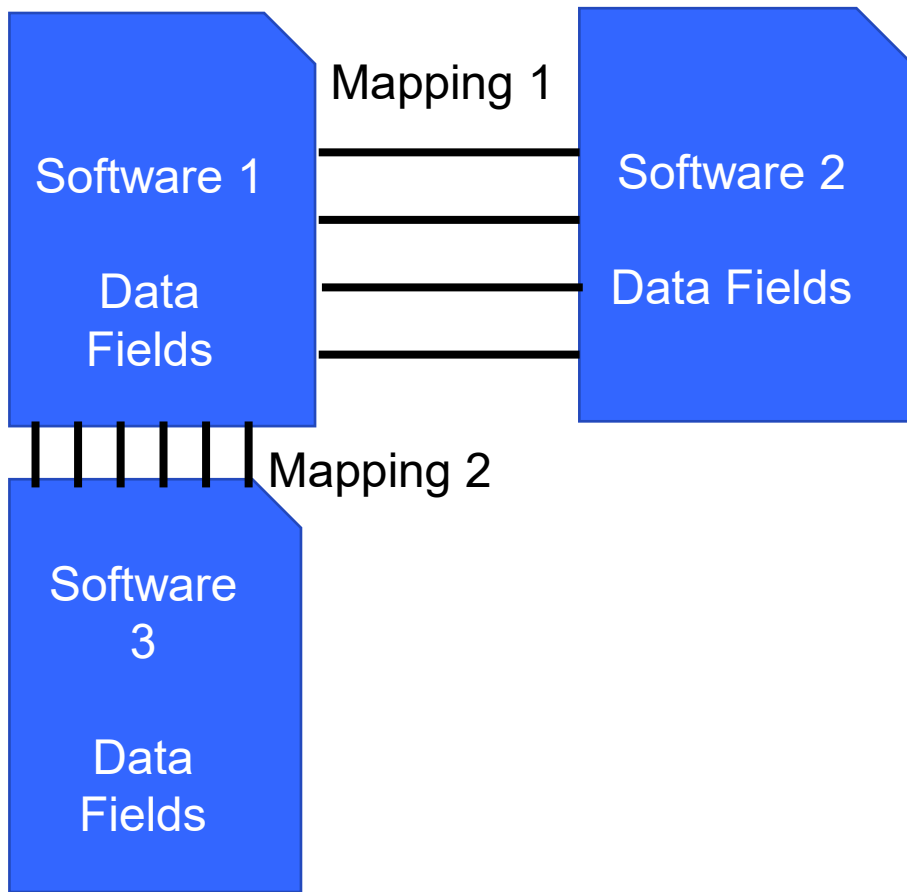
## OIIE Pilot Key Concepts

---

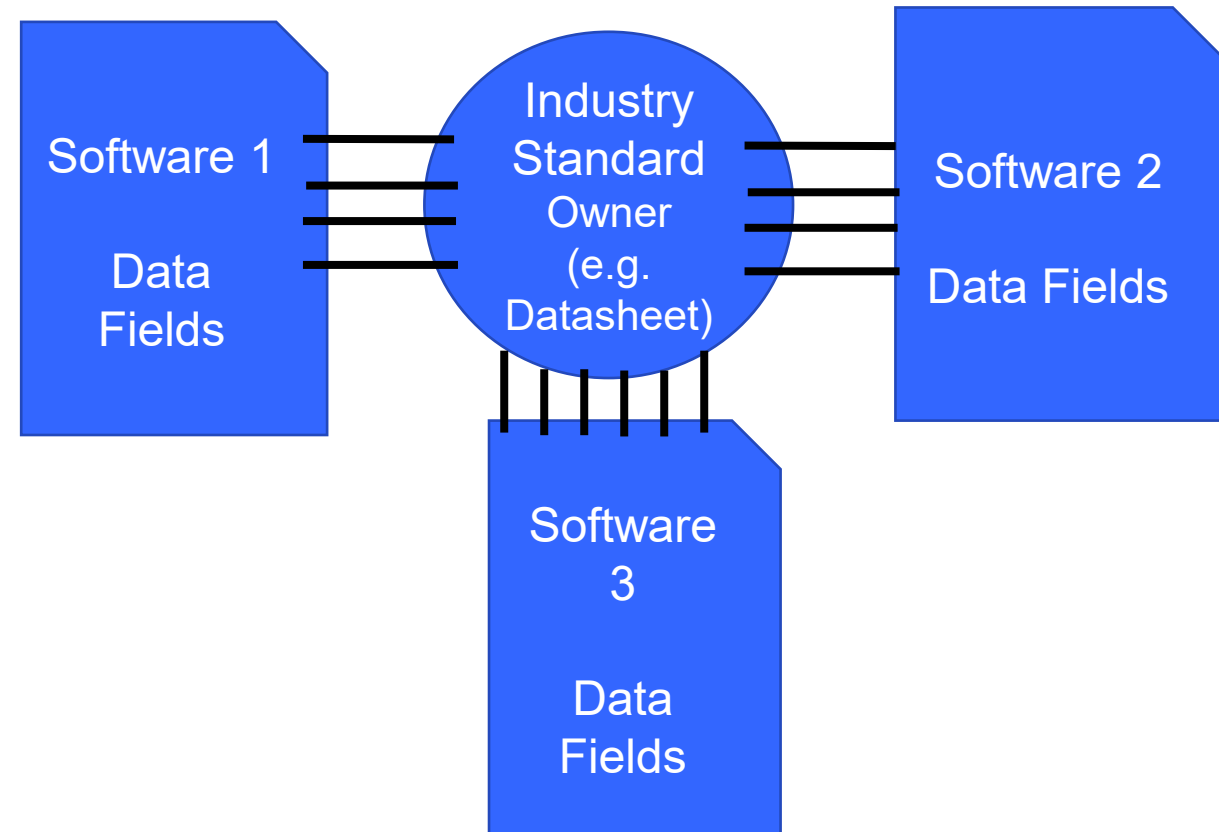
- Use Industry Standard Data Sheets (e.g. ISA, API, ASME, PIP, etc) as a starting “standard” data set for equipment data interoperability data flows
- Convert current Industry Standard Data Definition (ISDD’s) to machine readable format (Still owned by legacy standard owner)
- Develop vendor neutral API’s to extract, move, receive and insert ISDD based data between software applications

# Data Movement- ISDD Approach

Current Data Exchange



ISDD Approach



Each Software Developer owns the cost of upgrade remapping to the Standard



# Summary

We aim to:

- Identify
- Prioritise
- Align
- Define
- Pilot / Validate
- Standardise / Publish

OIIE Use Cases for Capital Projects to realise industry digital transformation, improve efficiency, and deliver value.



IBC Extract

# We Are Missing a Mammoth Integrator



Traditional Retail .....→ Walmart, Costco, Schwartz Gruppe

Internet Retailers .....→ Amazon, Alibaba, eBay, Walmart

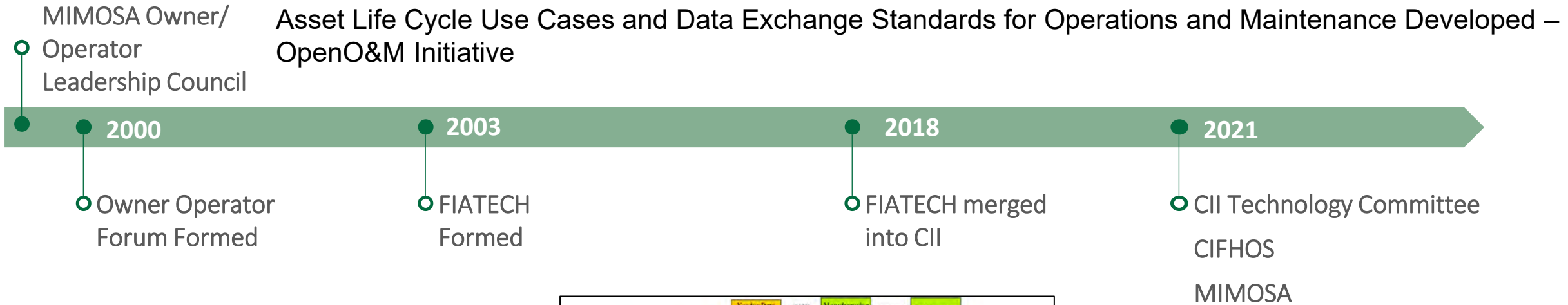
Automotive .....→ Toyota, Volkswagen Group, Daimler, Hyundai/Kia, Ford, GM

Civil Aerospace Platform Suppliers .....→ Airbus, Boeing

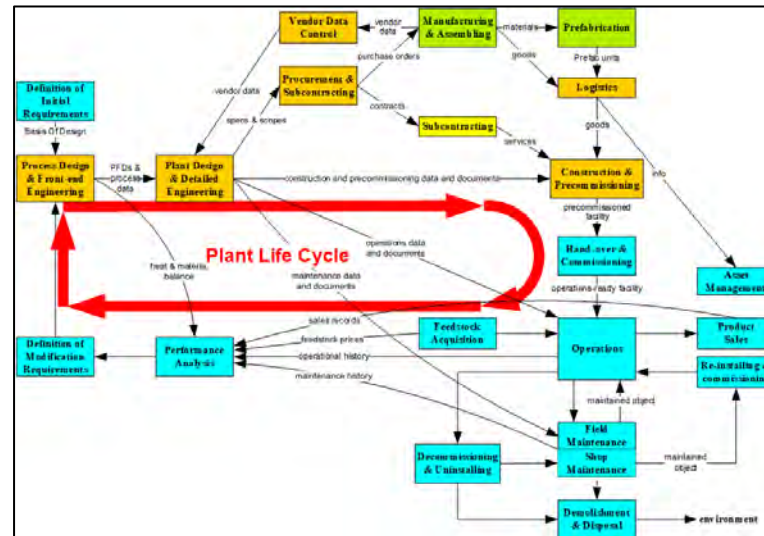
What has our Industry tried?

# Driving Data Standards for Capital Projects

We have *attempted* to align and consolidate our requirements...to develop data standards



ISO 15926  
Life Cycle  
Reference  
Data



# ~~We Are Missing a~~ How do we become the Mammoth Integrator ?



Traditional Retail .....→ Walmart, Costco, Schwartz Gruppe

Internet Retailers .....→ Amazon, Alibaba, eBay, Walmart

Automotive .....→ Toyota, Volkswagen Group, Daimler, Hyundai/Kia, Ford, GM

Civil Aerospace Platform Suppliers .....→ Airbus, Boeing

How do we make our voice louder?

## Discussion Summary - How do we become the Mammoth Integrator?

---

- EPC's need to be part of the VOICE – need to define value to EPC's also
- Other Industries grew Platform Providers and Retailers (e.g. AWS and Amazon)
- How to build open not vendor proprietary
- Many different processes, scope and data content varies dramatically
- Enterprise policies are very different across companies → how do we define the common ground
- Our suppliers can't be commoditized (everyone needs to win)
- Need a shared risk / shared value model
  
- Do we need to understand how Industry Standard Organizations work?
- Aligning on lifecycle strategy / timing would be something to consider – organizations have different horizons and it starts with common awareness
  
- Have EPC's share their data strategy – need a common vision / strategy Owners/ EPC's  
Level 1 Data Strategy – Map our data and current state
  
- Owners to show value across the chain --

## From Meeting #4 ... Using the TEAMs Chat Window... Next Meeting Agenda ?

---

I Wish I knew or Understood...

... more about the needs from my organization!!

... Estimate validation

I wish to understand better the final deliverables and how they tie with ISO 18101

Work shop to go over the use case methodology

Maybe topics or user stories or developments from each small team that apply or carry through the others. To stay aware of developments that affect each. Asset information is an example used in each phase.

appreciated seeing the user story, now have clearer picture of the end goal(s), would like to hear more on how engage an owner in a test case

Next Steps



# IPA – MIMOSA OIIE CPWG

## Levels of Participation

General Interest

Register for Large Group Meeting Minutes

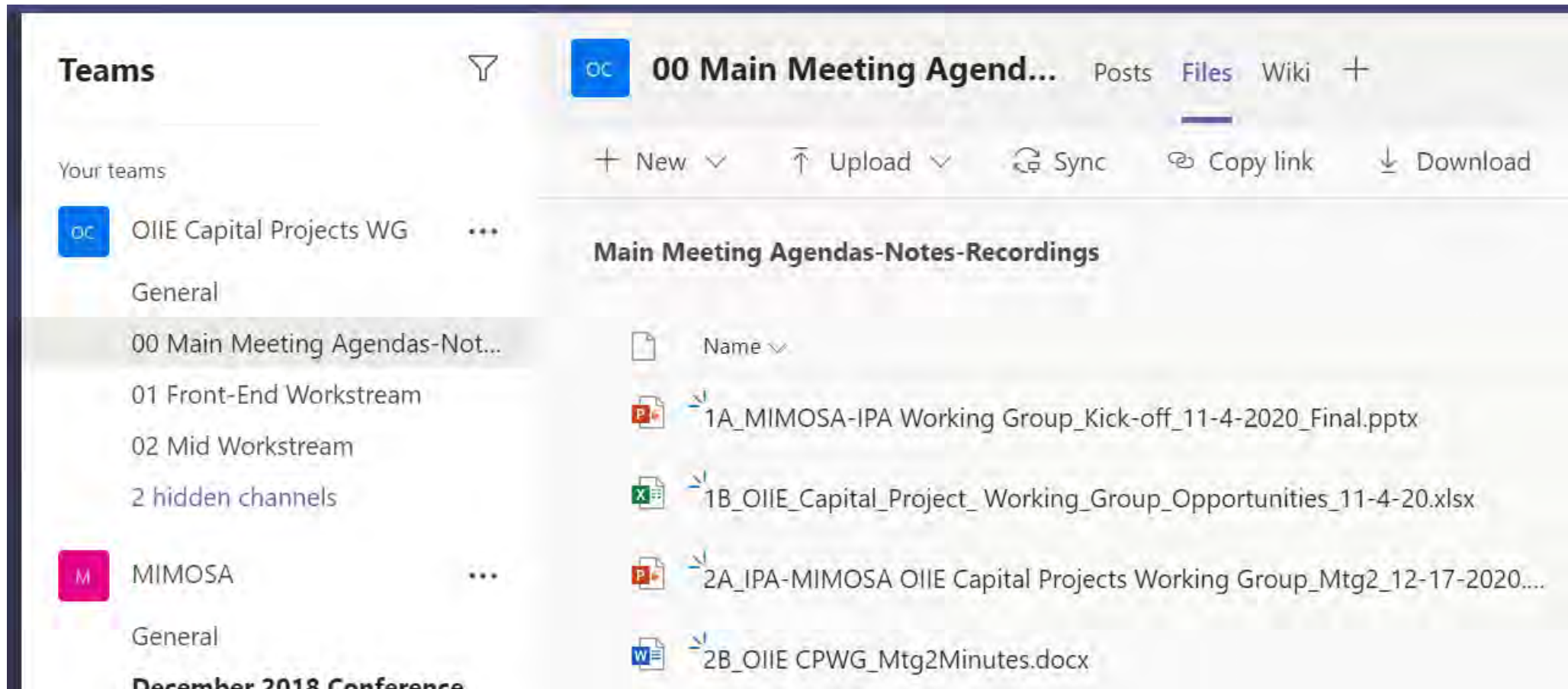
Attend the Large Group Meeting

Attend the Breakout Team Working Groups

You'll be invited to join the TEAMS site.

You can then sign up for participation in one Or more of the Break-out Groups

# Join us on TEAMS and let's get to work...



The screenshot displays the Microsoft Teams interface. On the left, the 'Teams' sidebar shows 'Your teams' with 'OIIE Capital Projects WG' selected. Underneath, the channel '00 Main Meeting Agendas-Not...' is highlighted. To the right, the channel view shows a header with '00 Main Meeting Agend...' and tabs for 'Posts', 'Files', and 'Wiki'. Below the header is a toolbar with options: '+ New', 'Upload', 'Sync', 'Copy link', and 'Download'. The main content area is titled 'Main Meeting Agendas-Notes-Recordings' and contains a list of files:

Name
1A_MIMOSA-IPA Working Group_Kick-off_11-4-2020_Final.pptx
1B_OIIE_Capital_Project_Working_Group_Opportunities_11-4-20.xlsx
2A_IPA-MIMOSA OIIE Capital Projects Working Group_Mtg2_12-17-2020....
2B_OIIE CPWG_Mtg2Minutes.docx

## Gathering Input on 3 Use cases

### Sub-Teams-

Cost Estimating – Will restart meetings in June

RFI and Asset Installation Teams – meeting every other Tuesday  
8 to 9 am EDST – Next Meeting is 5/25/21

Break Out Group	Facilitator	Meeting Link
Front-End - Cost estimating group 1/ Group 2	Von Gusa	<a href="#">Click here to join the meeting</a>
Middle - RFI/ RFI Response (Greenfield project)	Karamjit Kaur	<a href="#">Click here to join the meeting</a>
Back end - Capital Project Asset Installation	Matt Selway	<a href="#">Click here to join the meeting</a>

Next Main (Large)Group May Meeting – June 15, 2021 7 – 8 am EDST

# New Member Registration

The screenshot shows the top navigation bar of the IPA website. The navigation menu includes: NEWS, EVENTS, CONTACT US, SUBSCRIBE, CAREERS, and QUESTIONS? (highlighted in green). Below the navigation is the IPA logo (Independent Project Analysis) and a secondary menu with: WHAT WE DO, INDUSTRIES, INSIGHTS & RESOURCES, ABOUT IPA, COVID-19, and a search icon. The main banner features a dark background with a glowing network of lines and nodes, and the text: **Digitalization: IPA-MIMOSA OIIE Capital Project Working Group Meetings**.

## SUMMARY

[REQUEST INFO](#)

Join us in helping to solve interoperability challenges and move the capital project industry's digitalization efforts forward.

The IPA-MIMOSA Open Industrial Interoperability Ecosystem (OIIE) Capital Project Working Group is focused on defining the high value

## EVENT DETAILS

[REGISTER NOW](#)[ADD TO CALENDAR](#)

<https://www.ipaglobal.com/event/digitalization-ipa-mimosa-oiie-capital-project-working-group-meetings/>

## Next Steps:

---

1. Member willing to share your digitalization journey?
2. If not already a member, you will be invited to the MIMOSA TEAMS workspace to continue development of the Use Cases
3. Please participate in the sub-team meetings to generate the industry input to the Pilot Project and the Industry Standards work (each sub-team will set it's own meetings)
4. Contact Alan Johnston ([atjohn@comcast.net](mailto:atjohn@comcast.net)) to get more info on MIMOSA membership and access to the solutions already in place for your company to use
5. The Main Team will meet once a month on the 3<sup>rd</sup> Tuesday from 7 to 8 am EDST to report on progress, share industry knowledge, set priorities and continue the knowledge sharing and dialog.

If you need new meeting invitation – please email [dmcneil@ipaglobal.com](mailto:dmcneil@ipaglobal.com) or Register (See Slide 29)

6. Meeting Minutes are published on the IPA Website.

THANK YOU

Addendum: Current Slides from RFI/RFI Response Sub-  
Team

# OIIE Use Case for Purchasing of Equipment/Instrument

Karamjit Kaur

Industrial AI Research Centre

University of South Australia



# Major themes identified from User Story Statements

- Supplier management
  - Shortlist certified supplier
  - Shortlist suppliers that meet quality requirements
  - Unified view to see and manage all previous and current contracts
- Project Control Manager
  - Identify equipment with long lead times - should be pre-ordered as soon as design is completed
  - Monitor and control delivery schedule – no delays
- Order Change Management
  - PMS is up to date w.r.t. any design or qty changes and communicated to interested parties (such as OEMs)
  - Any change in requirements is registered and reflected in all the relevant systems and actors

# OIE Purchasing Use Case Actors

## **Business Actors**

- Purchasing Team/Officer
- Project Control Manager
- Manufacturer sales team
- Manufacturer Engineer

## **System Actors**

- Material/Procurement Management System
- OEM Product Management System
- Order Change Management System
- Supplier Management System

# OIE Purchasing Use Case Scope

## In Scope

- ✓ Process of Purchasing up to the point where Purchase Order (Digital version) is submitted and ACK is received containing estimated shipment date etc.
- ✓ Identify contents to be sent as part of the RFI and RFI responses
  - ✓ Any documents (both machine interpretable and otherwise) to be sent as part of these RFI and RFI responses
- ✓ Include the data exchanged as part of RFI process as part of Purchase Order

## Out of Scope

### (separate OIE Use Cases)

- × Make/model matchup process
- × Logistics aspect of Purchasing
- × Receiving process
- × Inspection processing
- × Cost estimation(Pricing) aspect of Purchasing
  - × RFP/RFP response
- × Payment processing
- × Change(s) in Purchase Order
- × Evaluation and Selection of quote
  - × After receiving RFQ Responses
- × Supplier Management
  - × Managing list of preferred suppliers etc.

# OIE Purchasing Use Case Conditions

## Pre conditions

- Completion of OIE Use Case 12  
*(RFI and RFI Response for Models Meeting Functional Requirements)*

## Successful End Condition

- The EPC or Owner/Operator issues purchase order to manufacturers to procure identified assets.
- Receiving Acknowledgment of Purchase Order

# OIE Purchasing Use Case Scenarios

## **Sc 1 : Simple Purchase**

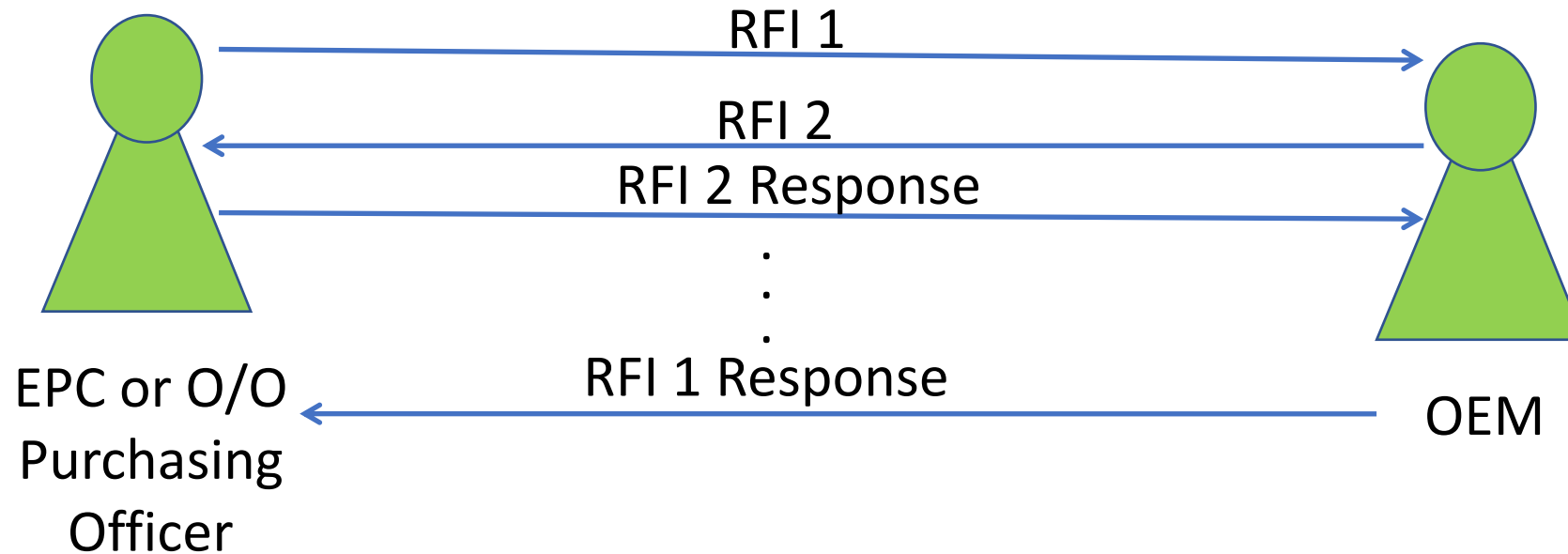
- Getting something off the shelf
- Can be automated purchase

## **Sc 2 : Complex Purchase**

- Buying special equipment
- Lots of information exchanges (RFI/RFI Response)
- Time consuming

# OIIE Purchasing Use Case Scenario 2 – Complex Purchase

Scenario 1 - Buying special (custom-built) equipment



➤ NOTE: The information exchanged in RFIs and RFI responses above will become part of Purchase Order

# OIE Purchasing Use Case Scenarios

## **Sc 3 : Know Make/Model but not OEM**

- Nominated Vendor never used before
- Know the make but don't know the manufacturer
- Start with RFI to obtain general information from potential suppliers
- Followed by RFI for technical (make/model) information
  - May have this info already

## **Sc 4 : Approved Supplier but custom built**

- Purchasing from approved Supplier
- But EPC or O/O don't know the make/model
- Cases of custom built
- Modified accordance with O/O's special requirements
- Starts with RFI for technical (make/model) information

# OIE Purchasing Use Case Development Concerns

- Multitude disjoint systems used during the process
- Systems that create and manage RFIs are separate than one that create PO
- Purchase of Equipment vs Instrument



# RFI Contents

- List of Model(s) meeting functional requirements
  - One RFI consisting of multiple Models or one RFI for each Model?
- Engineering data sheets containing functional requirements for each location
- Model data sheets containing model specific properties
- Allowable deviations or customizations from specified functional requirements
- Respond by – Date
- Requested by – Person/Team/System