



# Metals Industry Project Roadmap

---

Our working group project scope is limited by the Metals Industry Council:

- Resolve the identified gaps in original metals industry xml documents as compared to existing OAGi xml BODs
- Any deviations from our charter must be first reported to and then approved by the Metals Industry Council
- We can work using the method we deem most efficient but we should complete our mission by August 1, 2010

We should, in order to fully complete our mission and provide a better roadmap for the metals industry, do the following additional work:

- A consensus definition of all the xml document/BOD elements we use
- Harmonize and de-dupe the existing MSCI list of codes, putting them in conformity with their OAGi equivalents

Please read the following set of slides for a detailed description of our project scope and the gap analysis referred to above.



# OAGIS Project Definition – Metals Industry OTC – PTP Working Group

---

- Project Name: Order to Cash – Procure to Pay
- Project Chair: TBD
- Project Start Date: March 22, 2010
- Approved Date: March 22, 2010 (by Metals Council)



# Proposed Scope

---

- What is in scope
  - Develop a set of OAGIS BODs that provide metals supply chain companies the XML documents needed to exchange order to cash/procure to pay (OTC-PTP) information electronically with trading partners
  - This working group's scope is restricted to filling the gaps listed in the analysis between the existing MSCI XML documents and the existing OAGIS BODs, as documented by David Sinclair (GAP Analysis attached)
  - The identified gaps will be closed and a set of OAGIS compliant order to cash/procure to pay BODs will be published in OAGIS version 9.5 or 9.6 as appropriate. The gaps will not be filled using the OAGIS extension capabilities but rather by amending or creating BOD elements directly
  - Any significant out of scope issues encountered by this working group must be immediately documented and sent back to the Metals Industry Council for resolution. The working group may suggest solutions to such issues but does not have any authority to resolve them
- What is out of scope
  - This working group will only address messages that have been traditionally used in the metals industry
  - The Mill Test Report (MTR) or "Cert" is outside the scope of this effort
  - More unstructured/collaborative documents such as product design, product sourcing, product information, etc.
  - Any additional processes or documents



# Key Deliverables Summary

---

- Scenarios affected
  - Order to Cash
  - Procure to Pay
- 0 New Nouns
- 0 New BODs
- 6 Changed BODs



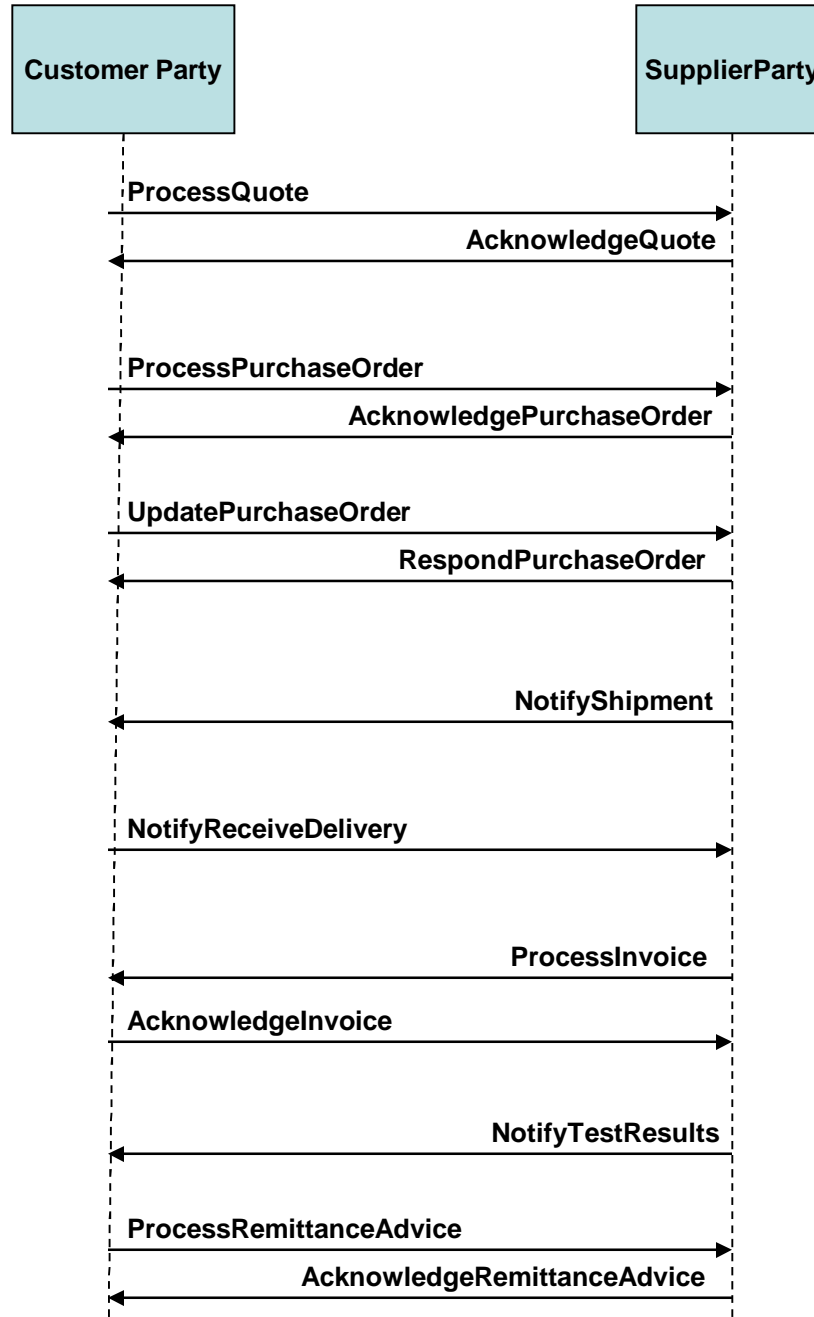
# BODs Involved

---

- Quote
  - Initial assessment indicates changes are required
- Purchase Order
  - Initial assessment indicates changes are required
- Shipment
  - Initial assessment indicates changes are required
- Receive Delivery
  - Initial assessment indicates changes are required
- Invoice
  - Initial assessment indicates changes are required
- Remittance Advice
  - Initial assessment indicates changes are required



# Metals Industry OTC-PTP Process



ConfirmBOD is potentially used as both a Functional Acknowledgement and an Application Advice



# Work Group Members

---

- Reliance Steel & Aluminum

- Pinaki Ghosh
- Sue Borchers

- Ryerson

- Don Fleschut
- Brendan Sheehy

- ThyssenKrupp

- Jeff Fischer
- Sampat Patil

- Nucor

- Chris Ridenhour (?)

- Russel Metals

- Wayne McCormick
- Shelley McIvor

- Oracle

- ?

- MSCI

- Chris Marti
- David Sinclair



# Schedule of Deliverables

---

- First Meeting (via Conference Call) - April 2010
- Complete BODs by June 30, 2010
- Consult with MSCI's wider member audience and any other external experts as necessary by August 30, 2010
- Submit amended BODs to the OAGi Architecture Council and Policy Board by September 1, 2010
- Obtain OAGi approval and start public comment period by October 1, 2010
- Publish final BODs by December 31, 2010



# Assumptions, Dependencies, Issues

---

- Assumptions
  - Will have sufficient metals industry participation
  - Will have OAGi-conversant resources
- Dependencies
  - OAGi conversant resources
- Issues
  - None identified



# Outside Resources

---

- Official Work Group members must be OAGi members
- Metals industry representativeness requires MSCI-only members (as partners) to participate and review outside the OAGi process (*these companies will be required to sign the OAGi IP policy*)



# Metals Industry OTC-PTP Project Definition Signature Page

---

---

**Authorized Signature**

---

**Name**

---

**Company**

---

**Date**

- Fill out this signature block if you are signing onto this project definition.
- This page is to be emailed or faxed to OAGi staff
- Fax 801 740 0100
- Email [dmconnelly@oagi.org](mailto:dmconnelly@oagi.org)

---

# MSCI to OAGI XML Message Gap Analysis

---

David Sinclair

March 12, 2010

---

# Outline

- **Background**
    - Language
    - Guidelines
    - Actions
    - Message extensibility
    - Technical issues not solved by OAGI
  - **Process**
    - Steps followed to perform the analysis
    - Message mappings
  - **Gap Analysis**
    - ProcessPurchaseOrder
    - AcknowledgePurchaseOrder
    - NotifyShipment
    - ProcessInvoice
    - Other messages
  - **Next Steps**
    - Technical issues not solved by OAGI
    - Resolve gaps with Metals specific extensions
    - Include additional OAGI messages in order-to-cash cycle
    - Participate in OAGI version 10 design
-

---

# Background: Language

- The term *transaction* is ambiguous and therefore is not used.
  - *BOD* is a business object definition and transferred between two parties via a message
  - *Messages* are based on a noun and a verb combination.
  - *Nouns* are a “set” of information that needs to be sent between two organizations. An example is “PurchaseOrder”
  - *Verbs* are the “action” the receiver is expected to take to handle the message. An example is “Process”
  - To complete the example, a valid message is “ProcessPurchaseOrder”.
-

---

# Background: Guidelines

- “Extensibility breaks interoperability.”
  - “Communication is a two-way street.”
  - “The technology of connecting phones all over the world was the easy part...understanding the person that answers the phone is a whole different problem.”
  - “XML just clears away some of the syntactical distractions so that we can get down to the big problem: how we arrive at common understandings about knowledge representation.” -Jon Bosak, leader of XML initiative within W3C
-

---

# Background: Actions

For each established message, there is an understood (and potentially necessary) response. The Noun is usually the same, but the response verb is different. Below are the typical verbs that would be used in the response message.

## Original Verb

Process

Get

Sync

Post

Load

Update

Cancel

Notify

## Response Verb

Acknowledge

Show

*Confirm*

Acknowledge

*Confirm*

Respond

*Confirm*

<none>

---

---

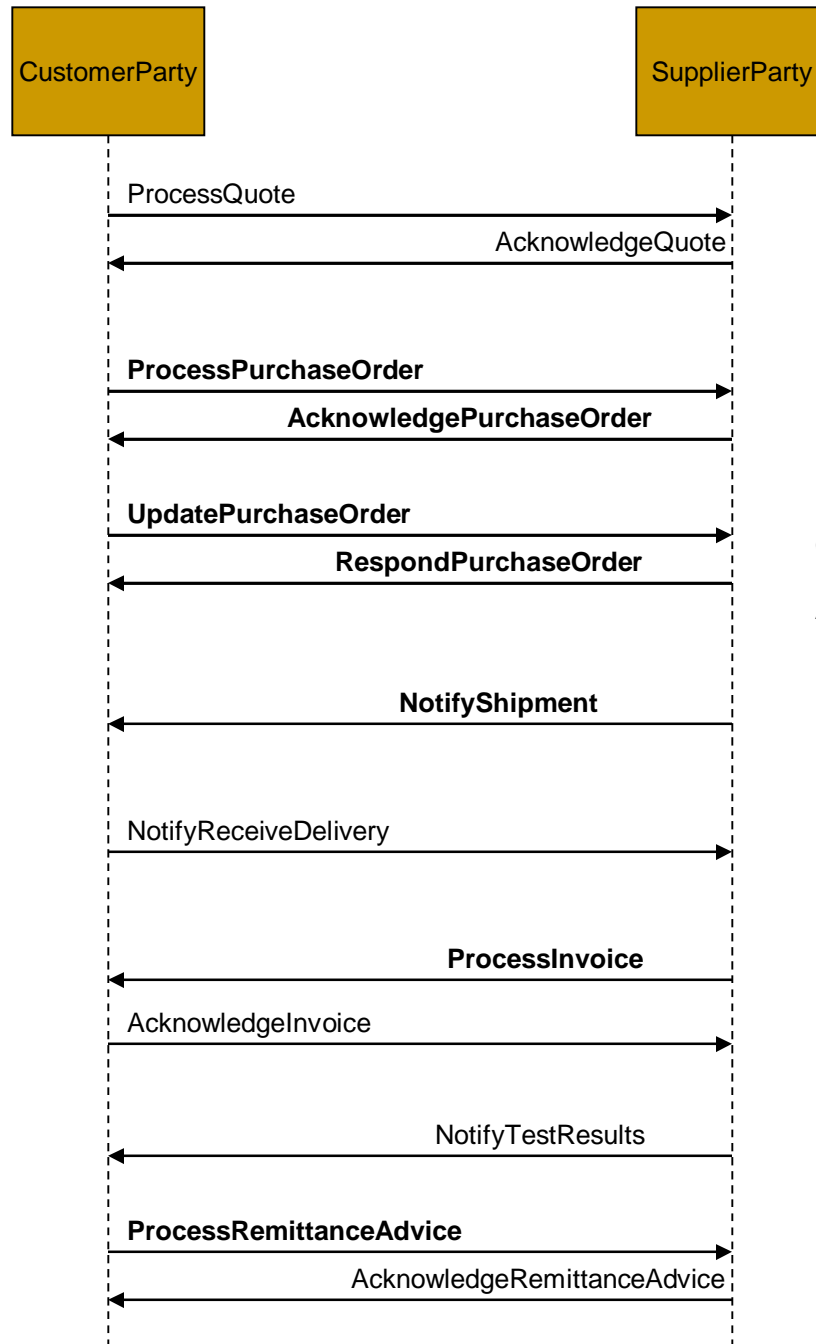
# Background: Extensibility

- All of the messages use a well-defined structure including standard mechanisms for customization.
  - A design objective of this project is to limit the customizations; however it will be necessary to extend the OAGi BODS in all messages to include the data originally defined by the MSCI XML team.
-

---

# Process: Analysis procedure

- MSCI Foundation team had identified the existing EDI X.12 documents used in the typical Order-To-Cash business process and developed a set of XML specifications to replace the X.12 formats. The MSCI XML specification is available at <http://gateway.msci.org/niag/index.htm>
  - OAGI version 9.4.1 Business Object Definitions were compared to the latest complete MSCI specification. The OAGI specification is available at <http://www.oagi.org/>
  - Element names follow two completely different perspectives and styles, so no attempt to match element names was done
  - Implied meaning behind the MSCI elements was mapped to a corresponding OAGI element as much as possible
  - Depth of nesting (the hierarchy) was not considered a gap with the exception of elements that had a different top-level parent between the header and detail sections
  - Potential uses of OAGI elements were identified as gaps if the selected element would be used to satisfy many MSCI elements (an example is the use of a generic cost element where each cost had a specific element in the MSCI specification)
    - Example: re-use of the OAGI InvoiceCharge element instead of unique line and subtotal elements
  - No analysis around unique business processes based on business or processing type was performed. In other words, the message flow outlined in this gap analysis models the typical sequence of messages in the Order-To-Cash business process
-



ConfirmBOD is potentially used as both a Functional Acknowledgement and an Application Advice

---

# GAPS: ProcessPurchaseOrder

- Currency type is optionally associated with each element and therefore raises the possibility of complications if utilized in a message.
  - In the header, the following fields are not available in the OAGi BOD:
    - expirationDate
    - Processing (indicator of a “type” of order)
    - shipFrom
  - The material type identification with both the MSCl XML formats and the OAGIS BODs is that item numbers are used instead of metal material attributes. This implies a predetermined understanding about material between the parties.
-

---

# GAPS: AcknowledgePurchaseOrder

- Currency type is optionally associated with each element and therefore raises the possibility of complications if utilized in a message.
  - In the header, the following fields are not available in the OAGi BOD:
    - expirationDate
    - processing
    - shipFrom
  - At the line level, the following fields are not available:
    - shipToBay
    - itemSizeDescription
    - processingInstructions
    - unloadDescription
    - colorDescription
    - certificationRequired
    - randomLength
    - minBundleWeight
  - Specific charge fields can use the OAGi generic DistributedCharge element:
    - surchargeDescription and its component elements
    - miscCharge and its component elements
  - There is no UserArea as a peer to the header element in the OAGi BOD.
-

---

# GAPS: NotifyShipment

- PackagingCode moves from a header to a line element
  - In the header, the following elements are not available in the BOD
    - fullTruckLoad
    - loadNumber
    - vehicleID
    - shipViaCode
  - The foreignShipment element can be inferred based on the DeliveryCountryCode element
  - The aggregation totals at the line level can use the generic DistributedCharge element:
    - totalSurchargeAmount
    - totalFreightAmount
    - totalTaxAmount
    - totalMiscChargeAmount
  - The surcharge field can use the generic DistributedCharge element.
  - At the line level, the following fields are not available:
    - itemLength
    - itemSizeDescription
  - Heat can use the generic OAGi ShipmentUnit although this will be inconsistent across other messages
-

---

# GAPS: ProcessInvoice

- Currency type is optionally associated with each element and therefore raises the possibility of complications if utilized in a message.
  - The aggregation totals in the header are not included in the OAGi BOD:
    - totalSalesAmount
    - totalSurchargeAmount
    - totalFreightAmount
    - totalTaxAmount
    - totalMiscChargeAmount
  - Payment Terms details moves from billTo area to InvoiceHeader area in the BOD.
  - The aggregation totals at the line level could use the generic OAGi element InvoiceCharge:
    - totalSurchargeAmount
    - totalFreightAmount
    - totalTaxAmount
    - totalMiscChargeAmount
  - Specific charge fields could also use the generic OAGi element InvoiceCharge:
    - Surcharge
    - miscCharge
-

---

# GAPS: Other MSCl messages

- Functional Acknowledgement (997) is not implemented by the OAGI standard. The standard specifically does not address the transport of messages.
  - ProcessRemittanceAdvice (820) was not fully defined in the MSCl specification and as a result, the gaps are extensive. A more effective approach is to review and amend or accept in full the OAGI specification as defined.
  - UpdatePurchaseOrder (860) was not fully defined in the MSCl specification as this is a very complicated transaction to manage. The OAGi specification would simply use the understood noun PurchaseOrder with any fields changed(?). The underlying process to support these changes was not defined.
  - AcknowledgePurchaseOrderChange (865) would not be a unique transaction under OAGi and instead rely on the respond verb and a corresponding Purchase Order noun. Again, the underlying process to support these changes is complicated and was not fully outlined in the MSCl specification.
  - Material Test Report (863) does not have a corresponding OAGi specification. (*Not in the scope of this Working Group?*)
-

---

# Next Steps: Technical Issues

There are aspects of exchanging documents that require a framework not included in the OAGI specification. These issues must be resolved in order to establish security and reliability between business partners and may be necessary for the implementation of the BODs.

- **Authentication:** you are who you say you are.
  - **Authorization:** you can only perform those actions that have been specifically permitted.
  - **Confidentiality:** your information is protected from others.
  - **Integrity:** your information is complete and only the information as originally sent by you.
  - **Non-repudiation:** both parties have full faith that the message was delivered and used for the purpose intended.
-

---

# Next Steps: OAGI messages

- The following standard OAGI messages should be included in the order-to-cash process:
    - ProcessQuote
    - AcknowledgeQuote
    - NotifyReceiveDelivery
    - AcknowledgeInvoice
    - AcknowledgeRemittanceAdvice
  - The following noun needs to be developed in collaboration with OAGI
    - MaterialTestResults
-

---

## Next Steps: Resolve the gaps

- Launch workgroup to understand extensibility mechanisms, create new element names in compliance with OAGI standards, and modify the BODs as necessary
  - Launch workgroup to understand the additional messages required in the order-to-cash cycle
  - Participate in the OAGI version 10 workgroup to include the above changes in the next major release of the OAGIS standard
-