Seller Integration Guidelines – DIRECT Materials

ABB Global Template

2022

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Table of Contents

VERSION HISTORY

This log is updated each time this Process Document is updated. The log identifies the version number, the date the version was completed, the author of the changes, and a brief description of the changes.

Version	Date	Author	Description
1.0	7th August 2022	Jan Sagl - SAP Ariba	Initial version of the document with finalized requirements for Robotics, clients Swe 050&070
1.1	7th September 2022	Jan Sagl - SAP Ariba	Finalized requirements for Baldor, client BUS
1.2	17th January 2023	Jan Sagl - SAP Ariba	Update requirements and samples for EL & Subcontracting Ship Notice with component consumption
1.3	6th April 2023	Jan Sagl – SAP Ariba	Subcontracting process description and message samples added Forecast process updates

1. Introduction

1.1 Purpose of the Document

The purpose of this document is to provide an overview of ABB's cXML requirements that are unique to ABB's procurement environment. Detailed explanation of these items can be found in the proceeding pages.

The message format described in this documentation is cXML which is the default format for electronic exchanges with SAP Ariba Network. If a supplier wishes to process other formats like EDI it will be a task of the integration project to check and adapt default cXML – EDI mappings. This task will be performed with the support of Ariba B2B content team.

Once the integration of messages from SAP Ariba Network has been established, it may be reused with other customers connected to Ariba with a potential additional effort to handle customer specific information. It is not guaranteed that all EDI formats support information sent or expected by ABB. Messages exchanged between ABB ERP and SAP Ariba Network are in the cXML format.

Some of the topics contained within this document are meant for educational purposes and are informational in nature in order to give the reader context and Ariba definitions to ensure that the details of each section are understood within an Ariba context.

1.2 SAP Ariba Network Transaction Validation

Please note, ABB has configured customer validation rules on the SAP Ariba Network which apply specifically to POs, Order Confirmations and ASN's.

Ariba applies the following set up logic for sellers:

- **Default Transaction Rules:** Default Transaction rules have been set to reflect ABB's specific validation requirements in terms of transactions on SAP Ariba Network. Default transaction rules apply by default whenever Country Based Rules are disabled, or seller is **NOT** placed in a specific group.

Invoicing (TBD for Baldor) - To view ABB invoicing rules (both country-based and general) please follow the steps:

1. Login to your supplier account on the SAP Ariba Network
2. In the upper right corner of the home page, choose **Company Settings > Customer Relationships**
3. **Click** ABB's name under your list of **Current** trading partners

2. ABB's Detailed Specifications and Requirements

2.1 SAP Ariba Network Identifier (ANID)

- ABB's Production ANID: AN01478434247
- ABB's Test ANID: AN01478434247-T

2.2 Material Types Scope

Indirect Material: NO

In case you also have in scope Indirect Material process another specification will be provided to you.

Please make sure to confirm the scope of your project directly with ABB's Team.

Direct Material: YES

This document will cover only the information related to the Direct materials specified in chapter 3.

2.2.1 Ship To Locations in scope:

Each ABB's Business Area have different shipping locations in scope. Please review the below lists valid for each BU:

RA, PA:	MO:	EL	
SESAP050 address list.xlsx SESAP070 address list.xlsx	Baldor address list.xlsx		

2.3 cXML Delta Requirements (Sample files)

In the following excel workbook you will find baseline cXML transactions accepted by the SAP Ariba Network Cloud Integration Gateway (CIG) and the SAP Ariba Network, including the requirements for ABB's scope and the UoM list used by ABB BA ERPs:

RA, PA (SESAP 050,070)	MO (BUS)	EL	
		DESAP	IS
cXML Delta requirements	cXML_Delta_Requirements.xlsx	cXML_Delta_Requirements.xlsx	cXML Delta Requirements

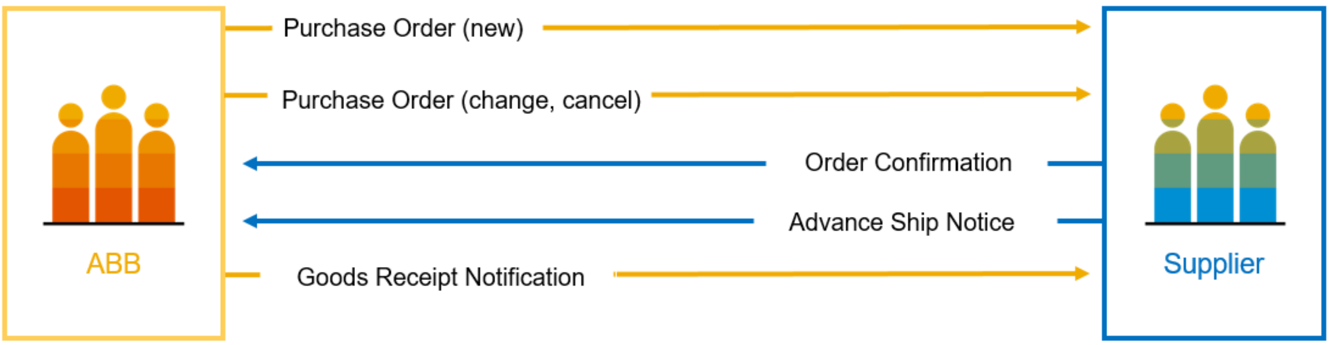
3. Processes – Direct Materials

Please note that this version of Integration guidelines only covers processes designated for supplier enablement / integration in the pilot phase.

3.1 Processes in Scope

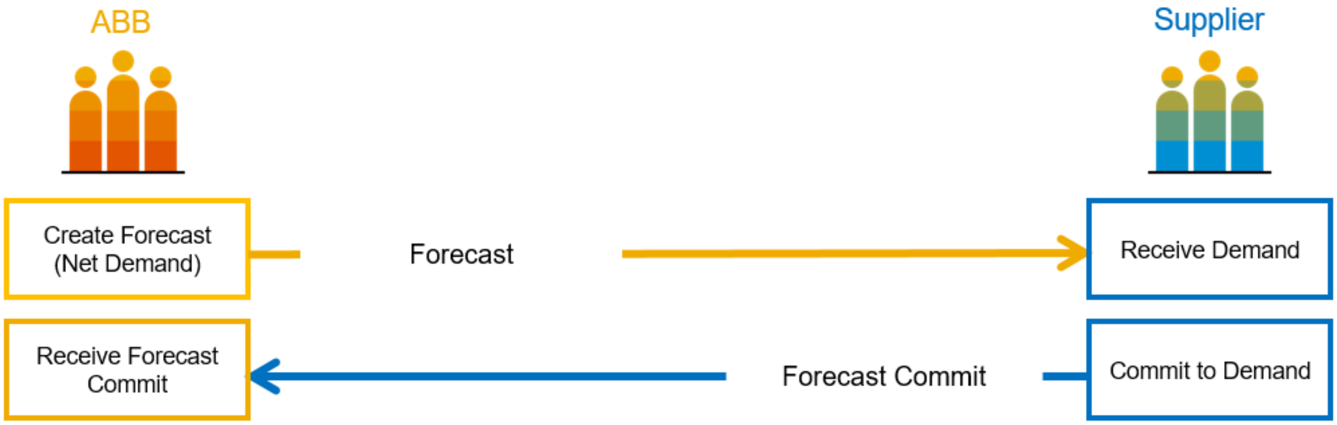
Current ABB's project covers the following scope:

3.1.1 Purchase Order Collaboration



Document type:	Document flow description:
PO (Purchase Order) cXML OrderRequest	ABB creates, change, or cancel purchase orders and send them to the SAP Ariba Network
OC (Order Confirmation) cXML ConfirmationRequest	A Supplier sends the Order Confirmation to SAP Ariba Network. ABB receives the order confirmations from the SAP Ariba Network.
ASN (Advance Ship Notice) cXML ShipNoticeRequest	A Supplier sends the ASN, and ABB receives the inbound delivery from the SAP Ariba Network
GR (Goods Receipt) cXML ReceiptRequest	ABB sends information about booked Goods receipt based on physical goods delivery at ABB Plant or a customer's location.

3.1.2 Forecast Collaboration



Document type:	Document flow description:
Forecast cXML ProductActivity	ABB shares net demanded quantities after material requirement planning in ABB's backend system on a daily/weekly/monthly/quarterly basis. It shows potential Purchase orders and/or Scheduling Agreement delivery line quantities in a certain horizon.
Forecast Commit cXML ProductReplenishment	A Supplier makes commitment to deliver quantities of goods specified in ABB's forecast demands.

3.1.3 Subcontracting collaboration

Document type:	Document flow description:
PO (Purchase Order) cXML OrderRequest	ABB creates, change, or cancel purchase orders with subcontracting item containing the component (raw material) data.
OC (Order Confirmation) cXML ConfirmationRequest	A Supplier sends the Order Confirmation to SAP Ariba Network. ABB receives the order confirmations from the SAP Ariba Network.
ASN (Advance Ship Notice) cXML ShipNoticeRequest	A Supplier sends the ship notice that reflects physical delivery of the finished goods. Supplier has also option to report consumed components (raw materials).
GR (Goods Receipt) cXML ReceiptRequest	ABB does a backflush Goods receipt based on finished goods delivery at ABB Plant and reported consumed components by a supplier – inventory is updated.

Component Inventory	
cXML ProductActivity	

4 Purchase Order Collaboration

4.1 Purchase Order

The Purchase order (PO) message is generated by ABB ERPs and transmitted electronically to suppliers via SAP Ariba Network. The electronic message is integrated into the Ariba Supply Chain Collaboration module for online display and processing or integrated into the supplier ERP. When the supplier receives the purchase order, ABB expect to receive a confirmation after the supplier has checked their ability to deliver it.

The PO message contains the terms of an order for standard purchase.

A PO message is sent to Ariba:

1. At creation time
2. When a change is made to a supplier relevant information
3. During the cutover preceding go-live, when all open Purchase Orders need to be sent to SAP Ariba Network to allow supplier Order Confirmations and Advance Shipment Notice to be linked with the original PO / OR all open Purchase Orders won't be sent to SAP Ariba and supplier finishes the process on the legacy solution. The approach will be individually discussed with each supplier and ABB business team.

4.1.1 Purchase order types in scope

Purchase order type	In scope Y/N
New PO	Yes
Change PO	Yes
Cancel PO	Yes – both item/full PO cancellation
PO with attachments	Yes – PDF printout of PO from local ERP MO - TBC
Free text PO	No – material ID is always included

An order change can include updates of information in the order at header or item level:

- Change in a field at header or item level relevant to the supplier
- Change of quantity, date, price decided by ABB or to reflect changes communicated by the supplier through the order confirmation message
- Adding or removing PO items
- Cancellation of the full PO

4.1.2 Purchase order message structure

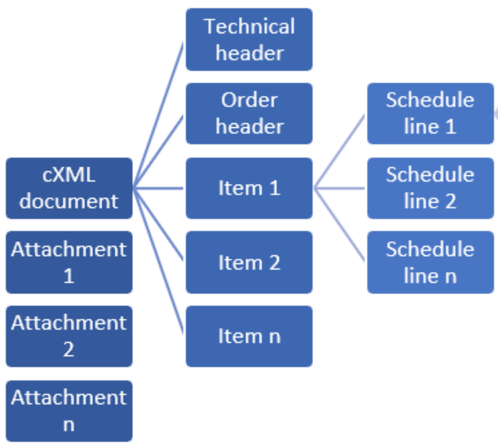
The <OrderRequest> tag identifies the cXML message as a Purchase Order.

The PO message in cXML format is structured as below:

- XML message technical header
- Order header information
- Items information
- Schedule line information

If an information which is required for the supplier to create the order and support the business process in place with ABB is missing from the message content, the supplier should report it to ABB.

Overall message structure and segment grouping:



The section below describes the content, information provided in the message and the related business rules.

- **<u>XML message technical header:</u>**
  - cXML format definition and DTD version
  - Message unique PayloadID and time stamp
  - Unique Ariba partner IDs (ANID) is used for message routing between ABB and supplier systems/middleware's through SAP Ariba Network

- **<u>Order header information content</u>**
  - Order number and creation date
  - Type indicating whether it is a new, an update or a deletion message type
    - If an item is deleted, it disappears from the new PO version submitted with a "update" indicator in the header
    - If the order is completely cancelled, the PO is resent with a "delete" transmission type with all its line item
  - Order version - indicating the version of the order:
    - Newly created PO have a version 1
    - Every PO update transmitted increments the version by 1
    - In case of an order cancellation, the version stays the same as one previously sent
- **<u>Item information</u>**
  - Line item number
  - Item ID and description
  - Material revision, drawing revision (applicable for following BUs: Baldor)

        - Expected delivery date
        - Quantity and unit price
        - Tolerances allowed by ABB on quantity, date and price
        - ABB expectation on Order confirmation and Advance ship notification
        - Reference to a quantity contract/outline agreement (applicable for following BAs: PA, EL)
    - **Schedule line information**
        - List of expected delivery dates and quantities for an PO item
            - Schedule line number, date and quantity
        - When schedule lines are specified, the expected delivery date at item level is always equal to the first schedule line.
        - Schedule lines are sorted chronologically
        - In Swe 050 & 070 BUs there is always a single schedule line per PO item
        - In Baldor there can be multiple schedule lines per PO item (some raw material). Please consult with ABB business team if this may be relevant for your materials.

4.1.3 Purchase Order main sections

The ANID is the unique account ID for a buyer or a supplier on SAP Ariba Network.

The Network ID in the <From> section indicates the ABB's unique ID on Ariba. There is one ID for the Production environment and one for the Test (Pre-Production) environment.

The Network ID in the <To> section indicates the Production or Test ID of the supplier registered on Ariba.

- Header/Ship-to
    - Ship-to section provides details of where the goods must be shipped. If all line items must be delivered to the same location, the ship-to section can be found at header level, under the <OrderRequestHeader> section, but not at item level. ABB BUs can use a different ship-to locations on line level.
    - When available, the addressID attribute in <Address> segment can be used as a unique address identifier.
    - StorageLocationID is also unique – there are different storage locations available under the same addressID.
- Header/Bill-to
    - This segment is guiding your invoice process. Bill-to address ID provided in a PO should be returned by a supplier on an invoice.
    - At this stage the invoicing process is happening outside of SAP Ariba Network.
- Item/Part IDs
    - The item section can contain from 1 to n items
    - If a line is deleted from the PO, it is not transmitted anymore in the message
    - Supplier part IDs are maintained in ABB Material Master data only for certain materials. It should be agreed individually with each supplier if ABB buyer part ID or supplier part ID will be used to identify the material correctly in supplier's backend system.
    - If there is a specific material revision maintained by ABB, this information will be populated in the supplier part ID element as follow:

```xml
<ItemID>
  <SupplierPartID revisionID="J">110-064-10801</SupplierPartID>
  <BuyerPartID>35SB0055B00</BuyerPartID>
</ItemID>
```

- Drawing revision is provided in custom “extrinsic” field on the item level as follows:

```xml
<PlannedAcceptanceDays>0</PlannedAcceptanceDays>
<Extrinsic name="ReceivingType">4</Extrinsic>
<Extrinsic name="extLineNumber">00001</Extrinsic>
<Extrinsic name="revisionNo">F</Extrinsic>
```

- PO Item also can be marked as Kanban in case it’s Kanban order -> can only apply for Sweden BUs.

- Item/Pricing
  - The <UnitPrice> tag contains the item unit price. The total price for the line is not transmitted but can be calculated my multiplying the Unit Price and the quantity.
  - The <PriceBasisQuantity> qualifies Price with a 'Price Per' quantity. It is set to 1 in most cases with a <conversionFactor> to 1.

    <PriceBasisQuantity> includes a unit of measure to describe what the price and price quantity applies to, such as, a price of 100€ could apply to 1 case of product or to 25 Kilograms.

    Examples below show how to perform the price calculation at line level.

    Example 1:

Line item Quantity	100 pieces
Price per UOM	3 EUR for 5 PF (pallet)
Qty of Packaging UOM	5 PF
Conversion factor	1 piece = 0.2 PF (20 pieces per PF)
Price at line level	100 x 3/5 * 0.2 = 12 EUR

    Example 2:

Line item Quantity	5223 pieces
Price per UOM	725 EUR for 1000 MCT
Qty of Packaging UOM	1000 MCT
Conversion factor	1 piece = 0.034 MCT
Price at line level	5223 x 725/1000 * 0.034 = 128.747 EUR

    *PLEASE NOTE: these examples are taken from the general cXML reference guides, just to show the correct method of calculation and what is required back in order confirmation message and ship notice (in case a supplier decides to provide the information about the unit price in these messages).

- Item/Control Keys
  - This section includes:
    - Instructions on whether the supplier should send an Order Confirmation, Advance Ship Notice or Invoice

OC instruction	ASN instruction	Possible sequence of messages
Allowed	Allowed	No OC → No ASN
		No OC → ASN

		OC → No ASN
		OC → ASN
Allowed	Not allowed	OC → No ASN
		No OC → No ASN
Not allowed	Allowed	No OC → No ASN
		No OC → ASN
Not allowed	Not allowed	No OC → No ASN
Required before ASN	Allowed	OC → ASN
Required before ASN	Not allowed	Not relevant

- Tolerances allowed by the ABB in the supplier Order confirmation unit price, quantity and delivery date.
- Tolerances allowed by the ABB in the supplier Advance Shipment Notice on quantity and delivery date.
- Unit price tolerance will be also maintained by ABB on SAP Ariba Network's validation rules.
- **IMPORTANT NOTE:** integrated supplier is advised to extract control keys and read the OC and ASN instructions, including the tolerances.

- Attachments
  - If processed by the supplier connector/middleware they must be detached from Multipurpose Internet Mail Extensions (MIME) envelope and stored. A supplier can configure message routing settings in their SAP Ariba Network account in a way that SAP Ariba Network removes attachments and forwards only the URL to the file in the cXML payload.

4.1.4 PO Customizations

cXML allows custom field extension by using of the 'Extrinsic' element. The Extrinsic element can appear within Header or Item section of the message. Please be so kind to review the Delta requirement for the full list of the extrinsics specific to ABB PO's.

4.1.5 Legacy PO (cutover process)

ABB cutover process be discussed case by case and will run upon an agreement between ABB and integrated supplier.

4.2 Order Confirmation

ABB has the Order Confirmation in scope. Supported methods of providing it are:

- cXML
- Online

4.2.1 Order Confirmation types in scope

Order Confirmation Types	In scope Y/N
Full PO Acceptance	**Yes**
Partial order confirmation for a part of PO (part of PO items)	**Yes**
Partial order confirmation for a part of a quantity of PO item	**Yes –** but limited by quantity tolerances. Supplier should always confirm full qty of PO item
Order confirmation with attachments	**No**
Full PO rejection	**No** - ABB does not allow any rejections of the Purchase Order nor the items

4.2.2 Order Confirmation attribute requirements

OC Attribute	Comments
Unit price	Optional In case Unit price is included, a supplier must provide correct pricing per advanced pricing details included on a PO. Please see section Purchase Order Main section - Item/Pricing
Unit Price Currency	Suppliers are not allowed to change the currency for unit price on OC
Unit of measure	Mandatory
Delivery date is mandatory and may be different from the one in the PO	Suppliers are allowed to edit delivery dates up to the tolerances in the control keys of the PO.
Estimated shipping date	Optional
Price corrections	Managed by validation rules on SAP Ariba Network
Supplier and Buyer Part Ids	Must be the same as on the original PO
Description and classification domain, comments	Optional. It depends on the Order Confirmation type that a supplier decides to use. Please see Order Confirmation samples in the cXML Delta requirements.

4.2.3 OC and re-confirmation after a new PO version - change PO

The confirmation status of items on a previous order is not retained. Then each time when there is a change PO, the supplier will have to use OC “new” for the first confirmation of the new PO version.

- If the OC is not sent, it may prevent the ASN to be sent.
- Examples of status behaviors:

Timeline	**t1** →	**t2** →	**t3**	
Sequence of messages	**PO**	**OC**	**PO change**	**Confirmation status after PO change:**
PO #1	Line 1	Line 1	Qty/date/price is changed	**Previous OC status is lost, another OC is required**
PO #2	Line 2	Line 2	Text is changed	**Previous OC status is lost, another OC is required**
PO #3	Line 3	Line 3	No change	**Previous OC status is lost, another OC is required**

- **IMPORTANT NOTE:** reconfirmation after the PO change is needed to align with PO content.
  Although the last PO version received by the supplier reflects exactly a previously sent confirmation, another confirmation is required.

4.2.4 Order confirmation general rules

- An OC can only include items belonging to the same Purchase Order. (The message only allows to refer to a single PO number)
- If a supplier has started generating OCs from its ERP, these OCs can't be edited from SAP Ariba Network. Similarly, if an OC is initially created from SAP Ariba Network subsequent OCs coming from a supplier ERP will not be accepted by SAP Ariba Network. This rule must be taken into account when defining the project cutover strategy.
- If an OC message is blocked in CIG, it will not reach ABB's ERP. Rejection details will be provided in Technical Acknowledgment (cXML StatusUpdateRequest) or email notification triggered by SAP Ariba Network, if configured.
- If ABB has requested the OC to be sent before the ASN in control keys, sending an ASN without OC will cause SAP Ariba Network to report an error and the ASN will not reach the ABB's ERP.
- Supplier can submit a Confirmation of multiple delivery dates for a single PO item (split quantity with different delivery dates). In this case **a supplier is required to sort the split delivery dates chronologically from the earliest to the latest date.**

4.2.5 Order Confirmation details

- **<u>Confirmation header:</u>**
  - The Order confirmation message is only allowed by SAP Ariba Network if the corresponding PO line item <OCInstruction> value equals "allowed" or "requiredBeforeASN"
  - <ConfirmationHeader> operation must equal "new" for the 1st OC transmission, then "update" for re-confirming the same PO version.


```
- <Request deploymentMode="test">
  - <ConfirmationRequest>
      <ConfirmationHeader confirmID="OC123 Test" operation="update" type="detail" noticeDate="2019-01-18T02:02:18-08:00"> </ConfirmationHeader>
```


  - Summary of the logic applied to Order confirmation "operation" attribute:

1. The operation attribute with a "new" value is only used when one or more lines are confirmed for the first time. Several OCs referring to the same Purchase order having operation= "new" can't be sent.
2. The operation attribute with an "update" value in used when at least one of the confirmed lines was previously confirmed (even if at least one of them is newly confirmed). Confirming with "update" requires that all previously confirmed lines are included again in the OC message. In this case it may happen that an OC line confirms a delivery in the past which is accepted by SAP Ariba Network.
3. Example:
   - t1: PO is sent with 4 lines
   - t2: Line 1 and 2 are confirmed
   - t3: Line 3 is confirmed. Line 1 and 2 need to be resent as they were previously confirmed
   - t4: Line 2 and 3 are updated, Line 4 is confirmed for the first time. Line 1 needs to be resent as it was previously sent

Timeline	t1	t2	t3	t4
Sequence of messages	PO1	OC1	OC2	OC4
OC operation attribute		**new**	**update**	**update**
Lines included in PO and OC	Line 1	**Line 1**	Line 1	Line 1
	Line 2	**Line 2**	Line 2	**Line 2**
	Line 3		**Line 3**	**Line 3**
	Line 4			**Line 4**

4. Summary of possible business cases including change PO:

	Message	OC operation attribute	Message content			Comment
Step 1	PO v1		PO item 1	PO item 2	PO Item 3	PO new with 3 items
Step 2	1st OC	new	**PO item 1**	**PO item 2**	**PO Item 3**	Confirmation of all 3 items
Step 3	2nd OC	update	PO item 1	PO item 2	**PO Item 3**	Reconfirmation for item 3 with a new delivery date. Items 1 and 2 must be included again.
Step 4	PO v2 (update)		PO item 1	PO item 2	PO Item 3	PO change made to item 1
Step 5	3rd OC	new	**PO item 1**	**PO item 2**	**PO Item 3**	OC must be sent with operation "new" – confirmation status was reset after a change PO.

5. Summary of authorized statuses per business case (adapted to the business of ABB). The decision is up to a supplier which Order confirmation will implement. Both options are shown in the Delta Requirements message samples.

	Supplier Action	Confirmation Header Status	Item Level Status	Delivery date	Item Section (Part IDs, Unit Price, etc.)
Confirm PO as is	Accepted without any change	accept	accept (Mandatory)	Mandatory	No

	Supplier Action	Confirmation Header Status	Item Level Status	Quantity and Delivery date	Item Section (Part IDs, Unit Price, etc.)
Confirm PO with changes	Confirmed with changes to the delivery date	detail	accept	Mandatory	No
		detail	detail	Mandatory	Optional
	Confirm with changes to the quantity (within tolerance)	detail	detail	Mandatory	Optional
		Remaining item quantity is set to un-confirmed with following item level statuses: unknown, backordered	unknown	No	Optional
			backordered	Mandatory	Optional
	Confirm with changes to the price (within tolerance)	detail	detail	Mandatory	Optional

	Supplier Action	Confirmation Header Status	Item Level Status	Quantity and Delivery date	Item Section (Part IDs, Unit Price, etc.)
Confirm PO with or without changes	Confirmed with or without changes to the delivery date	allDetail	accept	Mandatory	Mandatory
		allDetail	allDetail	Mandatory	Mandatory
	Confirm with changes to the quantity (within tolerance)	allDetail	allDetail	Mandatory	Mandatory
		Remaining item quantity is set to un-confirmed with following item level statuses: unknown, backordered	unknown	No	Mandatory
			backordered	Mandatory	Mandatory
	Confirm with changes to the price (within tolerance)	allDetail	allDetail	Mandatory	Mandatory

IMPORTANT NOTE: these are all the possible scenarios for integrated vendors. The final decision which approach will be implement and mapped is up to the supplier depending on ERP capabilities. cXML structure and ABB's ERP can treat each of the listed scenarios.

Both OC variants with header status detail/allDetail are shown in the Delta Requirements message samples.

4.2.6 OC Attachments

Attachment of external files to a cXML document in a single envelope is done using Multipurpose Internet Mail Extensions (MIME). The cXML document contains references to external parts sent within a multipart MIME envelope. More information can be found on cxml.org. The attached document should be encoded (Base64 Encoding) to ensure maximum protection against corruption. The way of sending attachments to CIG is the same for all kind of messages, so this part is also valid for Shipping notifications.

4.3 Advance Ship Notice

Advance Ship Notice (ASN) is in the general scope of ABB SCC processes. If ASN is required by a particular integrated supplier will be discussed case by case with ABB BU business team. Supported methods of providing the ASNs are:

- cXML
- Online

IMPORTANT NOTE: The Purchase Order Control keys instructs a supplier whether ASN is required or not. Please refer to chapter Purchase order main section - **Item/Control Keys**

ASN Types Supported	In Scope Y/N
Full ASN	**Yes**
Partial ASN for a part of a PO (part of PO items)	**Yes**
Partial ASN for a part of a quantity of a PO item	**Yes** – if allowed by over/under-delivery tolerance

Summary ASN (ship notice referring to more than one purchase order)	**Yes**
ASN with attachments (e.g. measurement, certificate of quality etc.)	**No**

4.3.1 Advanced Shipping Notice Details (ASN)

Required ASN information	Comments – valid for all types of PO
Unit price	Optional
Unit of measure	Mandatory
Delivery date	Multiple delivery dates <u>on the same ASN</u> are not allowed
Actual shipping date	Optional
Comments on the header level and line level	Allowed by cXML but not checked by ABB
Ship Control section - carrier	Optional
Supplier and Buyer Part Ids changed or additions (versus the PO)	Not allowed
Country of origin	No – Swe 050 & 070; Baldor
Batch/Serial managed items	Yes – batch managed items may be in scope for Torque and Baldor
Components consumption	Yes – in Subcontracting backflush process a supplier can report raw materials (component) consumption

4.3.2 ASN Customizations

cXML provides for extension by the use of the 'Extrinsic' element. The Extrinsic element can appear within various cXML elements. Please be so kind to review the Deltas for the full list of the extrinsics from ABB.

4.3.3 Batch or serial managed items.

ABB does not require to provide any batch or serial numbers in Advance Ship Notice document currently.

4.3.4 ASN cancellation

ASN cancellation is allowed. Modification of an ASN can be done by sending a cancellation ASN followed by a new ASN with a new ASN ID. ASN cancellation should not be sent after a Goods Receipt has been received for at least one line of the ASN. In such a case you should contact your buyer to find a workaround solution.

- ASN cancellation (very simple cXML structure)
  1. The operation attribute must be set to "delete"
  2. The ship notice ID (shipmentID) need a '_1' to be appended to the old ship notice ID
  3. A document reference tag references the old ship notice
  4. ShipNoticeHeader is the only required tag under ShipNoticeRequest:

```
- <Request deploymentMode="test">
  - <ShipNoticeRequest>
    - <ShipNoticeHeader shipmentType="actual" shipmentID="ASN-17-00000287_1" operation="delete"
      noticeDate="2019-06-12T12:37:00-00:00" deliveryDate="2019-06-12T12:00:00-00:00">
        <DocumentReference payloadID="782372508926664GIE3989170FT1720190619135424-539571"/>
      </ShipNoticeHeader>
    </ShipNoticeRequest>
  </Request>
```

4.4 Goods receipt

Goods receipt will be recorded in ABB's ERP system when the goods physically arrive at the relevant ABB Plant (or at Customer's location). The receipt will contain a reference to the Purchase order, supplier's Advance Ship Notice, part ID and quantity received.

Goods receipt will not be shared via SAP Ariba Network by Sweden BUs.

5 Forecast Collaboration

5.1 Forecast

ABB will share a Forecast of demanded quantities based on Net demand requirements on daily basis - **please always discuss with local BU business team about the frequency** as this might be specific per different client/location. Forecast contains a full overview of material demand based on the open Purchase requisitions (PRs are usually turned into firmed Purchase Orders ca 30 day prior to requested deliver) in a certain time horizon. It will contain the full "snapshot" of demanded quantities, not only changes to a demand.

ABB can request a supplier to commit to deliver demanded quantity by sending the Forecast Commitment.

Attributes and Requirements	Comments
Buyer Part ID provided	Yes
Supplier Part ID provided	Yes, in case the supplier part ID is maintained in ABB backend material master data.
ABB Ship To (Plant) Code	Yes
Net demand (Quantity)	Yes
Date of demand	Yes, will be equivalent to Requested Delivery date on firmed Purchase order.
One file can contain multiple material codes from multiple ABB plants	Yes, Forecast will usually contain multiple materials per a single ABB plant.
Only active part numbers shared in Forecast	No. ABB won't turn off Forecast for inactive parts. Inactive part numbers will have 0 demand over the entire horizon.

The date range – horizon of Forecast covers 60 calendar days before the current date of Forecast to maximum of + 999 calendar days in future by default.

IMPORTANT NOTE: The frequency, horizon, nature of the demand shared in the forecast with a supplier will be discussed individually with a local BU business counterpart on ABB side during the Integration project.

5.2 Forecast Commit

Allows suppliers to make commitments to deliver quantities of goods specified in ABB's forecast demands. ABB can use the Supplier-provided commit in their planning tool to manage the constrained planning process or firm up their open requirements. Supported methods of providing the Forecast Commits are:

- cXML
- Online / CSV

Forecast commitment is not fully integrated to ABB's backend system. Forecast committed dates and quantities by a supplier will be reviewed by ABB's users on the Portal.

6 SUBCONTRACTING COLLABORATION

6.1.1 Subcontracting PO

Subcontract PO contains detailed information about component – quantity, UOM, component ID, description and buyer part ID:

```
<SubcontractingComponent quantity="1.000" requirementDate="2022-08-17T12:00:00-04:00">
  <ComponentID>10_1_0001</ComponentID>
  <UnitOfMeasure>EA</UnitOfMeasure>
  <Description xml:lang="EN">UPS PowerValue 11RT G2 2 kVA B global</Description>
  <Product>
    <BuyerPartID>4NWP100201R0001-US</BuyerPartID>
  </Product>
</SubcontractingComponent>
```

Subcontract PO has item category "subcontract".

```
</OrderRequestHeader>
<ItemOut quantity="1.000" itemCategory="subcontract" requestedDeliveryDate="2022-08-22T12:00:00-04:00" lineNumber="10">
  <ItemID>
```

NOTE: Subcontracting PO is in scope for the following ABB BUs: EL

7 SUPPLEMENTAL DOCUMENTATION

This document contains ABB specific information regarding transaction requirements. Information in this document does **NOT** cover the complete technical aspects of integrating with the SAP Ariba Network. Below are two sections for supplemental documentation to be used with this document for cXML transaction format. Only refer to the section that pertains to the format your organization with be sending/receiving from the SAP Ariba Network (cXML).

cXML Section for Supplemental Documentation

New cXML supplier to SAP Ariba Network must:

1. Support a DTD (document type definition) validation tool internally and download the document type definitions (DTD's) for all supported transactions.
2. Support HTTPS protocol. Ariba supports HTTPS (not HTTP) only for cXML transactions.
3. Review the cXML Solutions Guide and cXML User Guides.

cXML Document Type Definitions (DTD's):

- http://cxml.org Download InvoiceDetail.zip for the InvoiceDetailRequest.dtd.
- http://cxml.org Download cXML.DTD for the OrderRequest
- http://cxml.org Download Fulfill.dtd for ConfirmationRequest/ShipNoticeRequest/ReceiptRequest

Recommended Resources:

The Ariba cXML Solutions Guide (URL to post documents to Ariba) and 14s SAP Ariba Network Release Guide. May also be downloaded via login to your supplier account (https://supplier.ariba.com) on the SAP Ariba Network:

1. Click the 'Help' link in the upper right-hand section of the page.
2. Select 'Help Center' from the drop-down menu.
3. Enter Search… key words or full document name.
4. Click on the pdf document name to open and download.

6 SAP ARIBA NETWORK SUPPORT INFORMATION

Supplier Integration (SI) support is available to ABB suppliers. SI support is available during the test phase and two weeks post-go live with ABB , or until the first production transactions are exchanged. After that period, suppliers must leverage Ariba Technical Support for any production issues.

By Web:

If you can log into your SAP Ariba Network Account	If you cannot log into your account
• Login at http://supplier.ariba.com • Once logged in, click on the *'Help'* link located on the upper right hand side of the page and choose *Help Center.* • Select Support located in the top right hand side of the page. • Options in the bottom right hand side of the page are Live Chat or By Phone. • An Online Service Request can also be submitted by selecting the "Start" button in the top center of the page.	• Go to http://supplier.ariba.com • For login issues select the *"Forgot Username"* or *"Forgot Password"* links near the top of the page. • Fill out the web form and select the *Submit* button.

www.sap.com/contactsap