SAP Business Network
Supplier Integration Solution Blueprint

Michigan State University

THE BEST RUN SAP

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1 VERSION HISTORY

This log is updated each time an update is made to this guide. 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	Description
1	11/4/2022	Draft

2 DOCUMENT PURPOSE AND USES

This document defines the scope of the project and documents various business and technical aspects that relate to supplier integration.

The aim is to identify all possible integration requirements from both parties to facilitate a smooth and swift implementation.

Any exceptions and areas of concern are analyzed and documented prior to the beginning of the design phase.

Assumptions:

There will be a single primary point of contact with each Trading Partner for Project Management activities.

It is assumed that assigned resources have the required skillset, appropriate system accesses, and availability to fulfil all responsibilities:
- Knowledge of business operations with customer
- Experienced Developers

The success rate of the project highly depends on proper and timely identification of all business/transaction scenarios to be covered during testing. It is imperative for suppliers to work with their Buyer and SAP Business Network integration resources to proactively identify any such cases and make sure they are documented and validated through testing.

3 BUSINESS OVERVIEW

The purpose of undertaking this initiative is to increase efficiency and effectiveness of the organization with targeted business benefits such as:
- Simpler and more efficient E2E process experience
- Reduced data maintenance & improved data quality
- Enhanced user catalog experience
- Catalog and supplier enablement services
- Improved insight from shared real time data
- Functional gaps closure, process automation
- Improved enforcement of legal compliance
- Step-change in vendor self-service
- Step change in "touchless" payment
- Tail end management in user self-service
- Integrated contingent and industrial workforce management

4   TECHNICAL LANDSCAPE

Description	Buyer Specific Details
Environment Infrastructure	
ERP	SAP R/3 v4.7 SAP ECC 5.0 SAP ECC 6.0 SAP S/4 HANA Oracle 12c v11.2.0.4 Oracle 12c v12.1.0.2 Oracle 12c v12.2.0.1 PeopleSoft
Middleware	** List all sources
Solutions Purchased	SAP Business Network for Procurement • SAP Ariba Buying and Invoicing (B&I) Supplier Lifecycle and Performance (SLP) SAP Business Network for Supply Chain SAP Business Network for Logistics SAP Business Network for Asset Management SAP Business Network for Trading Partners SAP Business Network Discovery
UoM Classification	UNECE UOM
Commodity Codes	Custom

5   PROJECT SCOPE

The following tables outline the requirements unique to this buyer procurement environment, as detailed in the Excel Transactions Samples Requirements. Not all required elements outlined in the DTD are represented below, as this is meant to only highlight information that is important to your Buyer.

*Current integrations are focused on catalog only. Any setting that is highlighted in purple can be ignored as it is not currently in scope but will be in the future.

Description Documents in Scope Summary	Mandatory	Optional	Out of Scope
Purchase Order	X		
Change Order	**X -** Not in scope for current integration		
Order Confirmation		X	
Advance Ship Notification		X	
Receipt Notification			X
Service Entry Sheet			X
Service Entry Sheet Response			X
Invoice	X		
Remittance Advice			X

Description Business IDs	Company Name	ANID	DUNS	DUNS_4
Buyer	Michigan State University	AN11098790882	N/A	N/A
Supplier				

Description Business Units	Location (City/State)	Business/Vendor ID	In Scope (Y/N)	Unique Requirements

5.1 Orders

Description Type	Buyer Supported (Y/N)	Supplier Supported/Format (No or online, email, cXML, D96A, X12, CSV, PIDX, etc.)
Catalog	Y	
Non-Catalog/Free Text	**Y -** Not in scope for current integration	
P-Card	N	
Blanket Order – with release	N	
Blanket Order – without release	N	
Service PO (Service structure/without parent - child lines)	**Y -** Not in scope for current integration	
Service PO (Service structure/with parent - child lines)	N	
Service PO (Material structure)	N	
Change Order - catalog	N	
Change Order – non-catalog	**Y -** Not in scope for current integration	
Change Order – P-Card	N	
Cancel Order	Y	
Exception or Urgent/Machine down Order	N	
Consignment Order	N	
Work Order	N	
Capital Equipment Order	N	

	Description Attributes	Buyer Comments	Supplier Comments
General	Split Orders	• N/A	
	Order Numbering	• PO numbers are Ariba generated (PO###)	
	Attachments	• Will not be sent	
Header	Bill To	▪ Required to be captured and returned on invoice the invoice.	
	Ship To	• Does not need to be captured and returned on invoice.	
	Private End User	• Not relevant for processing	
	Purchasing Agent	• Not relevant for processing	
	Payment Terms	• Required to be captured and returned on the invoice.	
	Need By Date	• N/A	
	Comments	• Terms and Conditions will be provided in comment section	
	Control Keys	• N/A	
	Service Date (start & end)	• **Will be sent on service order as an extrinsic** – Not in scope for current integration	
	Order Item Numbering	• Sequential	
Line Item	Supplier Part ID	• Will not be sent for non-catalog orders.	
	Unit Price	• Two decimal places are supported on invoice	
	Advanced Pricing/Price Basis Quantity	• Advanced Pricing/Price Basis Quantity (PBQ) • Accepted at line-level	
	Unit of Measure	• UNUOM	
	Ship To	• Does not need to be captured and returned on the invoice.	

Description / Attributes	Buyer Comments	Supplier Comments
Extrinsic Values	• Service start and service end date must be returned on invoice.	
Control Keys	• N/A	
Service Date (start & end)	• Will be sent as extrinsics	

5.2 Order Confirmation

*Only full order confirmations are accepted

Description / Type	Buyer Supported (Required/Optional /Out of Scope)	Supplier Supported/Format (online, cXML, X12)
Header Level	Optional	
Line Level	Optional	

Description / Attributes		Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
General	Attachments	Optional	• Allowed	
	Change Orders	Out of Scope		
	Invoicing	Optional	• Order Confirmation is not required before invoicing	
	OC updates	Optional		
Header	Rejection Reason	Out of Scope		
	Acceptance	Optional	• Acceptance of all items in the order is supported.	
	Changes	Optional	• Partial acceptance of items/item quantity are supported	

Description	Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
Attributes			
Line Level / Line Comments	Optional		
Rejection Reason	Optional	• Reason for rejection is not required in the line level comment field.	
Backorder	Optional	• Add comments at line-level for backordered items.	
Delivery Date	Required		
Shipment Date	Required		
Unit Price	Optional		
Unit Price Currency	Optional		
Item Description	Optional		

5.3   Advanced Shipping Notification (ASN)

Description	Buyer Supported (Required/Optional/ Out of Scope)	Supplier Supported/Format (No or online, email, cXML, D96A, X12, CSV, PIDX, etc.)
Type		
All	Out of Scope	Online, cXML, EDI

Description	Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
Attributes			
General / Attachments	**Optional**	• Not in scope for catalog orders	
Order Confirmation	Optional	• Order Confirmation is not required before Ship Notice.	
Header / Notice Date	Optional		
Shipping Date	Required	• Actual or estimated shipping date	
Delivery Date	Optional		
Delivery & Transport	Optional		

Description		Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
Attributes				
Line Level	Quantity	Optional		
	Asset Serial Number	Optional		
	Shipment Serial Numbers	Optional		
	Packing Slip	Required	• Must be unique	

5.4   Service Entry Sheets

Description	Buyer Supported (Required/Optional/ Out of Scope)	Supplier Supported/Format (No or online, email, cXML, CSV, etc.)
Type		
All	Out of Scope	

5.5   Receipt Notification (Goods Receipt Notice)

Description	Buyer Supported (Y/N)	Supplier Supported/Format (No or online, email, cXML, D96A, X12, CSV, PIDX, etc.)
Type		
Receipt (Goods Receipt Notification)	Out of Scope	
Receipt Based Invoicing	Out of Scope	

5.6 Invoice

Description Type	Buyer Supported (Required/Optional/Out of Scope)	Supplier Supported/Format (online, cXML, X12)
Catalog	Y	
Non-Catalog	Y - Not in scope for current integration	
Contract	N	
Blanket	N	
Non-PO	N	
Service	Y - Not in scope for current integration	
Service as Material	Y - Not in scope for current integration	
Other	• Relevant to specific business/transactions requiring custom approach. Ex. Invoice with positive/negative lines/amounts. Examples should be included in Transactions Samples file.	
Credit – Header Level	N	
Credit – Line Level	Y – must reference invoice	
Debit – Header Level	N	
Debit – Line Level	Y	
Invoice Rejection	Y	
Invoice Status Update	N	

Description Attributes		Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
General	Attachments	Optional		
	Amounts		• **Subtotal amount** = Unit Price x Quantity (No tax) • **Taxable amount** = Subtotal amount • **Gross amount** = Subtotal + Tax • **Net amount** = Gross amount – adjustments and discount/rebait (if any) • **Due amount** = Gross amount - adjustments (if any) • *No discount/rebait => Net amount = Gross amount	
	Address IDs		• Please **discuss** with project parties if a list of addresses/IDs is required for processing.	
	Satellite Requirements			
	Supplier Invoice Processing — Real Time			
	Batched			
	Scheduled Run Nightly			
	Monthly			
	Next Day			
	Validation prior to sending to AN			
Header	Invoice Number	Required	• What is the max length? • Are special characters allowed	
	Invoice Date	Required	▪ Is backdating allowed, and if so, how many days	
	Bill To	Required	▪ Address & ID	
	Remit To	Optional	▪ Address	
	Sold To	Required	▪ Must match PO Bill to name and country (or Sold to information if available)	
	From	Required	• Address	
	Ship From	Optional		
	Ship To	Optional		
	From	Required	• Address	
	S + Name	Required		

Description Attributes			Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
		Street	Required		
		City	Required		
		State	Required		
		Postal Code	Required		
		Country	Required		
	Bank Account Details		Out of Scope		
	Payment Net Terms		Required		
	Buyer VAT ID		Out of Scope		
	Supplier VAT ID		Out of Scope		
	Registration ID		Out of Scope		
Line Item	Invoice Line		Required		
	Quantity		Required		
	Unit Price		Required	• Precision Rounding on Invoices • Two decimal places supported	
	Unit Of Measure		Required		
	Order Line Number reference		Required		
	Advanced Pricing/Price Basis Quantity		Out of Scope		
	Supplier Part Id		Optional		
	Supplier Auxiliary Part ID		Out of Scope		
	Buyer Part Id		Optional		
	Item Description		Required		
	Tax	Alternate Currency	Out of Scope		
		Category	Out of Scope		
		Percentage Rate	Out of Scope		
		Supply Date (tax point date)	Out of Scope		

Description Attributes			Buyer Supported (Required/ Optional/ Out of Scope)	Buyer Comments	Supplier Comments
		Tax Amount	Out of Scope		
		Taxable Amount	Out of Scope		
		Tax Description	Out of Scope		
		Tax Location	Out of Scope		
	Allowance & Charges		Optional		
	Shipping & Handling		Optional		
	Net Amount		Optional		
	Amount without tax		Required		
	Subtotal Amount		Required		
Summary	Tax	Alternate Currency	Out of Scope		
		Category	Out of Scope		
		Percentage Rate	Out of Scope		
		Supply Date (tax point date)	Out of Scope		
		Tax Amount	Out of Scope		
		Taxable Amount	Out of Scope		
		Tax Description	Out of Scope		
		Tax Location	Out of Scope		
	Special Handling Amount		Optional		
	Shipping Amount		Optional		
	Net Amount		Required		
	Gross Amount		Required		
	Invoice Detail Discount		Optional		
	Due Amount		Required		

5.7   Remittance Advice

Description Type	Buyer Supported (Y/N)	Supplier Supported/Format (No or online, email, cXML, D96A, X12, CSV, PIDX, etc.)
Remittance Advice Notification	Out of Scope	

6   CUTOVER

Description Specifics	Buyer Cutover Process	Supplier Comments
Legacy Orders	None. Only net new orders will be sent to the Business Network.	
General		

7   ERROR HANDLING

Description Specifics	Buyer Comments	Supplier Comments
Failed or Rejected Document Transmissions		• Who gets notified? • Are there any expectations as to how failed/rejected transactions are to be handled?
Failed Order Validation (wrong part number, price, UOM, etc.)		• Who gets notified? • How is this corrected? • Does the supplier system automatically make substitutions? • What is the turn-around time to address failed orders?
General		• Is there any schema or data validation done on the invoice before it is sent to the AN? • What is the process if an invoice fails against a business rule in the AN? • What is the process if duplicate invoice numbers are not allowed when an invoice has failed or been rejected?

8   TESTING

Description Specifics	In Scope (Y/N)	Phase (Pilot / Post)	Buyer Comments	Supplier Comments
Test Central plan	N	Post	The assigned Supplier Integration Specialist will work one-on-one with suppliers through connectivity and testing.	
Test Plan	Y	Pilot & Post	Provided as part of the integration kit.	

9   PROJECT TRACKING

9.1   Project Teams

Roles & Responsibilities	Contact Name & E-mail
Buyer	
Project Lead (Operational Lead) • Main contact for project coordination • Provide commitment to project timeline • Understand buyer's transaction validation rules • Participate in status meetings	
Buyer Technical (Developer) • Provide technical details for integration to backend systems • Perform data mapping • Assist in troubleshooting document failures • Coordinate go live with functional resource	
Testing Contact • Define & Validate catalogue content with buyer • Analyze incoming Orders • Generate Test Invoice • Assist in other testing activities, coordinate go-live • Download & validate applicable test transaction • load & process through ERP	

Roles & Responsibilities	Contact Name & E-mail
Supplier	
Project Lead (Supplier Enablement lead) • Main contact for project coordination • Enforce compliance of project timelines	
Technical (Developer) • Support of cXML/EDI Identified Supplier testing • Provide connection parameters to ERP systems • Assist in troubleshooting document errors from the application/ERP	
Testing Contact • Define & Validate catalogue content with Supplier • Generate Test Orders • Reconcile and approve invoices • Assist in other testing activities, coordinate go-live Download & validate applicable test transactions, load & process through ERP	
SAP	
Supplier Integration Specialist (SIS) • Manage end-to-end supplier integration • Troubleshoot failed/rejected documents • Ensure timely completion of project milestones • Escalate issues to appropriate person/team	
Supplier Catalog Specialist (SCS) • Support Setup and testing of Catalogue with buyer and supplier • Troubleshoot failed/rejected catalogues • Ensure timely completion of project milestones • Escalate issues to appropriate person/team	
Network Deployment/Enablement Lead (NDL/NEL) • Consolidates all supplier's enablement status for reporting to the Buyer	

9.2 Project Schedule

Description Phase	Start Date	End Date	Contingency Plan (If target date is missed)
Plan			
Design			
Build			
Test			
Deploy			
Go Live			

9.3 Sign Off

Description Name	Buyer or Supplier?	Date	Signature

10 RISKS

Description Specifics		Buyer Mitigation Response	Supplier Mitigation Response
Competing Priorities	• Are other integration/capital projects running at the same time?		
	• Can this project start now or in the future?		
	• Is the PO Flip option a possibility in the interim, if the integration project cannot be completed in time?		

Description Specifics		Buyer Mitigation Response	Supplier Mitigation Response
System Maintenance Schedule	• Upgrades?		
	• System refresh?		
Resource Constraints	• Vacations?		
	• Holidays?		
	• Knowledge?		
Processes	• Updates/changes to code must be scheduled?		
	• Go live at certain points of the month?		
3rd Party Dependencies	• Are changes scheduled or added as needed?		
	• How are error notifications/failures communicated for inbound/outbound transactions?		
	• Is there a dedicated resource to support the project?		
	• Will they attend standing calls?		

11 SUPPLEMENTAL DOCUMENTATION

This document contains Buyer specific information regarding transaction requirements. Information in this document does **NOT** cover the complete technical aspects of integrating with the SAP Business Network.

Below are several sections for supplemental documentation to be used with this document for cXML, EDI D96A / X12 or PIDX transaction formats. Only refer to the section that pertains to the format your organization will be sending or receiving.

11.1 SAP Help Portal

SAP maintains a complete and rich documentation library with Administration and How-To guides.
Here at **SAP Help Porta**l, you can find the information you need to administer and provision our products.
All guides within our Help Library are downloadable and accessible by entering the document you are looking for in the search bar of SAP Help Portal.

Below are some helpful shortcuts to guidelines you might benefit from:
cXML Solutions Guide
cXML User's Guide
SAP Business Network guide to invoicing

11.2 cXML Supplemental Documentation

New cXML supplier to SAP Business 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. SAP Business Network supports **HTTPS (not HTTP)** only for cXML transactions.
3) Review the **cXML Solutions Guide** and **cXML User's 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

11.3 **EDI Supplemental Documentation** via SAP Cloud Integration Gateway

EDI D96A/X12 Supplemental Documentation
All EDI Supplier Guides

11.4 PIDX Supplemental Documentation via SAP Cloud Integration Gateway

PIDX Supplemental Documentation
All PIDX Supplier Guides

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12   SAP BUSINESS NETWORK CUSTOMER SUPPORT FOR SUPPLIERS

12.1   Post Go Live Support

Supplier Integrators provide two weeks support of Post Go Live starting with the first transaction in **Production**. After the two-week period, a **Service Request** should be created for any assistance.

12.2   How to utilize Help Center and request assistance

At **SAP**, our goal is to empower Suppliers with the information and tools they need to seamlessly navigate through **SAP Business Network Solutions**. You can find the answers you need about SAP Business Network products in the **SAP Help Center**. You can also contact **SAP Support** directly through the **Help Center**, when necessary.

12.3   Access the Help Center

Sign into your account and look to the right-hand side of your screen ⑦ to view the **Help Center panel**. If the panel collapses and you cannot see any articles, click ⬈ icon to expand.

12.4   Using SAP Business Network Help Center

The Help Center is the first place to start if you have questions about any **SAP Business Network Solution.** Please watch this short Tutorial on how to navigate **SAP Help Center to:**

- Find informational documents and FAQs created and curated by support or product documentation from SAP Help Portal
- Find information on new releases, upcoming webcasts, and events, as well as easy access to Supplier Release Readiness Portal.
- Contact us to submit a case for support.