



# Punchout Shopping and cXML Integration with Vendors at an Aluminum Manufacturer - Levels the Field with Oracle

FMMUG - New Orleans, October 16, 2024

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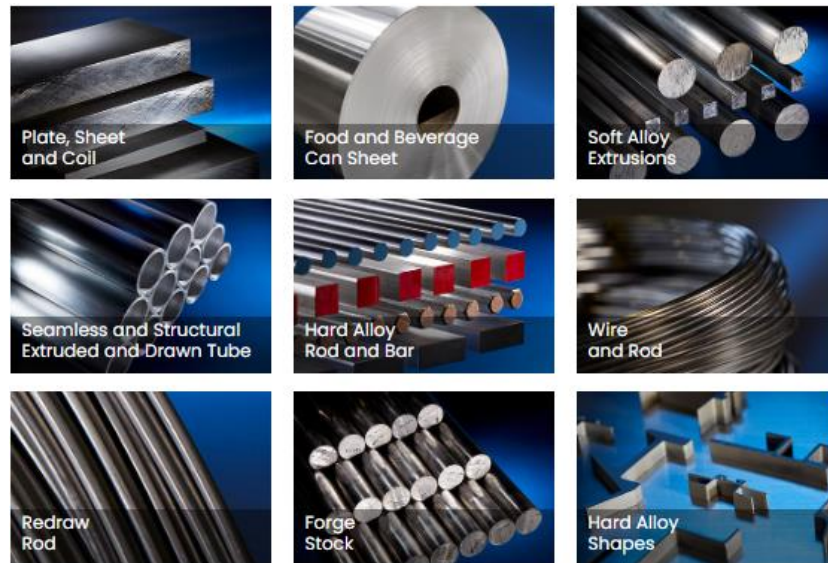


# Abstract

- Kaiser Aluminum, a leading producer of semi-fabricated aluminum products, has been using Maximo at 12 sites in North America for many years. They also used Oracle EBS at one large site, that was recently purchased, where they were had implemented Punchout Catalog Shopping with Automated Order Placement and Invoicing. The many benefits of such a solution applies not only to the Supply Chain Team, but also to the Maintenance and Production Teams, and the Accounts Payable function. The value of Punchout functionality led Kaiser to deploy a similar solution with Maximo. They wanted to level the field between Oracle and Maximo Application suites!
- In this presentation you will learn about the Procure to Pay (P2P) integration and automation process and solutions Kaiser implemented recently using the P2Insight e-commerce framework for Maximo, and about the deployment process

# Aluminum Manufacturer Overview

Kaiser Aluminum operates 13 North American manufacturing facilities and ships more than 1.1 billion pounds of product annually. We produce aluminum plate, sheet, coil, tubes, rod and shapes for a variety of industries including aerospace, automotive, food, beverage, general engineering.



# P2Insight Overview

- A Maximo business partner focused exclusively on Supply Chain & Procure to Pay (P2P) Integration, Automation, and Optimization. We connect Buying Organizations with their suppliers, vendors and contractors, giving them:
  - Visibility
  - Control
  - Automation
- But, we are not about the Supply Chain. We are about how the Supply Chain can more effectively serve the Maintenance Team and the entire organization better, more effectively, efficiently, and reliably.
- Our goals are:
  - To improve the time from demand to fulfillment by at least 50%.
    - You can improve uptime by getting critical direct purchase items delivered faster.
    - You can reduce inventory levels when you can replenish faster.
  - To reduce the administrative tasks for requesters - while searching for items, requesting item, expediting orders, and with any follow up activities, such as invoice discrepancies.
  - To reduce the manual tasks for supply chains professionals - so that they can focus more on strategic initiatives, such as vendor selection and contract pricing.

# The Situation

- Oracle EBS was deployed in 2022. It has had Punchout and other cXML integration with their leading suppliers since inception. Kaiser wanted the same capability within Maximo.
- The following integration exists:
  - Punchout
  - Order Placement
  - Order Confirmation
  - Invoice Import

# The Situation

- Oracle EBS has the following vendors integrated:
  - MSC
  - Fastenal
  - Amazon
  - Staples
  - Ferguson
  - McMaster Carr
  - Stauffer Safety
  - Napa
  - Allegheny Petroleum

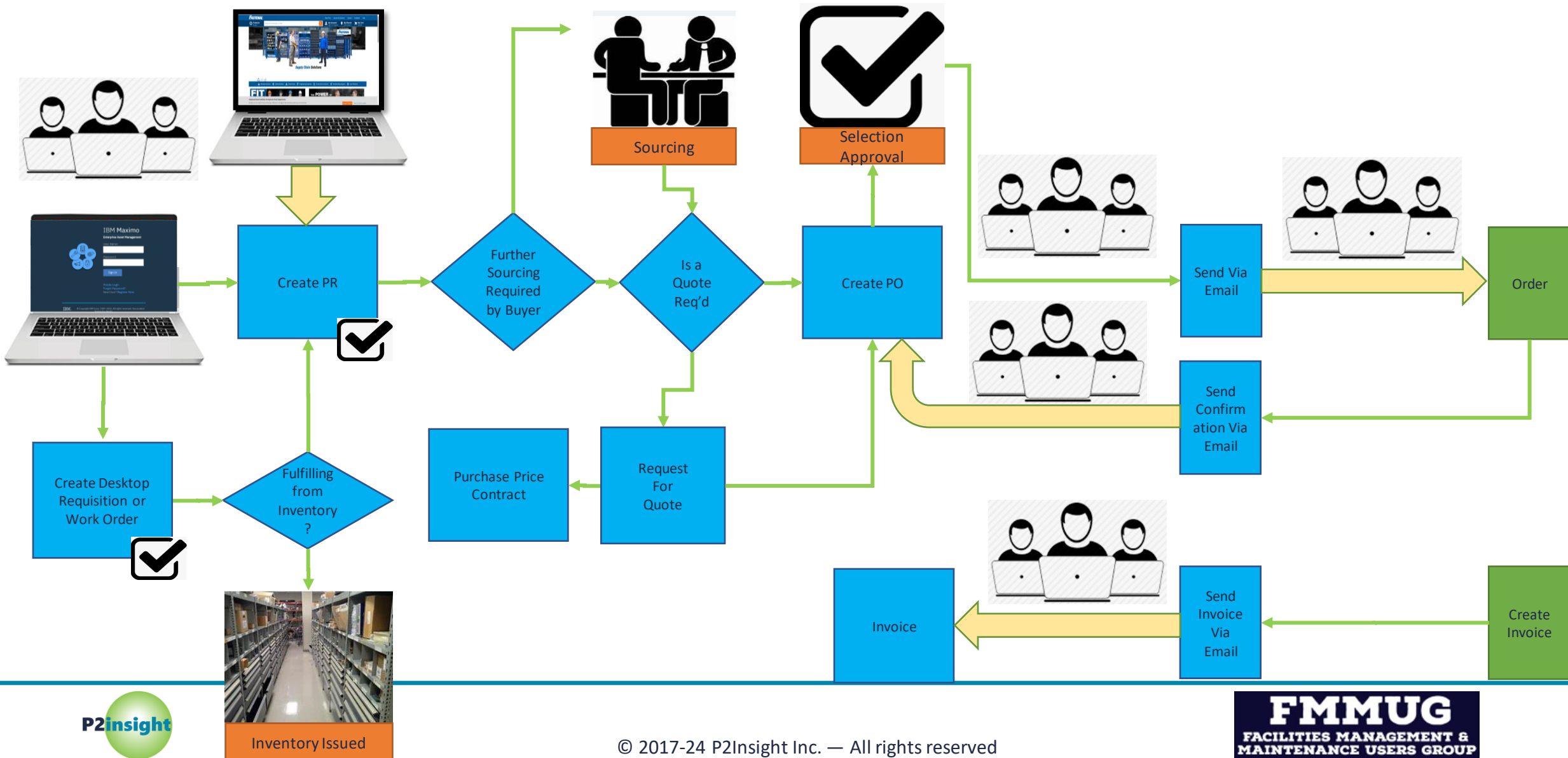


# The Problem

Maximo, like Oracle, has all the components required, but is not integrated with the suppliers. As such, it is a disconnected solution, requiring significant manual oversight and intervention.

- When shopping the vendor catalogs on line, we have two windows open, one with Maximo and a second with the vendor catalog, and when an item is found, we copy and past the details into Maximo.
- When the PO is approved, the Buyer presses a button, and waits for the system to create a PDF of the PO and sends it to the Vendor... not to bad, but it is one way communication.... We never quite know if there is anyone on the other end acting on our order.
- Vendor has to rekey the order from our PDF PO Print into their Order Entry system
- Vendor confirm the orders by email. We have to interpret that e-mail and manually update the PO in Maximo.
- Invoices are sent to us via email and A/P enters them with optical reader or manually. Errors can occur and delay payments.

# The Problem





# The Solution

- Saw the Northrop Grumman & P2Insight presentation at the 2023 Maximo World Conference and started talking with P2Insight.
- Attended the P2Insight organized MRO Supply Chain Matters! Conference in Houston, TX in February 2024.
- Contracted with P2Insight to deploy the following in May 2024:
  - Punchout in Desktop Requisitions and WO Tracking
  - Automated cXML Order Placement
  - E-Mailed Order Confirmation for now – future cXML integration
  - Automated cXML Invoice Import

# Punchout Vendor Direct Catalog Shopping

**1) From Maximo DR or WO...  
Punchout to Vendor Catalogs**

Purchase Requisitions  
Djordje Milic

Query: Find PR

PR Lines: 0 - 0 of 0

Buttons: Refresh, **Catalog**, Vendor Items, Select Spare Parts, Contract Items, View Contracts, Distribute Costs, New Row

**2) From Vendor Catalog...  
Shop for Items, and checkout...**

GRAINGER Catalog Find A Branch Help 1-800-GRANGER North Star - TEST

All Products Makita HM1317CB

Showing results for "Makita HM1317CB"

1 product

Compare **MARITA** 1-1/8" Hex Breaker Hammer Kit, 14.0 Amps, 730 to 1450 Blows per Minute

Item # 14F121  
Mfr. Model # HM1317CB  
Catalog Page # 715  
View Product Details

Web Price \$1,551.90 each

Enter location to check availability

Shop or Pickup Enter Location

Add to Cart

Using Real Time Data

Punchout to Marketplace

**4) Items returned to Maximo, Approved PR then goes to Buyer... or sent automatically to Vendor**

Query: Find PR

PR: 1400 BuyerQuest punchout demo

PR Lines: 1-3 of 3

Line	Item	Description	Quantity	Order Unit	Unit Cost
1	MISC	Socket Cap Screws	1.00	EA	1.22
2	MISC	Hex Cap Screws and Hex Bolts	2.00	EA	7.00
3	MISC	Flat Washers	3.00	EA	0.98

Line Item: Flat Washers

Manufacturer: FASTENAL APP  
Model: 0110019  
Category: STC  
Vendor: FASTENAL  
Catalog #: 0110019  
Commodity Group:  
Commodity Code:

Transferred Items (cXML interface)

Captures key data from Vendor Catalog

**3) When ready...  
Transfer cart back to Maximo...**

LINE	ITEM INFORMATION	PRICE	QUANTITY	SUBTOTAL
1	Socket Cap Screws SKU: 0110005 Supplier: Fastenal	\$1.2212	1 EA	\$1.22
2	Hex Cap Screws and Hex Bolts SKU: 0110006 Supplier: Fastenal	\$7.0004	2 EA	\$14.00
3	Flat Washers SKU: 0110019 Supplier: Fastenal	\$0.0623	3 EA	\$0.19

6 Items | \$15.41

Supports Multiple Vendors per PR

Negotiated pricing (Fastenal at 30% discount via OMNIA)

Press 'Transfer Cart'

Transferred Items

# Punchout

## Punchout catalogs address the following main objectives

- Streamline and Automate
  - Reduce manual, non-value add tasks
  - Reduce errors, reduce clarification time
  - Move from buying to sourcing activities
- Direct Spend
  - Make it easy for requisitioners
  - Utilize suppliers with contract pricing agreements
  - Increase spend with select vendors to improve discounts and rebates
- Improves efficiency for Vendors
  - Gets the current and accurate information that will eventually be used for easier order placement.
  - Current and accurate pricing will eliminate Invoice-PO Price Discrepancies down the road.

# PO Placement direct via cXML

### PR to PO Create by Buyer

Workflow  
Change Status  
View History  
Create PO

Create Multiple POs

Line	Item	Description	Quantity	Unit
3	MISC	TK1060747T Ta	25.00	EA
4	MISC	TK1060748T Safety	6.00	EA
5	MISC	TK1060749T Cente		

Publish to Vendor Order Entry System

### Fully automated or One-Button Transmission of PO to Vendors' Order Entry system, using cXML

Finalize Confirmation  
This PO is for: 527839 - PARAGON MICRO

This PO will be sent to the Vendor via:  
Order Hub cXML Transfer

Finalize Cancel

### Receive Order Confirmation from Vendor via e-mail

Thank You!

ORDER CONFIRMATION

PO Number	Item	Description	Quantity	Unit
1049	MISC	TK1060747T Ta	25.00	EA
1049	MISC	TK1060748T Safety	6.00	EA
1049	MISC	TK1060749T Cente		

Confirmation or PO Revision

### Logging of Transmission in Maximo

Published Electronically (cXML)?

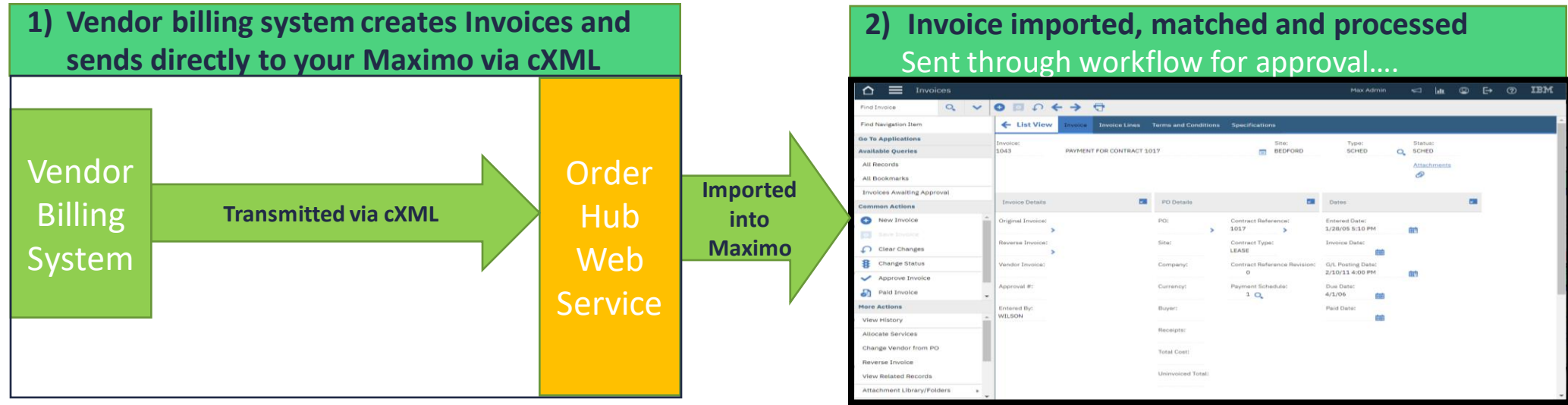
Order Hub Status: PUBLISHED

Order Hub Status Date: 3/9/21 5:40 PM

# Order Placement

- Orders under a specified dollar amount are sent to supplier immediately after requisition and PO approvals.
- Pricing and stock availability are real time reducing price changes and expediting.
- Item is compared against internal inventory and can be issued from stock on-hand improving inventory utilization and turns.
- Manual purchase order creation for materials is reduced by 30%.
- Orders are processed and fulfilled faster, as no delays in data entry and no clarifications required

# Invoice Import via cXML or Portal

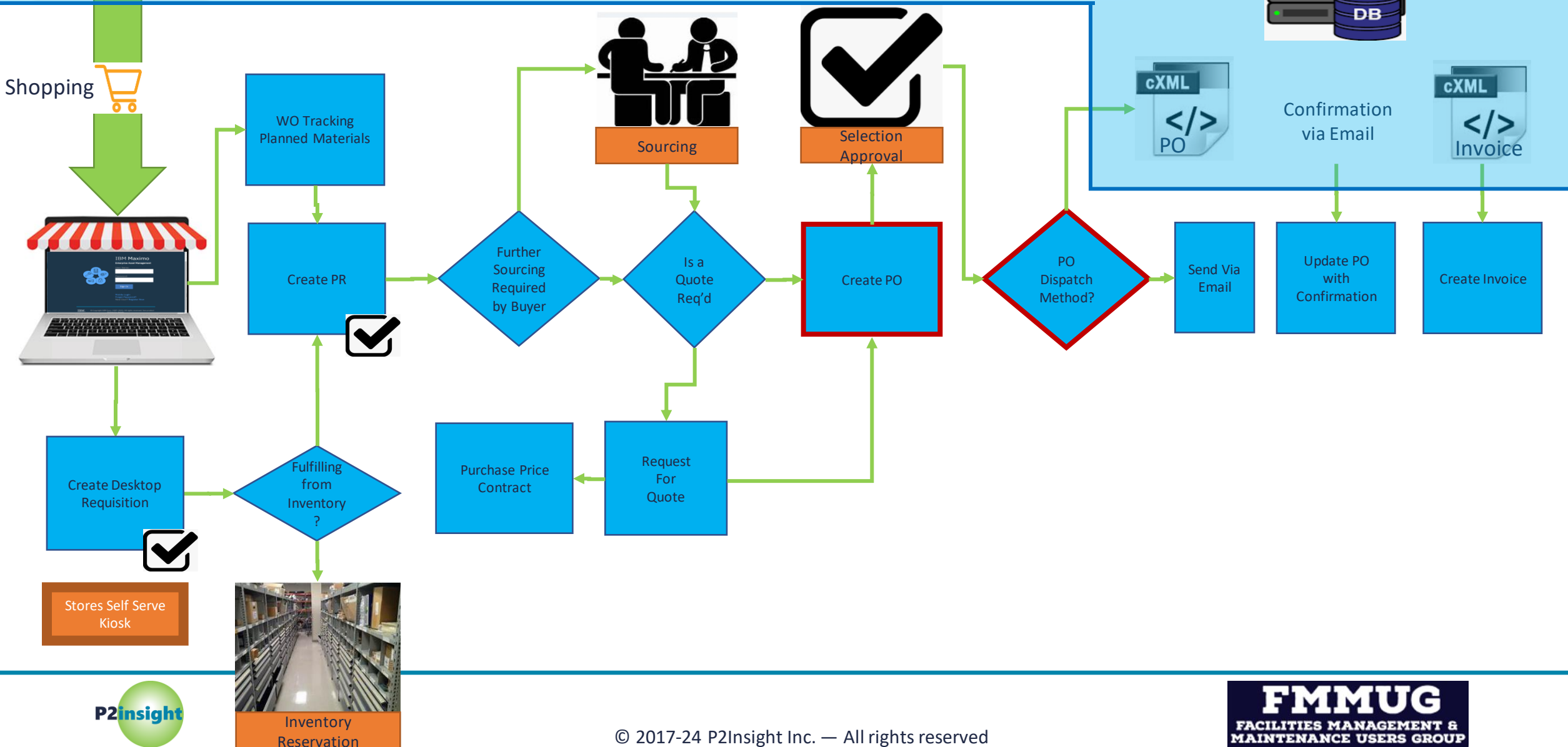




# Invoice Import

- Invoices are directly imported into Maximo (No digital to analog to digital)
- Invoice lines and PO lines are matched without intervention.
- Custom validation actions can update invoice status to APPR.
- Exceptions generate error messages for manual intervention.
- Invoices are logged.
- Credit memos follow same path as invoices.
- Any vendor freight and special handling charges create an additional invoice lines.
- For vendors that do not collect tax, a line for tax accrual is automatically created, and tax is collected to be paid directly to the government.

## cXML Integration Framework & Adapters



# Implementation Process

- Allocate resource availability (Stakeholders, IT, Users)
- Define requirements
- Engage with suppliers
- System access
- Coordinate and communicate
- Review progress, redefine, review progress
- Test planning, test, adjust, test....
- Train
- Continuous improvement with additional automation

# Issues Uncovered/Overcome

- Tax
  - Multiple states, mixed taxable & tax exempt orders
- Miscellaneous Lines
  - Freight/Handling
  - Discounts
- UOM
  - Vendor UOM codes are different from ours
- PO# Field Length with Vendors
  - PO# send to vendor is a concatenation of PO@, Release #, and Site ID
  - Some vendors have a limitation of only 20 characters

# The Technology Behind the Scenes

- We use the cXML Protocol to communicate with Vendors.
  - cXML, short for "commerce eXtensible Markup Language," is a standardized language for B2B communication
  - Taking over from EDI, which is a private network, to a public based network
- Invented by Ariba in 1999. Took about 20 years to become industry standard
- Today, just about all the major vendors support this protocol and enable this type of interaction.

These suppliers are cXML enabled...

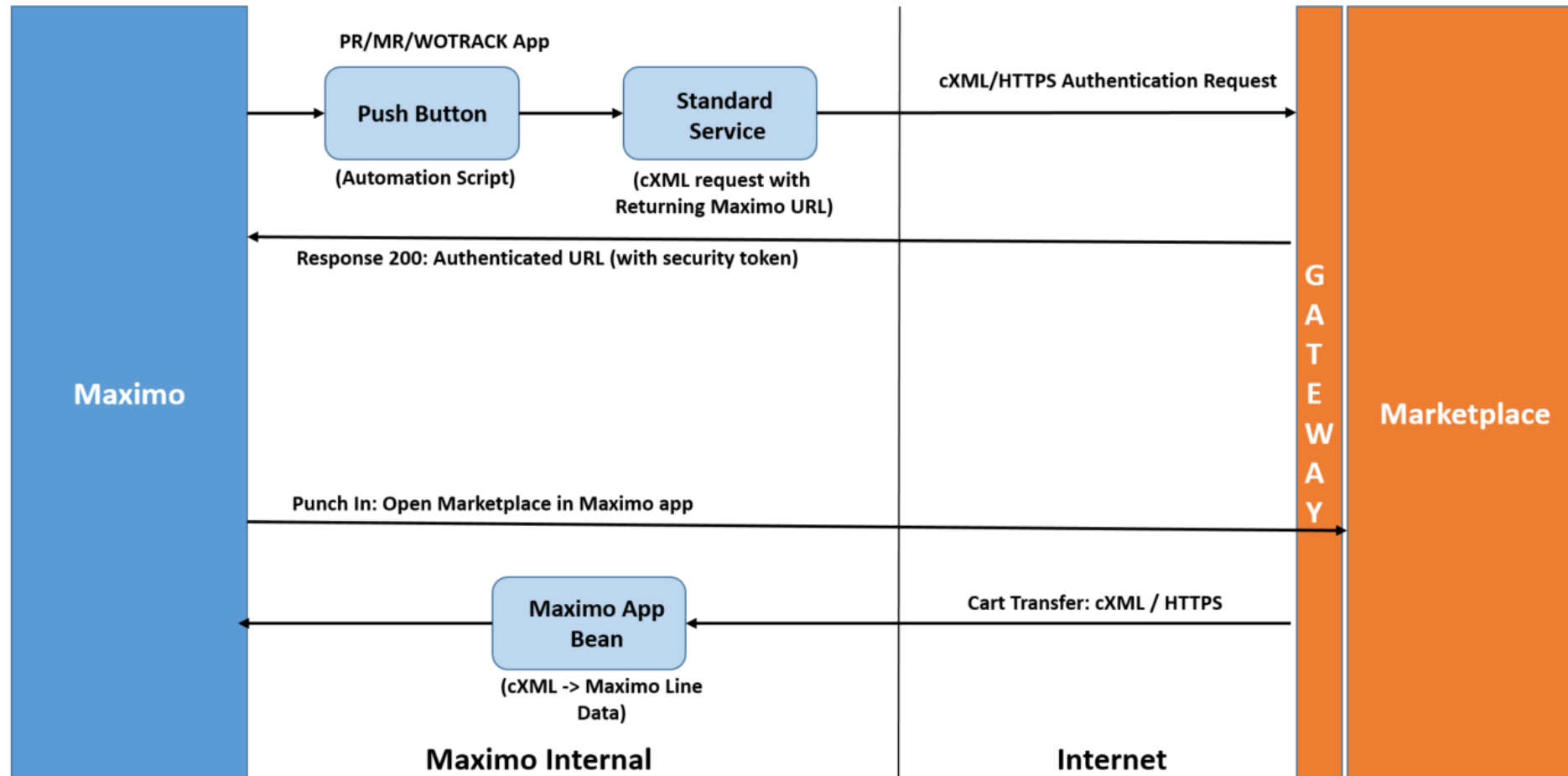




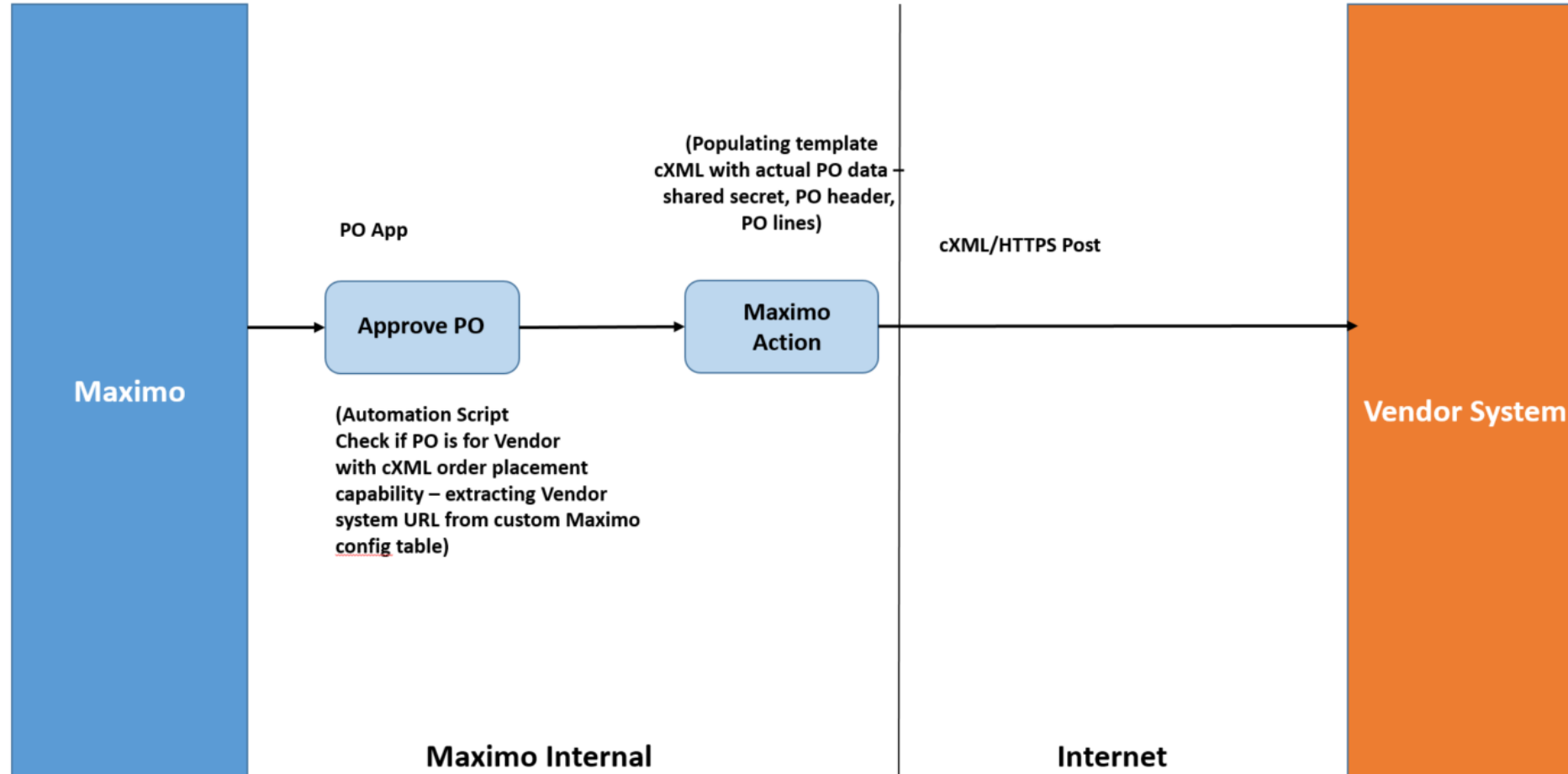
# cXML Security and Compliance

- Security Measures
  - Encryption
  - Authentication
  - Digital signatures
  - User access controls
- Compliance Standards
  - cXML specifications
  - Industry-specific standards
  - Internal security policies
- Additional Considerations
  - Regular security audits
  - Vendor security practices
  - User training

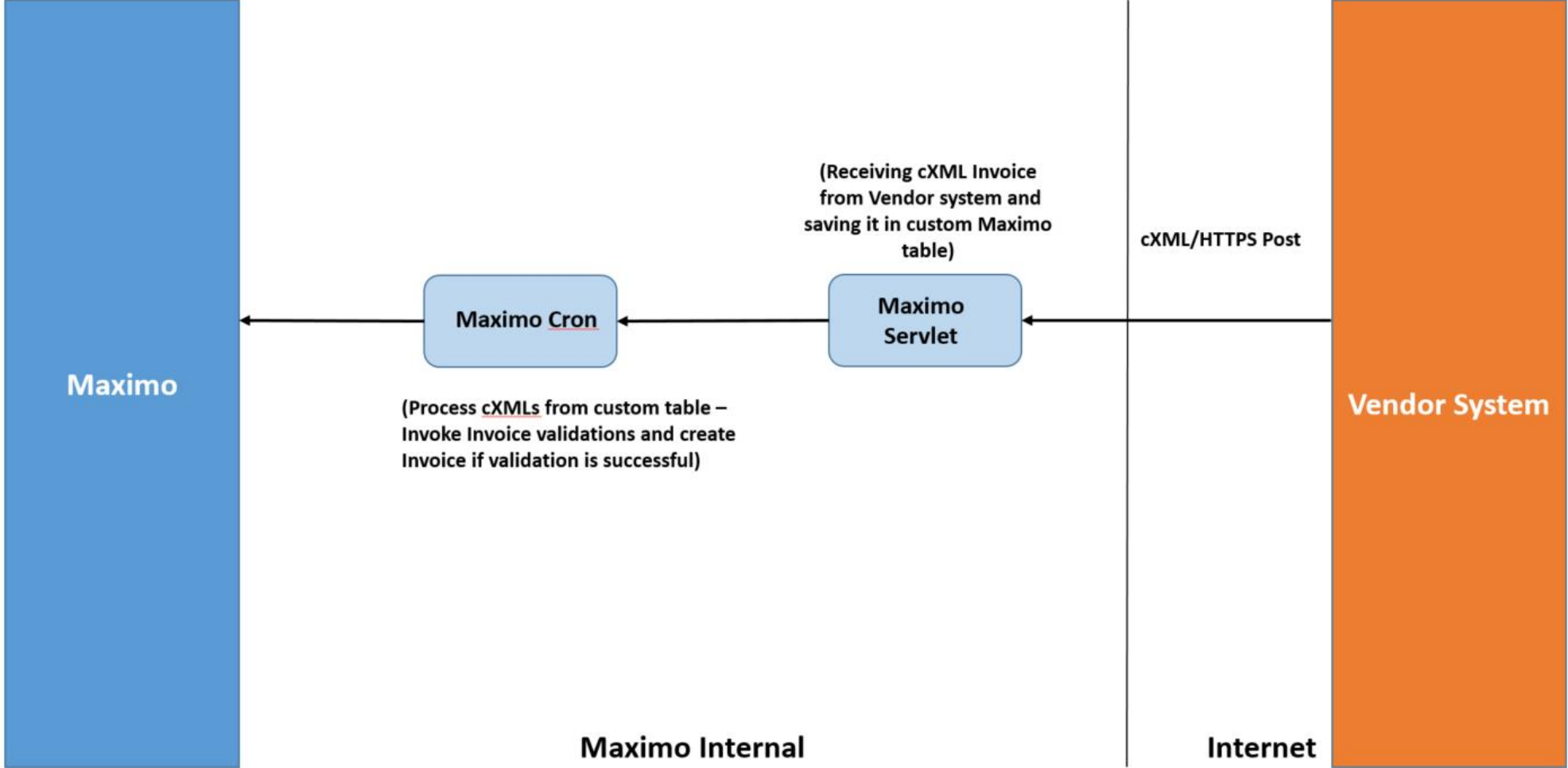
# Catalog Punchout Dataflow



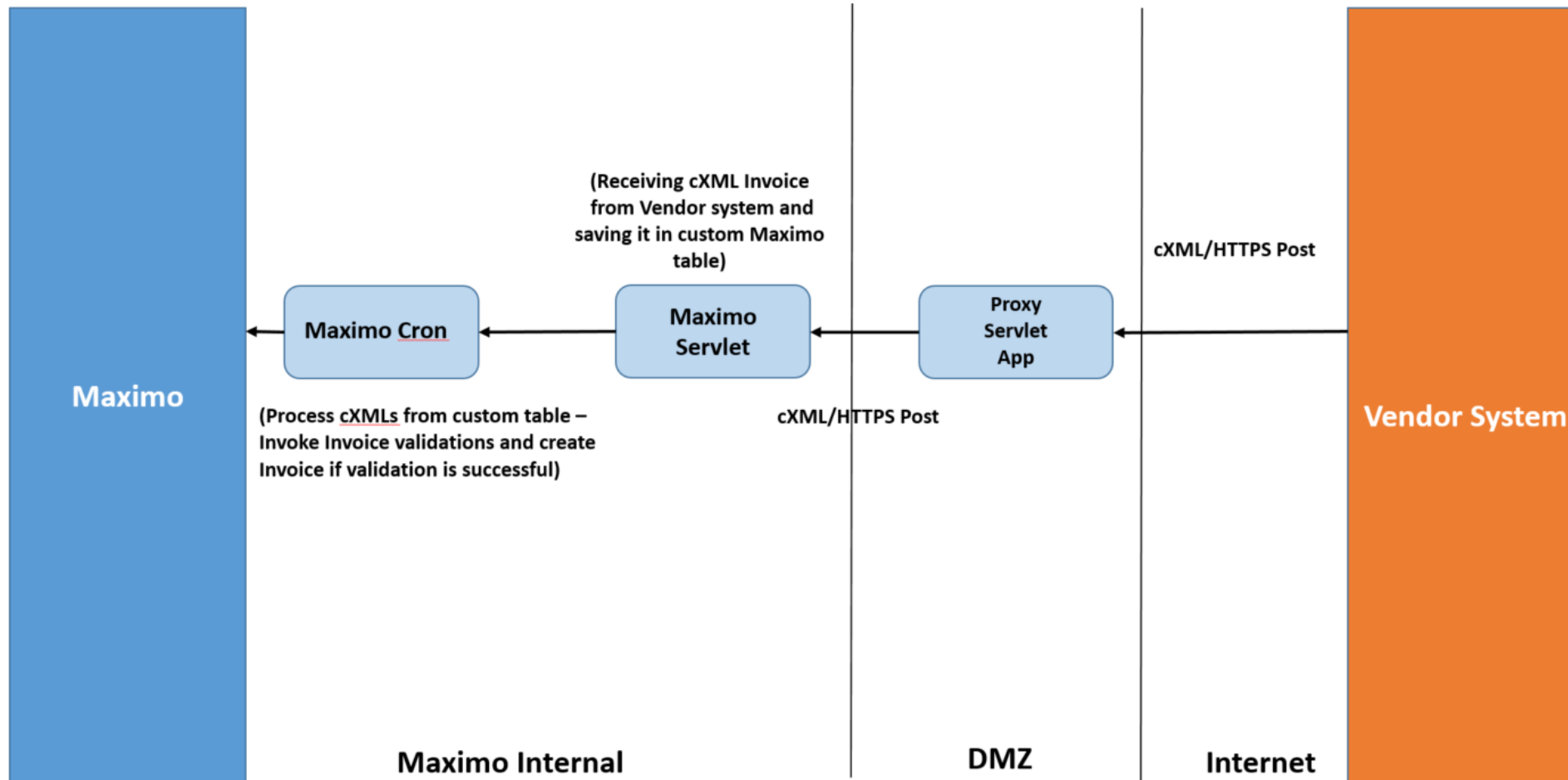
# Order Placement Dataflow



# Invoice processing (public-facing Maximo)



# Invoice processing (Maximo inside closed network + proxy app)



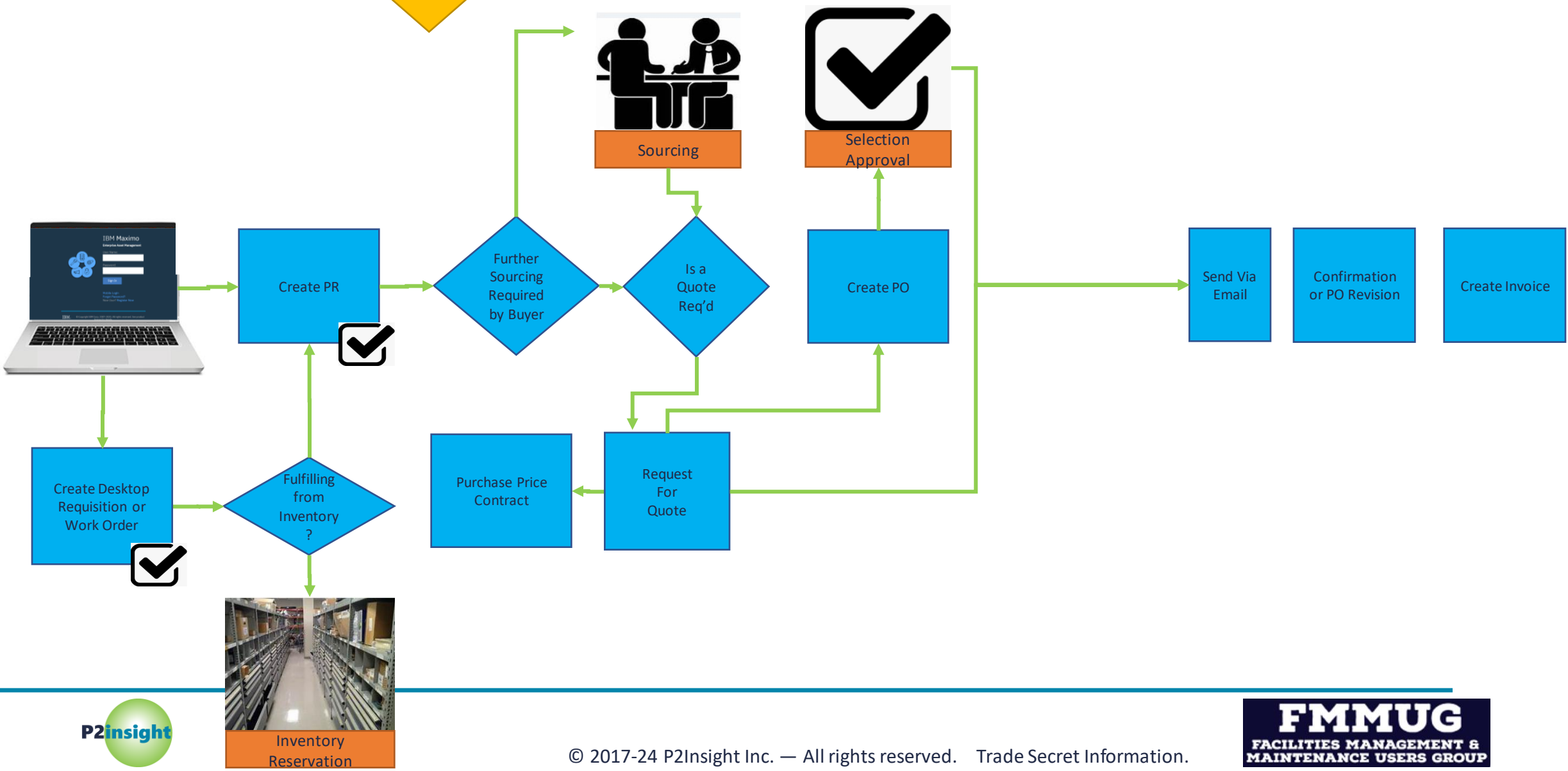
# Vendors Integrated

- Amazon
- Applied Industrial
- Fastenal
- Ferguson
- McMaster-Carr
- MSC
- Plus others on way...



# Results...

- The end users can now punchout and shop for parts with many leading Industrial suppliers.
- The Supply Chain professionals have less administrative tasks to do, and can focus on more strategic initiatives. The entire organization is more productive, efficient, and reliable!
- Now that the data is being exchanged electronically, Maximo can do things with it, so we are adding numerous automations to our processes.
  - Eg. We calculate the tax accrual on the incoming invoices.
- We have leveled the field with Oracle!





Implemented at Kaiser

cXML Integration Framework & Adapters

P2Insight Solution Deployed



Shopping



Create Desktop Requisition



Stores Self Serve Kiosk



Inventory Reservation

WO Tracking Planned Materials

Create PR



Fulfilling from Inventory?

Purchase Price Contract

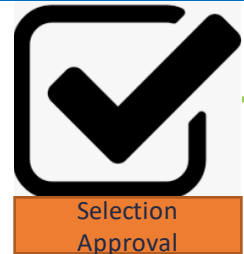
Request For Quote

Further Sourcing Required by Buyer

Is a Quote Req'd



Sourcing



Selection Approval

Create PO

PO Dispatch Method?

Send Via Email

Update PO with Confirmation

Create Invoice



Confirmation via Email

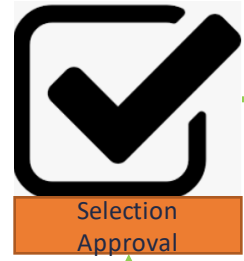
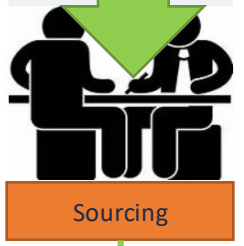


Advanced Search & Add to Internal Catalog & Request to Inventory



What is possible & available right now

cXML Integration Framework & Adapters



Create PR

Further Sourcing Required by Buyer

Is a Quote Req'd

Create PO

PO Dispatch Method?

Send Via Email

Confirmation or PO Revision

ASN

Create Invoice

Create Desktop Requisition

Fulfilling from Inventory?

Purchase Price Contract

Request For Quote

Advanced Selection of winning bids

PO Change Request

Order Hub PO

Order Hub Confirmation

ASN

Order Hub Invoice Import & Creation

Stores Self Serve Kiosk



Inventory Reservation

PR Quick Quote

Order Hub RFQ

Order Hub Bids

Order Hub Procurement Portal



Invoice Self Serve Status Inquiry

PO/Invoice Discrepancy

# P2Insight organizes an MRO Supply Chain only conference – The MRO Supply Chain Matters! (MSCM) Conference

- Most Maximo conferences are Asset and Maintenance focused, with very little for the Supply Chain.
- Objective is to provide Supply Chain professionals with a conference just for them.
  - No Assets, not WOs, no PM jobs, etc...just Supply chain topics: Inventory, Replenishment, Storerooms, RFQs, Purchasing, Receiving, Invoicing, Contract and Vendor Management, Logistics, etc.
- Supply Chain is an integral part of effective asset management. You cannot be fully effective, productive, and reliable, if your supply chain is not.
  - Next Conference: Houston, TX, March 3-5/25
  - See: <https://mrosupplychainmatters.com/>
  - Tell your supply chain professional about it! Tardy Bird Pricing until Nov. 15/24

# Thank you.

If there any further questions, feel free to contact:

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  - Reach out to Mike Popovic for Contact Details
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