Purchase Order Matching

User Story: Purchase Order Matching
Associated assets:
- Procure-to-Pay Research Study.pptx
- Procure-to-Pay Journey Map

I planned and executed the research study and created the Journey Map to summarize the findings.
I created the flow diagram and mocked up screens for this user story.
(Sage Intacct)

User Story

As CFO, I need the AR staff to be alerted to significant discrepancies between our anticipated purchase costs and cost invoiced by the vendor, so I can eliminate fraud and dispute charges with vendors when necessary. I want an automated process for comparing an invoice to the original purchase order at both the line-item level and total amount, and if it exceeds a threshold, I want the myself or the AR supervisor to review for approval to pay or to hold the invoices and dispute the charges. I want to configure the threshold in the system and modify it if needed.

This feature automates the comparison of currency amounts on an unpaid invoice (received from a vendor) to the matching purchase order and flagging the invoice for review when the difference exceeds a defined tolerance. There are two matching rules:

- Any line item on the vendor invoice is [%] greater than the corresponding amount on the matching purchase order.
- The total invoice amount is [%] greater than the total on the matching purchase order.

As CFO, I want to choose whether I enable one or both rules.

Upon enabling, the system will thereafter run Purchase Order Matching each time invoices are received or uploaded using AP Automation. At this time, automated comparison of historical P.O. to historical invoices is not available, even if the invoices are unpaid.

- Discrepancies outside of the tolerance are flagged on the Invoice and in the Invoice List.
- Flagged invoices cannot be paid until the invoice is reviewed and approved. (Approval feature is defined in another story.)

Scope & Dependencies

- This feature will initially only be available for invoices in English and with USD amounts.
- The P.O. matching will initially only work when there is a one-to-one match of invoice to purchase order. (If one purchase order is fulfilled by two shipments and the vendor has invoiced per shipment, the system will attempt to match the first shipment to the purchase order but is currently unable to automatically identify the match of the second shipment to the purchase order).
- This feature only can be enabled after AP automation has been implemented. The system should prevent enablement if AP automation is not set up.
- AP automation already is flagging invoices for approval when it is unable to find a matching P.O. or needs human intervention to "read" data on the invoice.

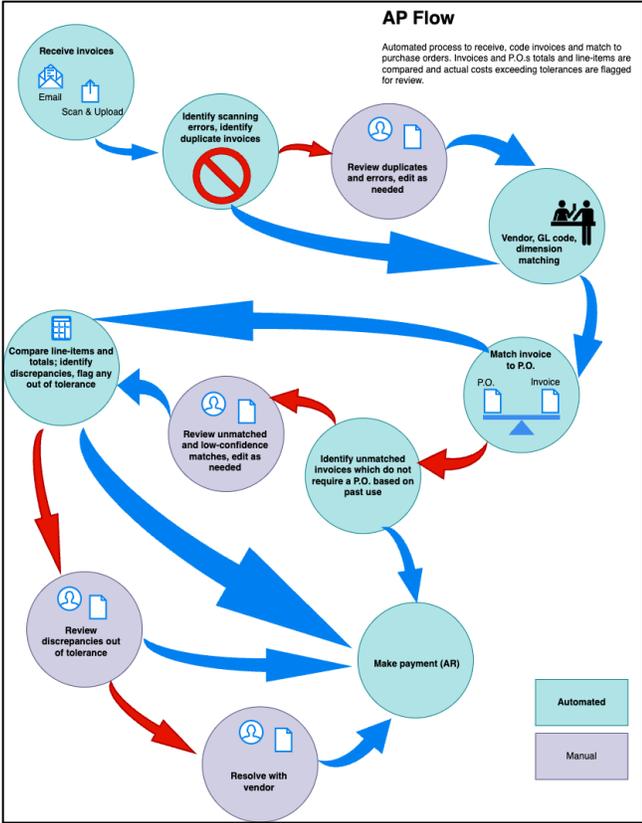**Acceptance criteria:**

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- A user with AP Configuration permissions ("the configurator") can enable the P.O. Matching only when AP automation is already set up.
- Once P.O. Matching is enabled, this feature can be disabled via the AP Configuration page.
- The configurator can turn on a rule to compare the total on the vendor invoice to the total on the matching purchase order.
- The configurator can turn on a rule to compare line-items on the vendor invoice to the line-items on the matching purchase order.
- A configurator can specify a percentage amount as tolerance for discrepancies. All discrepancies exceeding the tolerance are flagged for review.
- The threshold percentage can be edited, and the system will use the new percentage immediately for new invoices.
- Landed costs are not included in comparisons (line items on an invoice for costs such as freight, insurance, customs fees, etc.).
- Flagged invoices are automatically put in Hold state and require approval before payment is issued to the vendor.
- The Invoice List displays an indicator on each row where:
    - The invoice total exceeds the tolerance. (Only applicable when the invoice total rule is enabled.)
    - One or more line-items on an invoice exceeds the tolerance. (Only applicable when the invoice line-item rule is enabled.)
- Ad hoc reports can include new data attributes in the results as well as allow selecting data filtered by the new data attributes (total exceeds tolerance, line-item exceeds tolerance, % total exceeds tolerance, % line-item exceeds tolerance).
- Invoices API is updated with new data attributes (total exceeds tolerance, line-item exceeds tolerance, % total exceeds tolerance, % line-item exceeds tolerance and the discrepancy types of Quantity, Price, or additional line items in the Invoice).

Wireframes are on next page. These are existing pages within the product which need minor modifications to the UI.

I conducted user research prior to gain a greater understanding of the procure to pay process (refer to Procure-to-Pay Research Study.pptx) before beginning design.

Below is an illustration the system flow, noting where human intervention is required.

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AP Flow

Automated process to receive, code invoices and match to purchase orders. Invoices and P.O.s totals and line-items are compared and actual costs exceeding tolerances are flagged for review.

Receive invoices
Email   Scan & Upload

Identify scanning errors, identify duplicate invoices

Review duplicates and errors, edit as needed

Vendor, GL code, dimension matching

Compare line-items and totals; identify discrepancies, flag any out of tolerance

Match invoice to P.O.
P.O.   Invoice

Review unmatched and low-confidence matches, edit as needed

Identify unmatched invoices which do not require a P.O. based on past use

Review discrepancies out of tolerance

Make payment (AR)

Resolve with vendor

Automated

Manual

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Changes to the existing AP Configuration page:

- PO Matching options are only shown when the Enable AP Automation checkbox is selected.
- The new P.O. Matching options are:
  - Require approval for invoice totals outside of tolerance (checkbox)
    - Tolerance on total amount (numeric)
  - Require approval for invoice line-items outside of tolerance (checkbox)
    - Tolerance on line-items (numeric)
- The new fields appear directly below the Enable AP Automation checkbox item.

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Changes to the existing Invoices Received List:

- Add new columns:
    - Matched to
    - Discrepancies
- In the Matched to column, display the ID of the matched document, if identified. Otherwise leave blank. (Note that the heading "Matched to" purposely does not include any reference to purchase orders so Contract documents can be matched to invoices in the future.)
- When one or more discrepancies are detected at either at line-item level or for the total amount & exceed the tolerance, indicate the type or types of issues using the following abbreviations.
    - Q indicates Quantity discrepancy
    - P indicates Prince discrepancy
    - +line indicates there are more line-items in the Invoice as compared to the P.O.
- If there are no discrepancies, no value appears.
- When the user hovers over the Discrepancies values, show a tooltip with the abbreviations and their meanings.