

Efficient Invoice Creation in Alma without Financial System Integration

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What is this presentation about

- How we created (semi)automated invoice creation process
- Overview of the process
- Library Open Workflows implementation of the automation
- Our experiences running the automation

Tampere University Library in context

Tampere Universities

- multidisciplinary higher education community
- 32000 students, 5000 staff

Library

- Provides services for the entire higher education community and Tampere University Hospital
- Staff 76 persons, annual budget EUR 14.6 M€, 4400 onetime & 1650 cont. orders.

Background

- Universities merged 2019, Alma in 2020
- SAP as financial system
- Used to use JIRA as ERM



The Problem

- There was pressure to move ERM functionalities to Alma
- Alma added much work to do the same
 - ➔ Some understandable change resistance to added workload
- Invoice management and fund tracking are based on SAP
- but invoices also needed in Alma to track purchase and price history.
 - ➔ Need to find a way to move invoices from SAP to Alma

Goals



Keep managing invoices in SAP (review, approve, pay)



Get the invoice information copied from SAP to Alma



Minimize manual work to achieve this

Our situation

- Alma's financial system integration with SAP was not working for us
- No one-way invoice import from SAP to Alma was feasibly achievable
- Automatic invoices (EDI, API) possible but won't cover all publishers
- Manually entering invoices in Alma is overly time-consuming and prone to human error
- Needed a lightweight, effective solution

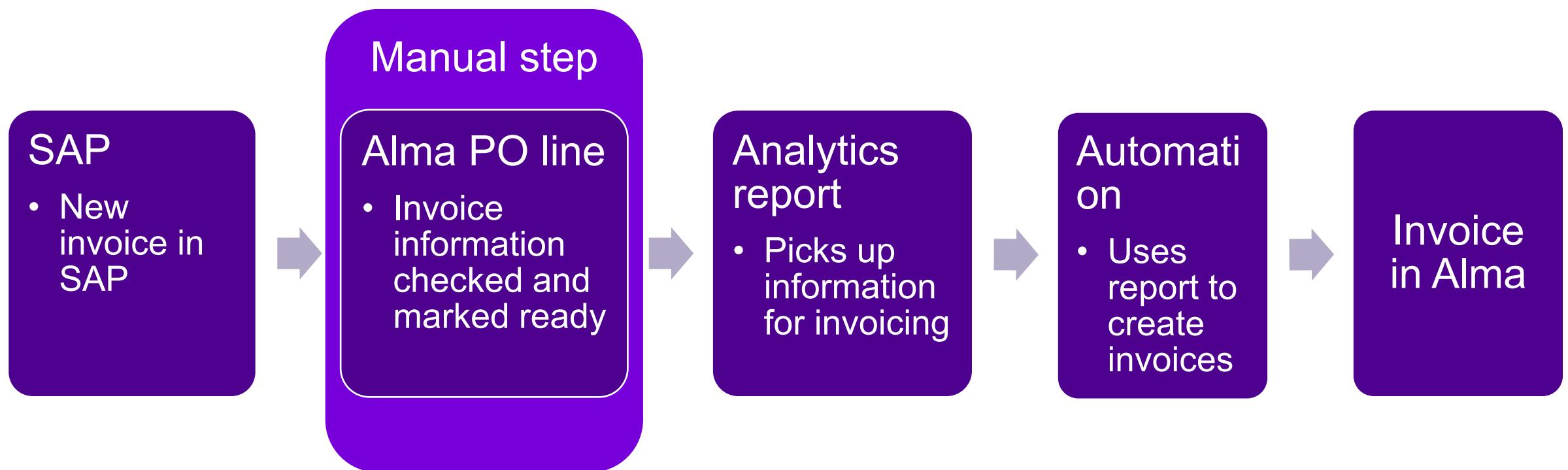
The Idea

We already have all the information needed for invoices in Alma.

We can build on that!



Overview of the process

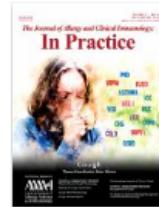


Technical Implementation

- The automation part can be done multiple ways using API's
- We have first used Python but this year switched to Library Open Workflows
- Has been running on LibOW now for half a year

Invoice operator's input

- Summary
- General Information
- Ordered Portfolios (1)
- Vendor Information
- Pricing and Funding
- Activation Information
- Renewal Information
- Interested Users
- Reporting Codes
- Notes (4)
 - Bib Description
 - Invoice Lines (2)
 - Associated PO Lines
 - Communications
 - History (62)
 - Attachments
- Quick Access



Journal of allergy and clinical immunology. In practice. , 2213-2198, ISSN

Assigned to: [REDACTED]

PO line owner: TAU Verkkokauppias

Vendor/Account: Prenax/PRENAX/AINEISTOT/PRAI

Funds: Yhteiset e-lehdet (100.0%) (FY-2025)

393.98 EUR

Electronic Journal - Subscription

🕒 Recurring Renewal

⚠ Alerts (1)

ⓘ Additional Information

PO line: POL-21674 / PO: PO-4770001 (Sent)

General Information

MMS ID: 9911222884305973

CKB ID: 53184487170005973

Identifier: 2213-2198

Acquisition method: * Purchase at Vendor System

Invoice status: Partially invoiced

Material type: Journal

Sent date: 17/02/2023

Additional PO line reference field: 251900000388

Associated PO line: -

Source type: Manual Entry

Manual packaging

Cancellation restriction

Renewal Information

Automated Renewal

Subscription from date 17/07/2023

Renewal cycle 1 Year

Renewal date * 16/07/2026

ⓘ Renewal note

17.7.2025 - 16.7.2026

Analytics report

GetSapNumbersContinuous2025_LibOW

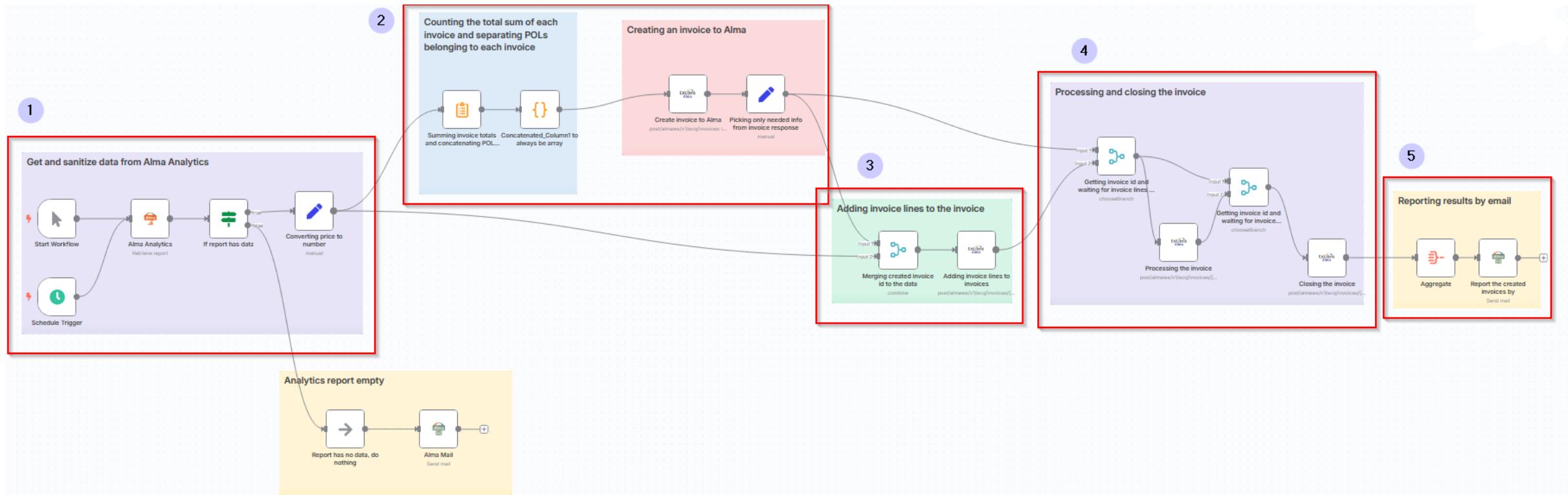
GetSapNumbersContinuous2025_LibOW

Fiscal Period Filter is equal to / is in Current Fiscal Year
and Continuity is equal to / is in CONTINUOUS
and TRIM(BOTH FROM Additional Order Reference) begins with 25
and TRIM(BOTH FROM Additional Order Reference) is not equal to any TRIM(BOTH FROM Invoice-Number) in  [InvoiceNumbers](#)

TRIM(BOTH FROM Additional Order Reference)	PO Line Reference	Vendor Code	Vendor Account Code	Renewal Note	Net Price
251900020079-1	POL-32678	ELLIBS	ELL		8.59
	POL-32679	ELLIBS	ELL	17.6.2025 - 17.6.2026	15.91
251900020378	POL-20276	PRENAX	PRAI	17.7.2025 - 16.7.2026	508.21
251900020379	POL-20373	PRENAX	PRAI	1.7.2025 - 30.6.2026	99.93
	POL-20648	PRENAX	PRAI	1.7.2025 - 30.6.2026	32.59
251900020380	POL-20277	PRENAX	PRAI	17.7.2025-16.7.2026	508.21
	POL-20286	PRENAX	PRAI	7.8.2025 - 6.8.2026	635.26

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Library Open Workflow automation



Data in LibOW

OUTPUT    Schema Table JSON 

5 items

```
L
{
    "Column1": 14.68,
    "Column2": "POL-32974",
    "Column3": "7.8.2025 - 7.8.2026",
    "Column4": "ELL",
    "Column5": "ELLIBS",
    "Column6": "251900022811-3"
},
{
    "Column1": 307.13,
    "Column2": "POL-31546",
    "Column3": "4.4.2025 - 3.4.2026",
    "Column4": "VLE BOOKS",
    "Column5": "VLEBOOKS",
    "Column6": "251900023697"
},
{
    "Column1": 817.54,
    "Column2": "POL-27256",
    "Column3": "28.5.2025 - 27.5.2026"
}
```

Email notification

 continuousInvoices@alma.com  | 

Vastaanottaja: **+1 muu** ke 13.8.2025 11.06

! Tämä Lähettäjä continuousInvoices@alma.com on organisaationsi ulkopuolelta.

[Estä lähettilä](#)

Following invoices were created:
Invoice Number: 251900022811-3, PO Lines: 1
Invoice Number: 251900023697, PO Lines: 1
Invoice Number: 251900023699, PO Lines: 1
Invoice Number: 251900023700, PO Lines: 1
Invoice Number: 251900023701, PO Lines: 1

 [Vastaan](#)  [Lähetä edelleen](#)

Benefits

- Significantly reduces repetitive manual work
- Supports university's SAP-centric invoicing practices
- But also enables us to get the needed invoices to Alma, utilize Analytics reports on expenses and have up to date information of our funds.

Experiences so far

- Has been running for about a year as Python script, since February in LibOW
- Email notifications need to be followed as there sometimes are human errors. Usually easy to fix.
- Very reliable - once since February there was a problem in LibOW system and scheduled workflows did not run
- Actually there are two different workflows: onetime orders and continuous orders

Summary

- Challenge: Need to get invoices from SAP to Alma
- Solution: Automation process including only small amount of manual work
- Value: Saves time, is accurate and enables us to bring all material invoices to Alma

Thank You! Questions?

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