

Automating Utility Invoice Processing with AI and Bots

April 2024

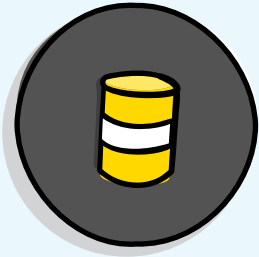


AGENDA



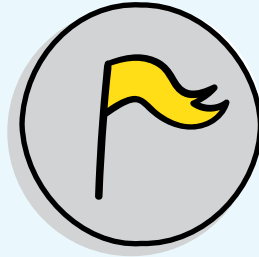
Who are we?

SmartDocs Overview



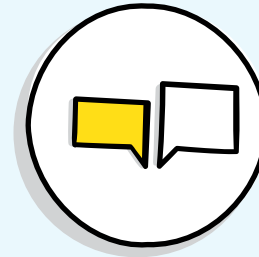
Digitization & Bots

What can these do to help your organization



Utility Invoice Processing

Process and nuances of paying Utility Invoices



Pennsylvania Turnpike Commission Story

PTC's story of handling Utility Invoices



Patterns & Anti-Patterns

Some Dos and Don'ts to consider

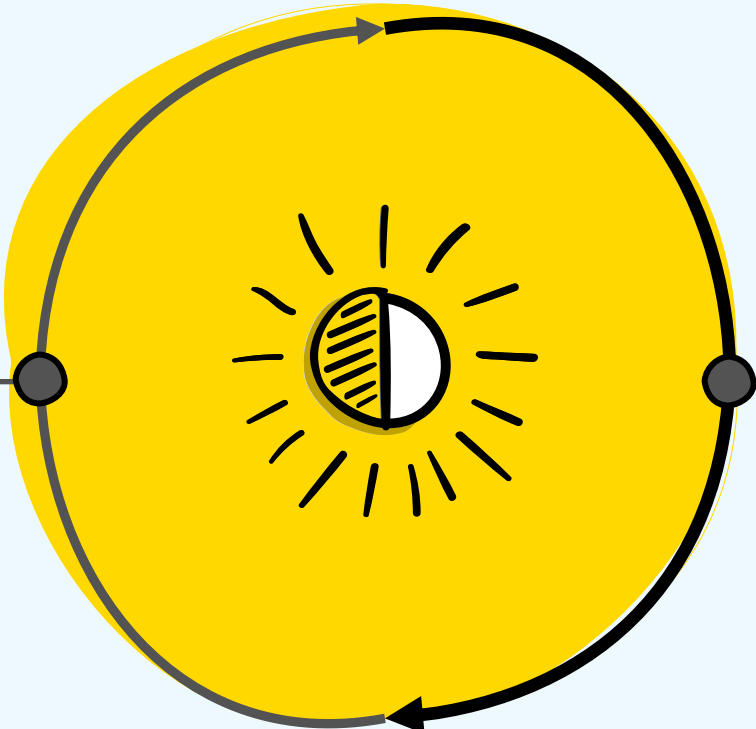
Who is SmartDocs



Who are we ?

SmartDocs Inc.

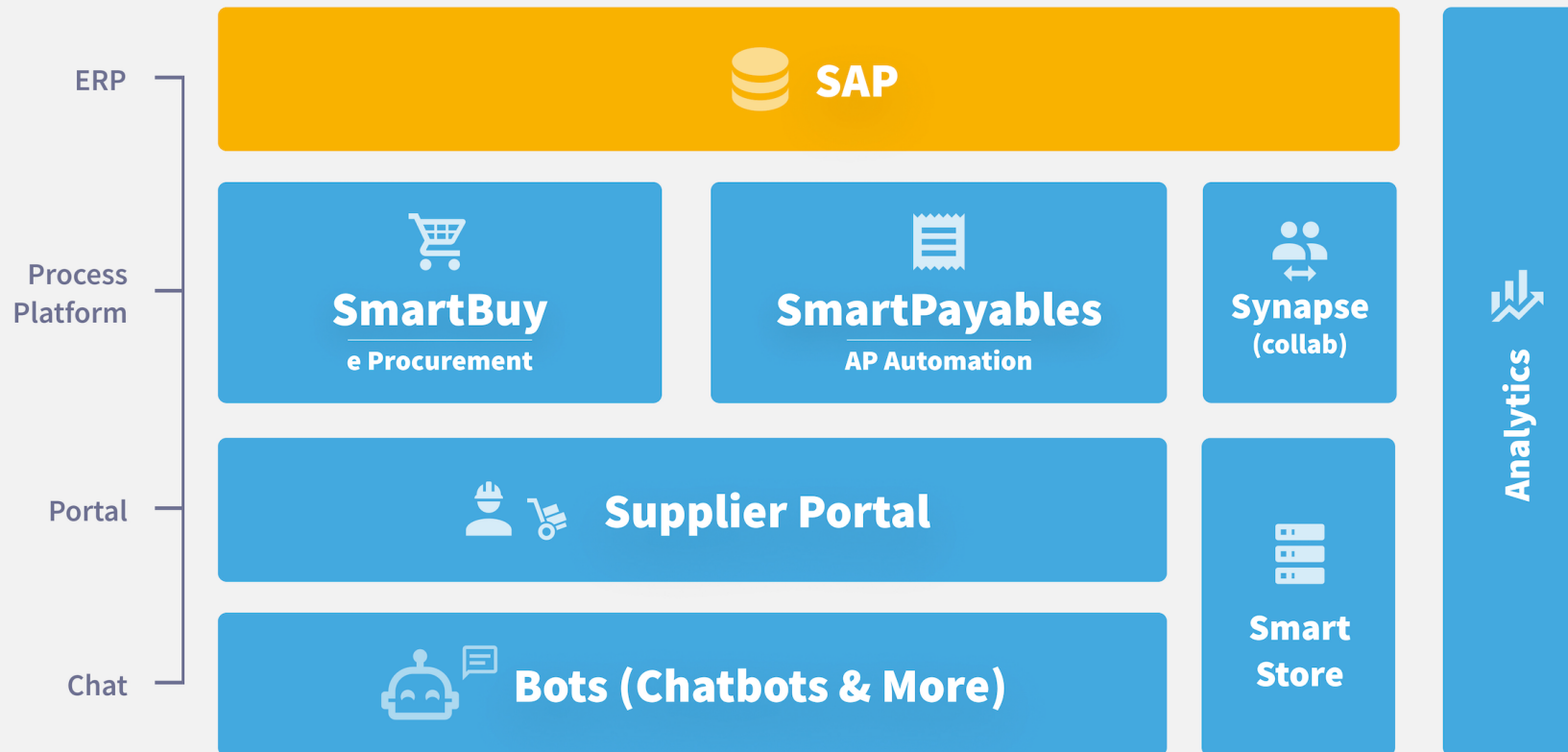
Digital
Source to Pay
(S2P) Platform



GenAI
Platform for the
Enterprise



SmartDocs One Platform



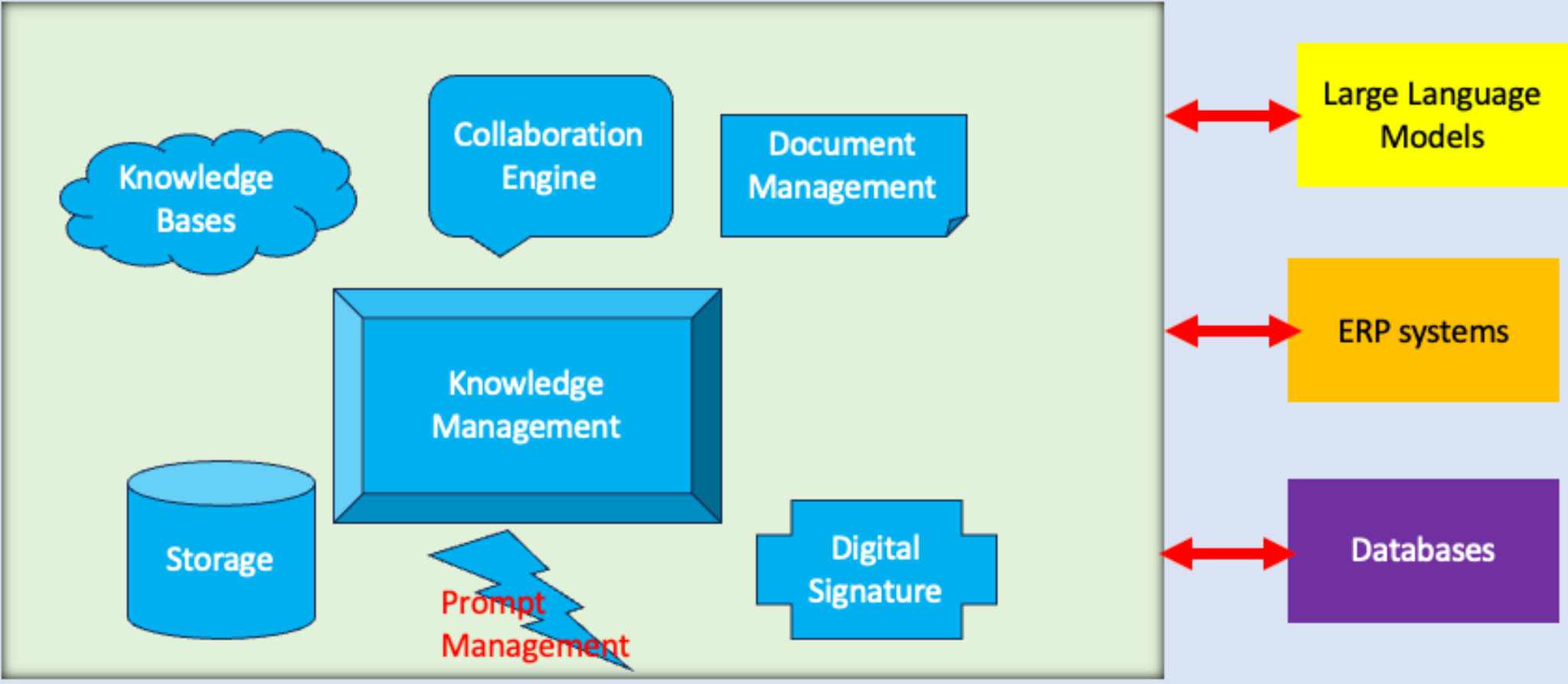
SmartDocs Vault Platform

Microsoft Teams

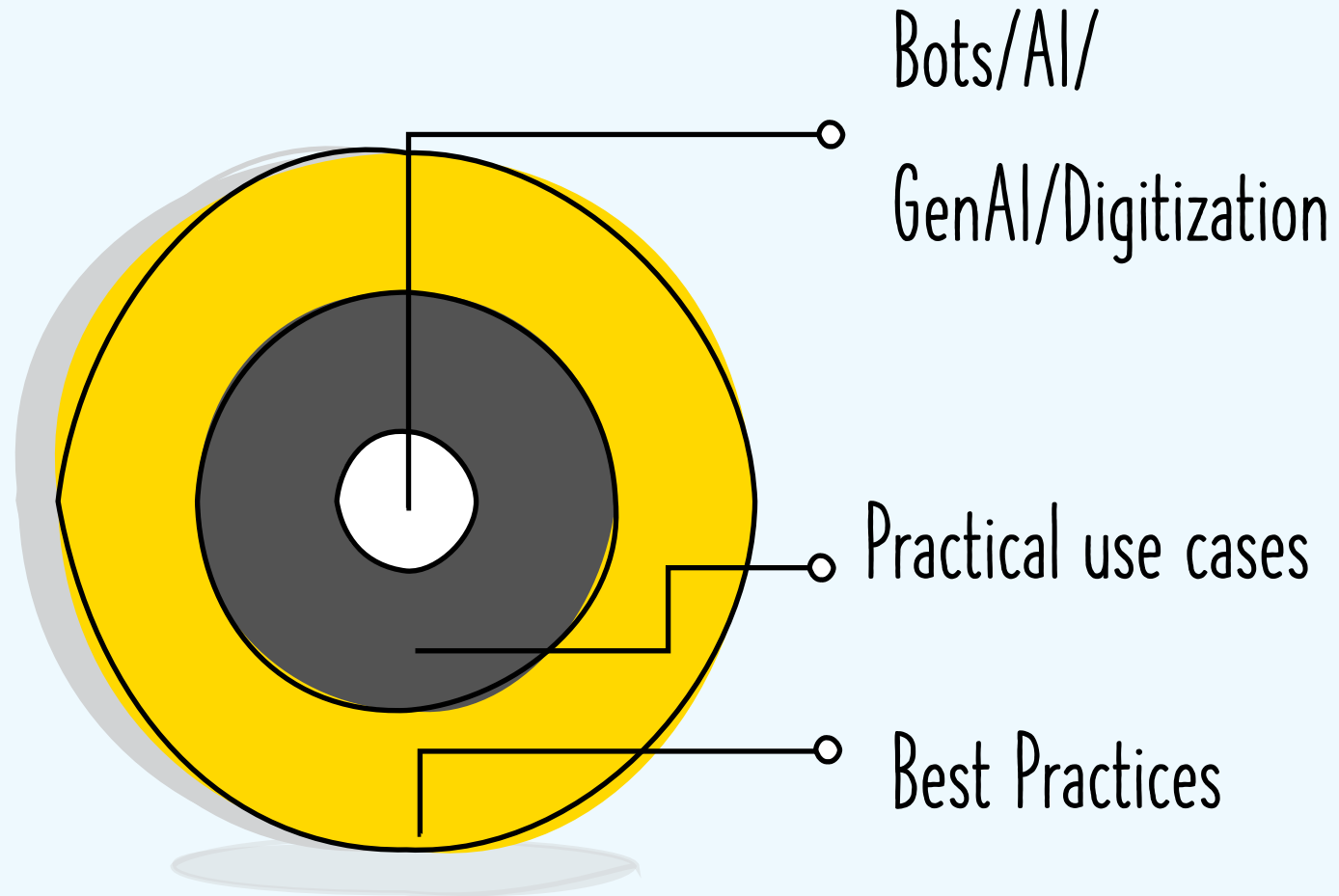
Browsers

SAP Fiori

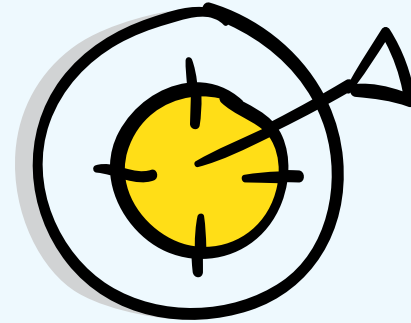
Enterprise Apps



WHAT WE ARE GOING TO TALK ABOUT



Digitization & Bots



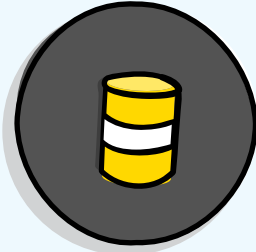
What is it all about???

Digitization

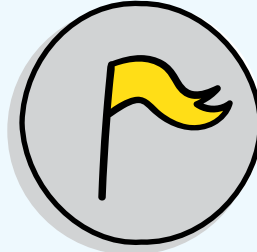
Broadly includes, among other things, ...



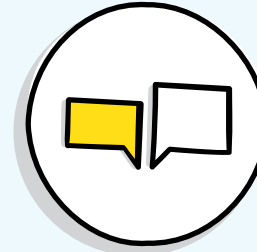
GenAI PLATFORMS



DIGITAL ASSISTANTS



OCR



NLP



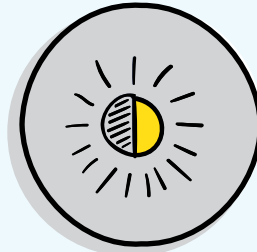
Digital Robots



Eliminate paper



Self-Service



Recommendation Engines



Anomaly Detection
Systems



Prediction Algorithms

Digitization & Bots: How can they help your organization?

Answer depends on two things

YOUR ORGANIZATIONAL
CAPABILITIES

YOUR COMPANY STRATEGIES
(a.k.a. priorities)

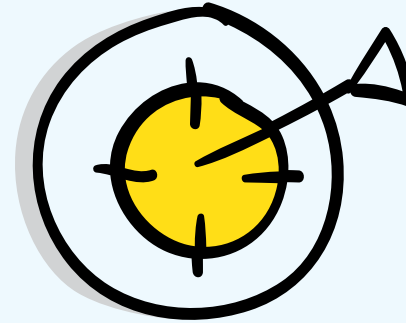
Introducing Technology without STRATEGY will bring marginal results at best and create chaos at worst.

Priorities / Opportunities

Focus - Goals

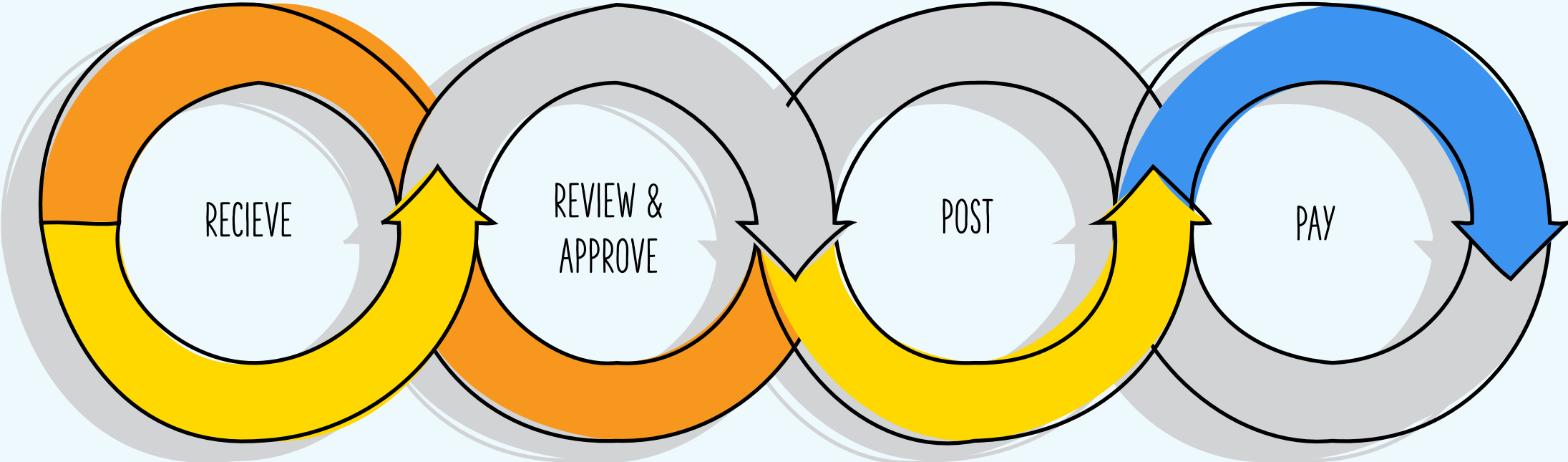


Vendor Invoice Processing



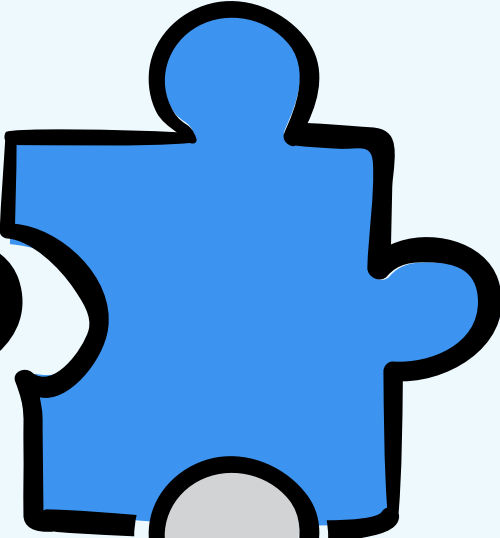
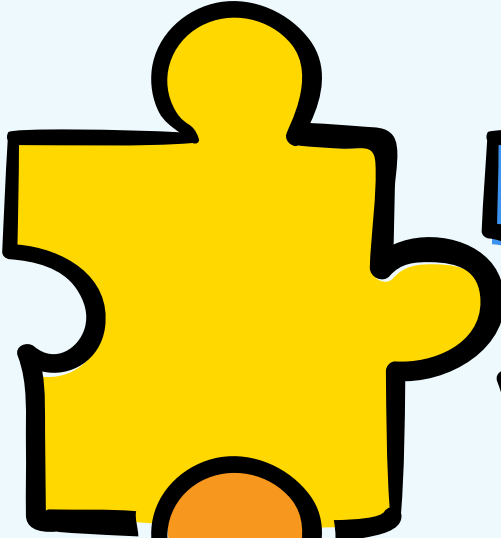
What it takes to process Vendor invoices

INVOICE PROCESSING



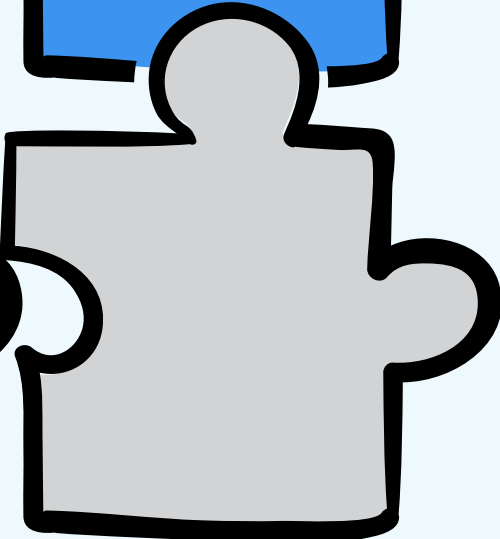
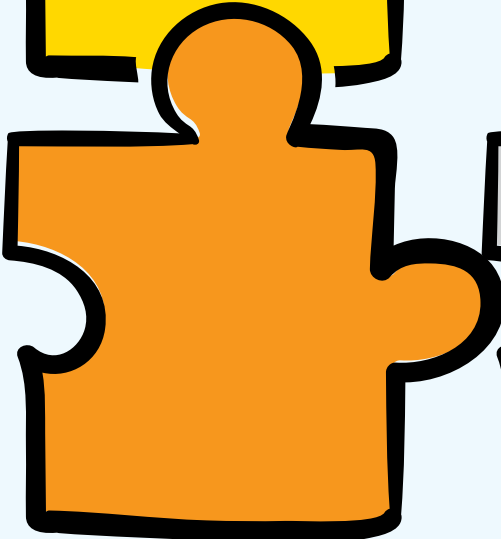
TYPES OF INVOICES

PO INVOICES



NON-PO INVOICES

CHECK REQUESTS

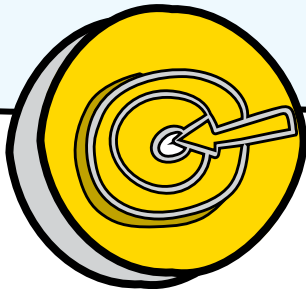


UTILITY INVOICES

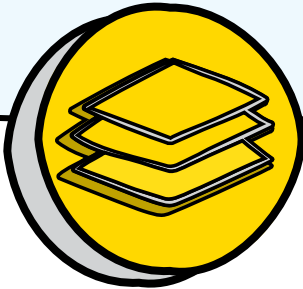
UTILITY INVOICES

KEY FEATURES

** Footer note goes here*



You can't dictate how you receive the invoices

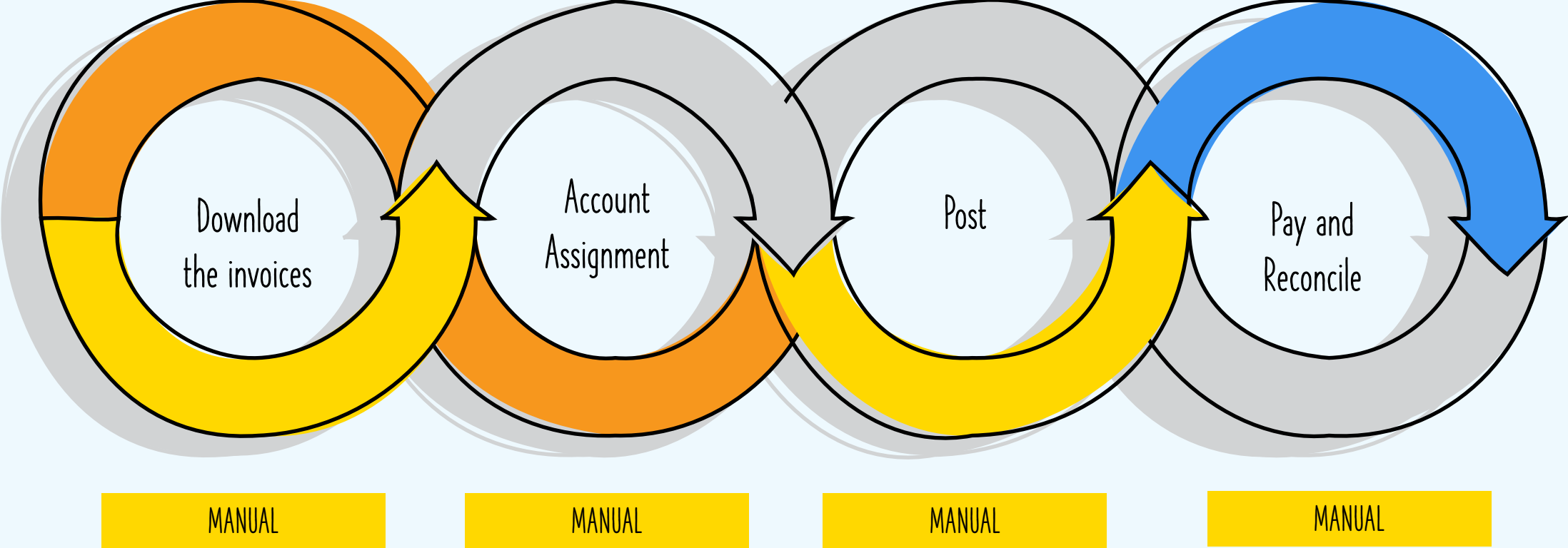


Have to generally pay first and then dispute

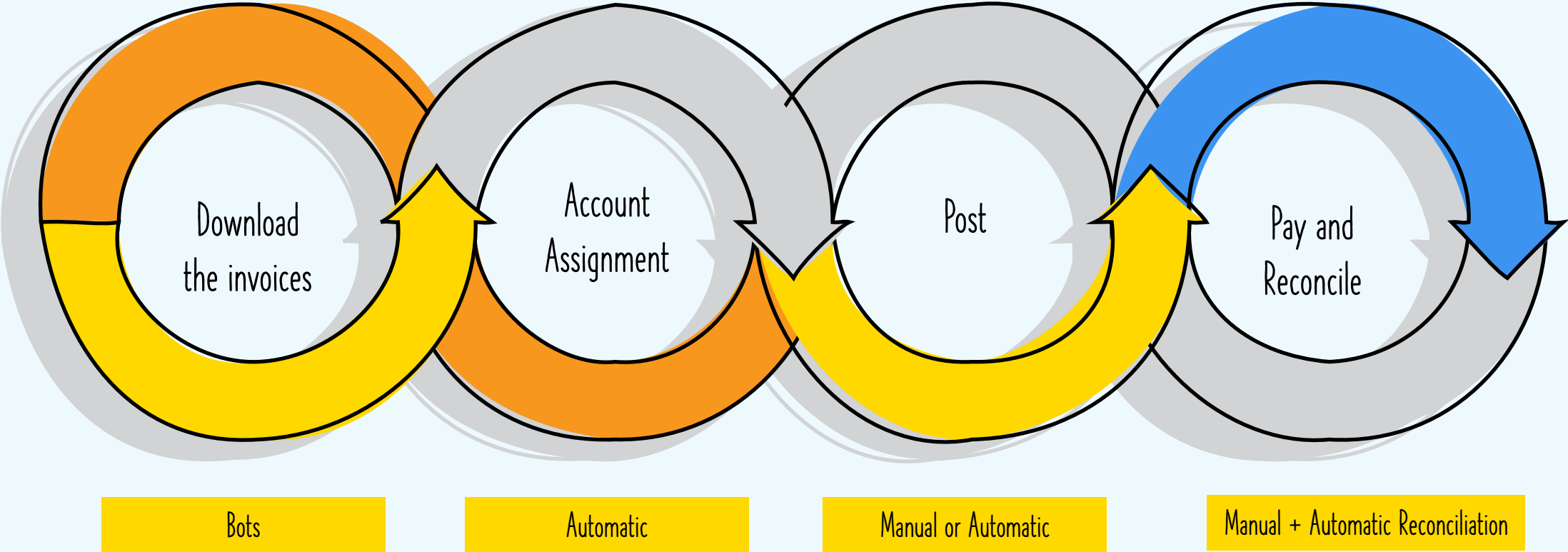


Difficult to find responsible owners

Typical Utility Invoice Process Flow



Utility Invoice Process Flow - with SmartDocs AI Platform



HOW CAN BOTS / AI HELP here?

...



Automatically Log into Vendor website and pull invoices



OCR the invoices and extract information.



Automatically Code (Account Assignment) the invoices



Check business rules and spot anomalies



Monitor and provide visibility



Pennsylvania Turnpike
Commission

Utility Invoice Processing



America's First Superhighway

- Abandoned Vanderbilt and Carnegie railroad from 1880s
- 160 miles designed and constructed in 20 months
- 2.4 million vehicles in 1940
- Led to Interstate Highway System



4 TRAFFIC LANES • 160 MILES • NO TRAFFIC LIGHTS

Seven Solid Concrete Tunnels Pierce the Alleghenies on the New Super-Highway

The Turnpike's Two 24-Foot Roadways Inside Scenic, Wild Mountain Country

Enduring Concrete Has Created Perfect Driving Conditions on the World's Greatest Road

Eastward	Westward
HARRISBURG	0
MIDDLESEX	51.4
SHARPSBURG	92.8
CONROCK	134.2
NEW BALTIMORE	175.6
NEW YORK	217.0
PITTSBURGH	258.4



The Pennsylvania Turnpike System Map

Website: www.paturnpike.com
Customer Service: **800.331.3414**
(Outside U.S., call 717.831.7601)

LENGTH OF TURNPIKE

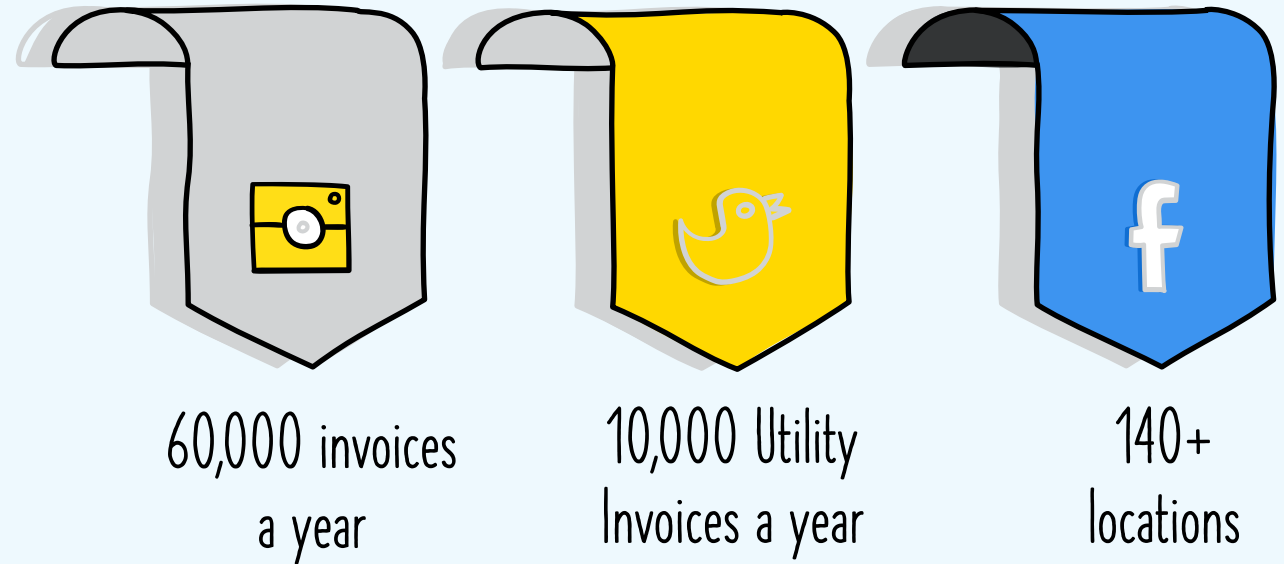
Delaware River to Ohio	359 miles
Northeastern Extension	110 miles
Western Expansions	83 miles
Expansions Include:	
• Beaver Valley Expressway	• Mon/Fayette Expressway
• Greensburg Bypass	• Southern Beltway
Total Turnpike Miles	552 miles
Total Lane Miles	2,442 miles



Accounts Payable Landscape

Process over \$1.5B in spend annually

- SAP ECC, SAP SRM, SmartDocs Vendor Portal



General Concepts




Assets
Locations




Utility Vendors
Vendors



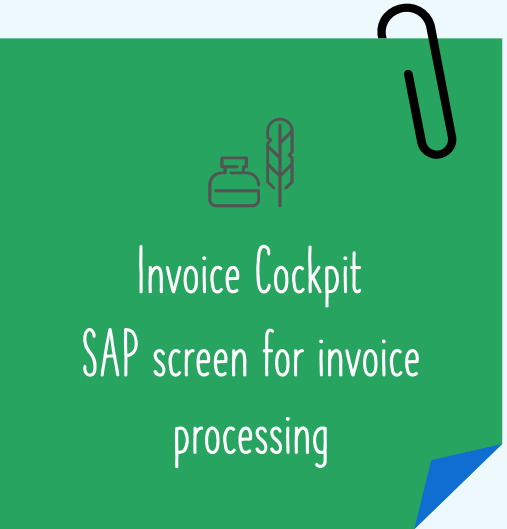

Vendor Accounts
PTC account at Vendors





Vault
Vendor Website
credentials




Smart Task List (STL)
Workflow list




Invoice Cockpit
SAP screen for invoice
processing

Invoice Ingestion Channels



AutoPilot - Bot



Bots pulling from Vendor websites

Channel: AutoPilot - Bot

Get from website automatically

AutoPilot - Email



Paper invoice scanned
Channel: AutoPilot - Email

Emailed to SVC_VP_utilityinv@paturnpike.com



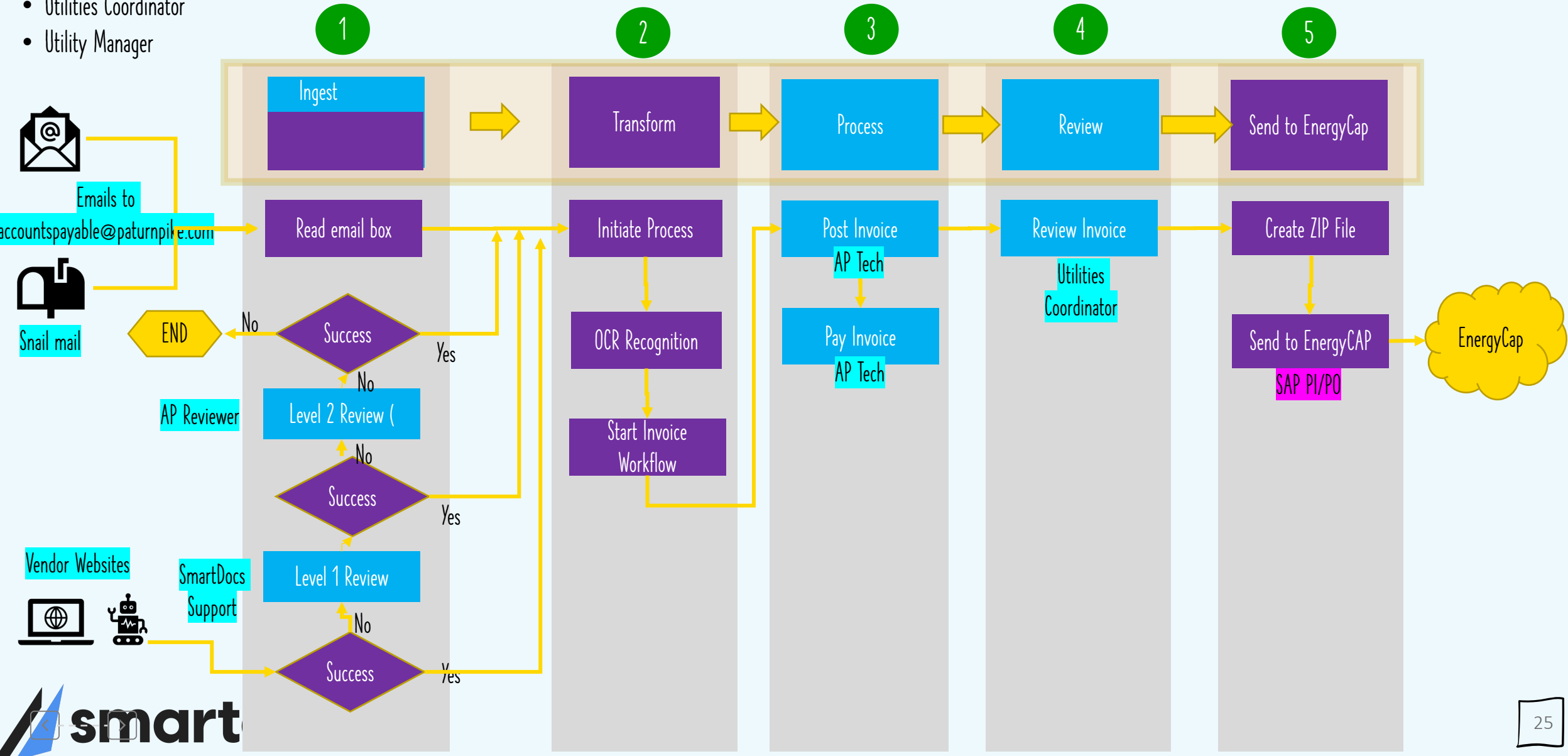
Forwarding Emails received
at accounts payable@paturnpike.com

Channel: AutoPilot - Email

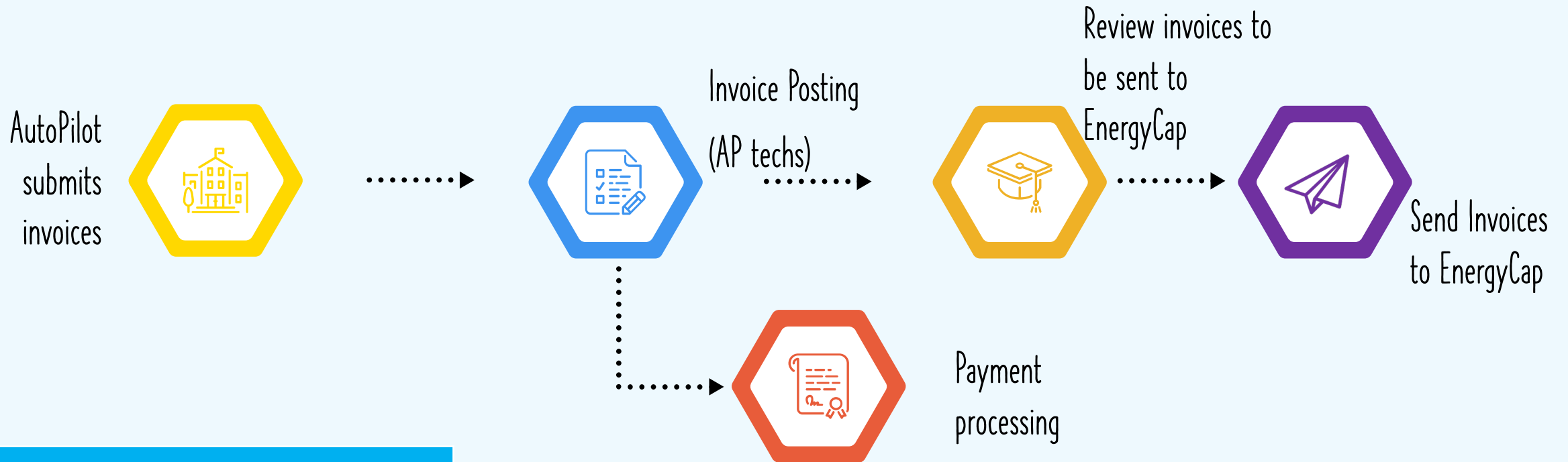
Emailed to SVC_VP_utilityinv@paturnpike.com

Utility Invoice Processing

- AP Reviewer
- AP Tech
- Utilities Coordinator
- Utility Manager



Utility Invoices



- Automatically pulling from vendor website
- Paper invoices and email invoices mailed to AutoPilot email

Asset Dashboard

Utility Invoice Management

dev.ptcvendorportal.com/utility/utilites/dashboard

S1 V7 Portal Vendor Portal Me | Attendance | L... Century New Asset Management S1 V7 Design Auto Pilot versio... SmartDocs S1V7 - I... L&T SAP GUI DETIL... ngWebDriver - a wa... Other bookmarks

AutoPilot Utilities Utility Invoices STL Reports Admin

SV

Assets Dashboard Vendors Dashboard Monitoring Dashboard

125
Total Assets

Asset Managers
No managers found

Bills from All Assets

Asset Name	Count	Count	Action
(610111) FC Dist 6 Office NEW GALLEE,	3	0	→
(610136) Jeff Hills Station Rout68,	0	0	→
(610012) Facilities District 1 3000 Haberlein Road,	1	0	→

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Vendor Dashboard

Utility Invoice Management

dev.ptcvendorportal.com/utility/utilites/dashboard

S1 V7 Portal Vendor Portal Me | Attendance | L... Century New Asset Management S1 V7 Design Auto Pilot versio... SmartDocs S1V7 - I... L&T SAP GUI DETIL... ngWebDriver - a wa... Other bookmarks

AutoPilot Utilities Utility Invoices STL Reports Admin

Assets Dashboard **Vendors Dashboard** Monitoring Dashboard

117 Utility Vendors

Vendors based on utilities

Water	52
Sanitation	3
Fuel	9
Gas	9
Janitorial Services	1
Phone	28
Electricity	16

Bills from All Utility Vendors Looking for?

(200000338) PECO Energy Co PO BOX 37629,PHILADELPHIA,PA,19101-0629	25	1896.35	→
(100) ePlus Technology Inc 4660 Trindle Rd Ste 101,Camp Hill,PA,17011	0	0	→
(200000154) PENN TWP SEWAGE AUTHORITY 1032 NIKE SITE RD,IRWIN,PA,15642	1	0	→
(30) Bedford Valley Petroleum Corp 10228 Lincoln Highway,Everett,PA,15537	0	0	→
(254) Mansfield Oil Co of Gainesville Inc 1025 Airport Parkway SW,Gainesville,GA,30501-6813	0	0	→
(401) AmeriGas Propane LP 460 N Gulph Rd,King of Prussia,PA,19406	0	0	→
(592) Talley Petroleum Enterprises Inc 10046 Allentown Blvd,Grantville,PA,17028	0	0	→

View all →

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Credentials Vault

The screenshot displays the 'Credentials Vault' interface within the 'Utility Invoice Management' system. The main view shows a list of secrets with columns for 'Secret name', 'User Id', and 'Description'. An 'Edit Secret' modal is open, showing the following details:

- Secret Name:** 200000006_All
- Description:** 200000006_All
- Key:** accountspayable@paturnpike.com
- Password:** [Redacted]
- User Email:** accountspayable@paturnpike.com

The modal also includes a 'Login URL' field with the value 'https://schedulepayment.com/aqua' and a 'Copy to clipboard' button. The background shows a table of secrets with columns for 'Secret name', 'User Id', and 'Description'. The table contains several rows of secrets, including those for 'accounts payable' and 'invoice processin'.

Secret name	User Id	Description
2000000006_All	accounts payable	
2000000088_All	accounts payable	
2000000094_All	invoiceproce	
2000000107_All	accounts payable	
2000000134-All	accounts payable	
2000000168_All	accounts payable	
2000000174_All	accounts payable	
2000000199	accounts payable	
2000000291_All	accounts payable	
2000000300_All	invoiceprocessin	invoiceprocessin

EnergyCap Review

Vendor Portal | Dashboard | Procurement | Invoicing | **Utility Invoices** | Expenses | OCR-Q | Tickets-Q | Requests | Reports | Admin

72 | 2 | + | SC

← EnergyCAP Invoices | Awaiting for Review | Completed | Reports

Asset: [] Utility Vendor: [] Utility Type: All Account Number: [] Date Range: Select From & To Dates [] [Search] [Download] [Send to EnergyCAP] [Set to Obsolete]

<input type="checkbox"/>	Vendor	Asset	Account Number	Invoice Number	Invoice Date	Last Update ↓	Channel	Amount	Status	Actions
<input type="checkbox"/>	AE 2-364 Adams Electric	9885 Vertex Homes 2118 Thornridge Cir. Syracuse, Connecticut 35624	6557000265	9506932861	Jan 08, 2022	Jan 12, 2022	Auto Pilot	64,120.0 USD	Posted	Actions [] []
<input checked="" type="checkbox"/>	CG 2-174 Columbia Gas of PA	9507 Triangle Heights 2464 Royal Ln. Mesa, New Jersey 45463	2377471239	2112032819	Nov 27, 2021	Jan 12, 2022	Auto Pilot	24,120.0 USD	Posted	Actions [] []
<input checked="" type="checkbox"/>	W 2-415 Windstream	9621 Dream Max 8502 Preston Rd. Inglewood, Maine 98380	2112032819	5351022502	Nov 27, 2021	Jan 12, 2022	Auto Pilot	14,120.0 USD	Posted	Actions [] []
<input checked="" type="checkbox"/>	VA 2-3015 Verizon Albany	1906 Russell Contracting 2972 Westheimer Rd. Santa Ana, Illinois 85486	9506932861	1501341233	Nov 27, 2021	Jan 12, 2022	Auto Pilot	25,020.0 USD	Posted	Actions [] []
<input type="checkbox"/>	A 401 AmeriGas	2452 Sthapatya Green 2972 Westheimer Rd. Santa Ana, Illinois 85486	8524792206	1696086371	Nov 27, 2021	Jan 12, 2022	Auto Pilot	34,100.0 USD	Posted	Actions [] []
<input type="checkbox"/>	AE 2-364 Adams Electric	1988 Precious Homes 6391 Elgin St. Celina, Delaware 10299	1565015004	1883798829	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions [] []
<input checked="" type="checkbox"/>	CG 2-174 Columbia Gas of PA	9617 Western Builders 1901 Thornridge Cir. Shiloh, Hawaii 81063	1883798829	8524792206	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions [] []
<input checked="" type="checkbox"/>	W 2-415 Windstream	5134 B Square Construction 4517 Washington Ave. Manchester, Kentucky 39495	9501956750	2377471239	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions [] []
<input type="checkbox"/>	VA 2-3015 Verizon Albany	2227 Everest Height 2715 Ash Dr. San Jose, South Dakota 83475	5351022502	6255877057	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions [] []
<input type="checkbox"/>	A 401 AmeriGas	2754 Bright Stone 4140 Parker Rd. Allentown, New Mexico 31134	1641617565	1565015004	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions [] []

Rows per page: 10 | 1-10 of 24 | < >

STL in SAP

SAP Sdocs Smart Task List

Refresh InBox Par Cancel

SMARTDOCS Digitize | Botify | Transform


Utility Invoices









Documents 53


Cockpit view on Process Replace

Status	Step Details	Vendor Name	Vendor	Vendor Invoice No	Latest Comment	Invoice Amount	Invoice Type	PO Number	Channel	Credit Memo
<input type="checkbox"/>	Duplicate Invoice	LEHIGH COUNTY AUTHORITY	2000002113	2557463		95.20	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Utility Invoice Missing on Last Mnth	LEHIGH COUNTY AUTHORITY	2000002113	2557463		95.20	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data		null	200004246399		302.11	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data	BEAVER FALLS MUN. AUTH.	2000000410			30.83	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data	Authority of the Borough of Charler	2000000570			104.99	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data	Authority of the Borough of Charler	2000000570			104.99	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data	Authority of the Borough of Charler	2000000570			104.99	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Utility Invoice Missing on Last Mnth	Bucks County Water & Sewer Authorit	2000000088	1025058-00		43.63	Non-PO Utility Invoice		AUTOPILOT	40003
<input type="checkbox"/>	Missing Mandatory Data		null	BOQJ3818.xls		185.00	Non-PO Utility Invoice		AUTOPILOT	40003

Invoice Cockpit in SAP

 SmartDocs cockpit for 400037756 - Post Invoice

✓   Comments  Cancel Workflow  Exceptions  Attachments  Header  Log Data  Attachments More ▾


 Digitize | Botify | Transform

General Activities
[◆ Create - FB60](#)

Collaboration Activities
[◆ Coll with PTC user](#)

Invoice Type Processing Stage Balance

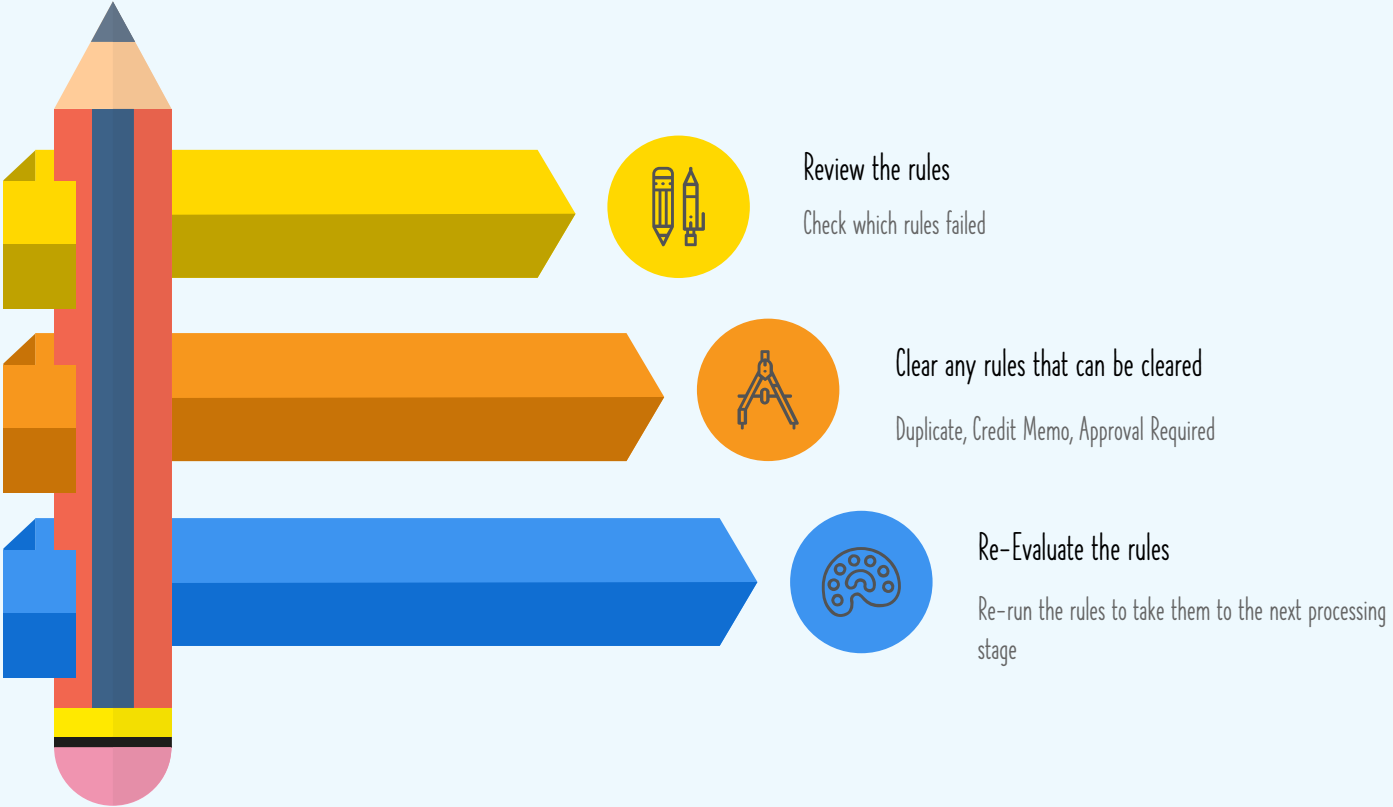
[Main](#) [General](#) [Vendor Details](#) [Last Period Invoices](#)

Invoice Date	<input type="text" value="12/15/2022"/>	Go to Vendor link	Go to Asset link
Posting Date	<input type="text" value="03/02/2023"/>	Vendor	<input type="text" value="2000002113"/> LEHIGH COUNTY AUTHORIT
SAP Document No	<input type="text"/> Year <input type="text" value="0"/> 	Vendor Inv No	<input type="text" value="2557462"/>
Submitter Email	<input type="text"/>	Asset Code	<input type="text" value="AC_0324A2"/>
Header Text	<input type="text" value="*2557463"/>	Account ID	<input type="text" value="30182"/>
Period/Dates of Service	<input type="text"/>	Bill Amount	<input type="text" value="95.20"/>
Channel	<input type="text" value="AUTOPILOT"/>	Last Month Bill Amt	<input type="text" value="95.20"/> <input type="text" value="USD"/>

Invoice Cockpit - Business Rules/Exceptions

Exceptions	Status	Agent	Clear Ex...	Clear
Missing Mandatory data	○○■	AP_TEAM		
Vendor,Asset Code and Account Id Mismatch	○○■	AP_TEAM		✓
Check Duplicates	○○■	AP_TEAM		
Utility Invoice Missing on Last Period	●○○	AP_TEAM	⚙️	
Tolerance of Utility Invoice Amount	○○■	AP_TEAM		
Post Invoice	●○○	AP_TEAM		

Enter text here...



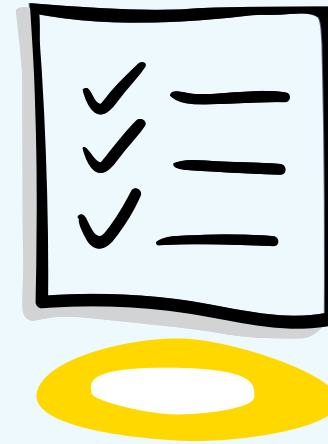
 | Re-Evaluate Rules
 Re-run the Business rules

Demo



Utility Invoice Processing

Patterns & Anti Patterns



DOs and DON'Ts

DOs and DON'Ts

○ Collaboratively administrate turnkey channels whereas virtual retailers



Plan for Change Management

Proactively and aggressively plan for change.

Recruit Process Champions in various departments



Integrated Solution

Plan for an integrated solution with your core systems.

Including your ERP and ITSM systems



Limit Customizations

Though your business is unique, try to minimize enhancements and modifications in core systems



Inadequate Testing / UAT

Ensure extensive and proper testing is done

Transformation means change to Status Quo



Forcing Process Changes

Without proper buying from all departments don't roll out changes that effect different parties



Unprepared for Change

Not adequately prepared for the changes



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