

# Automating Utility Invoice Processing with AI and Bots

December 14, 2023

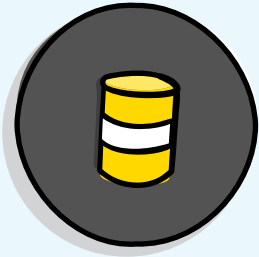


# AGENDA



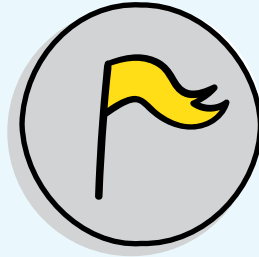
Who are we?

SmartDocs Overview



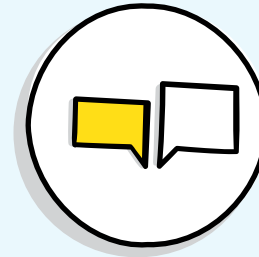
Digitization & Bots

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



GLIMPSE into FUTURE

See how a thoughtful well  
designed Procure to Pay  
platform would like

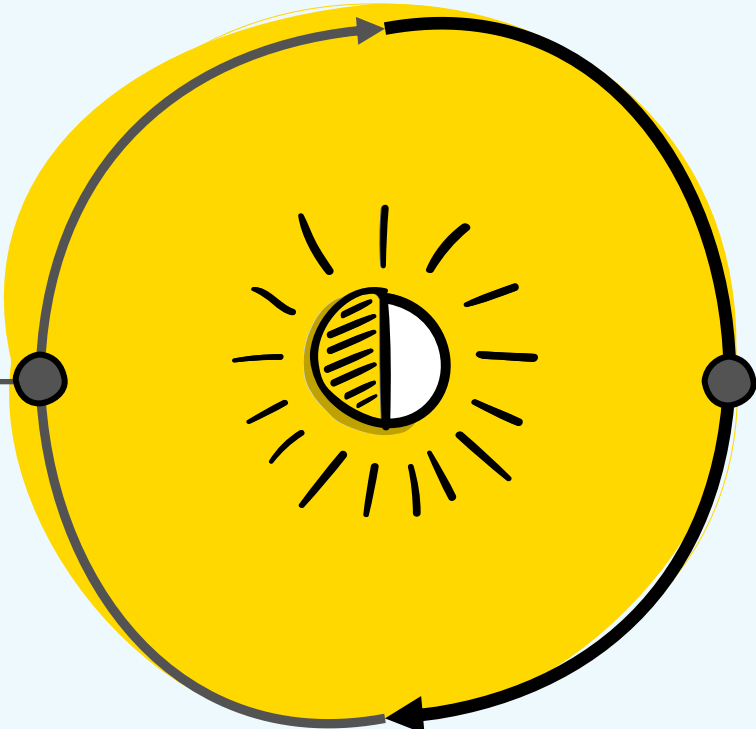
# Who is SmartDocs



Who are we ?

SmartDocs Inc.

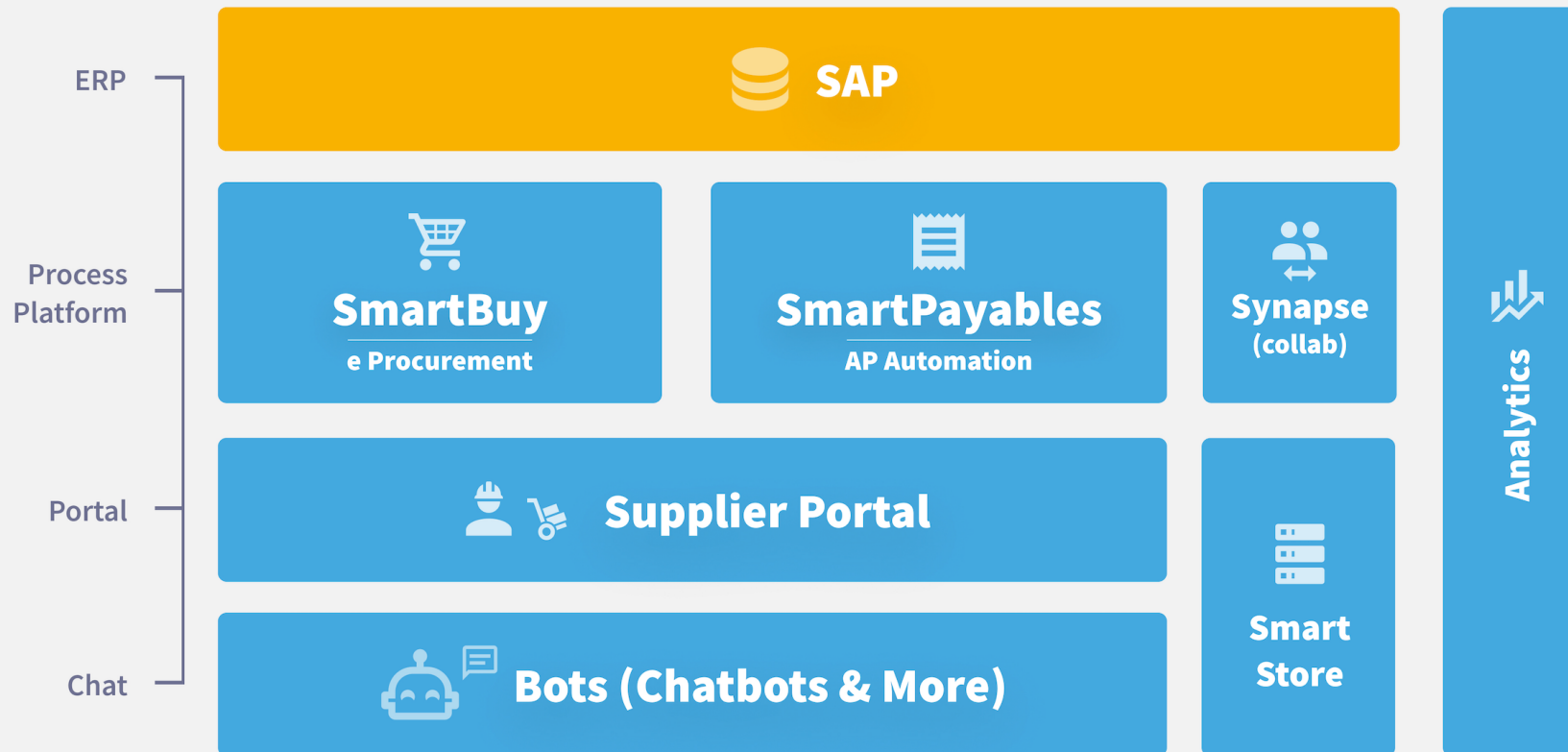
Digital  
Source to Pay  
(S2P) Platform



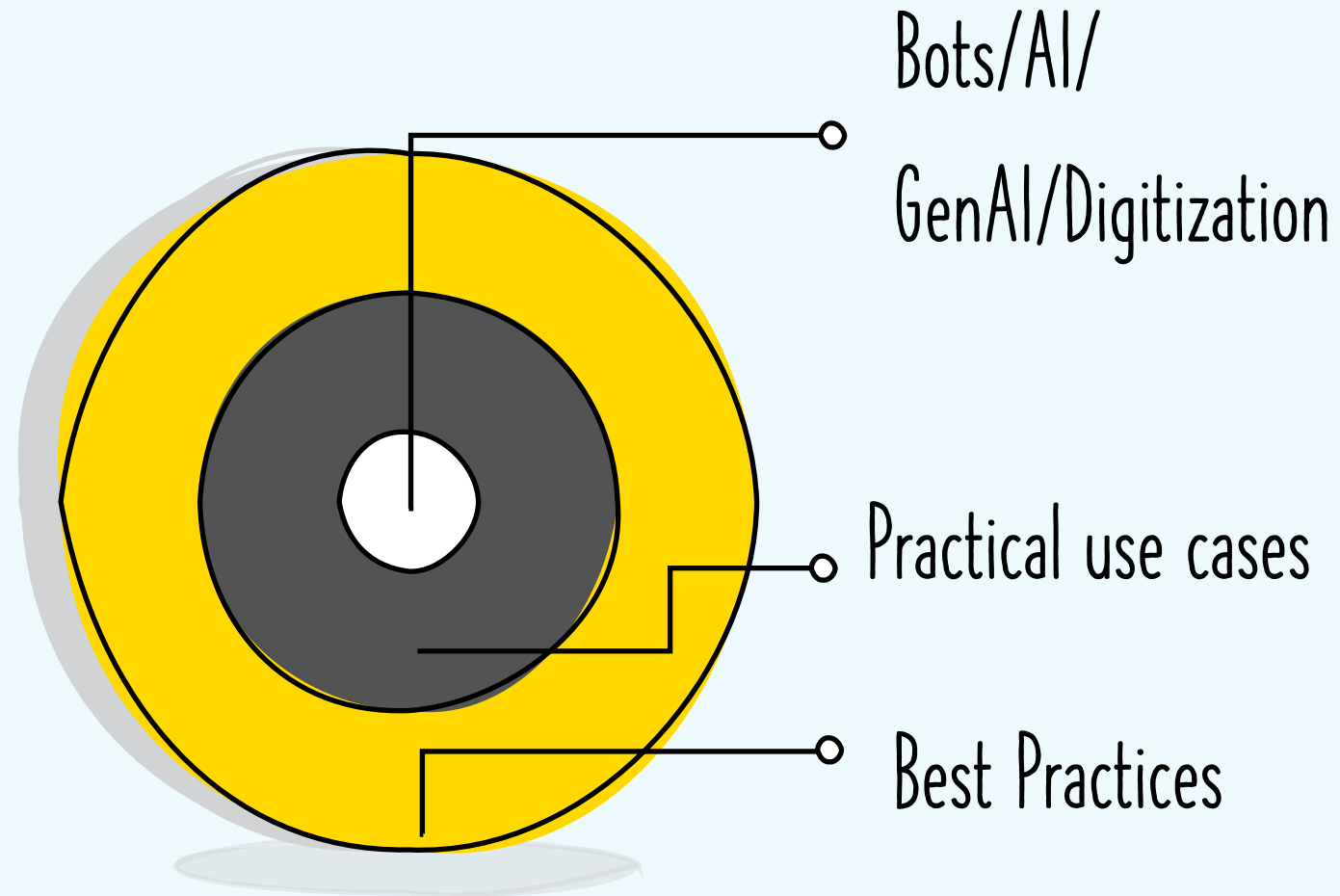
GenAI  
Platform for the  
Enterprise



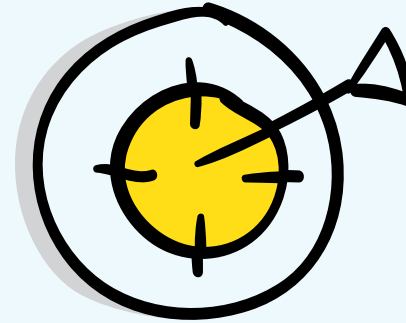
# SmartDocs One Platform



# WHAT WE ARE GOING TO TALK ABOUT



# Digitization & Bots



What is it all about???

# Digitization

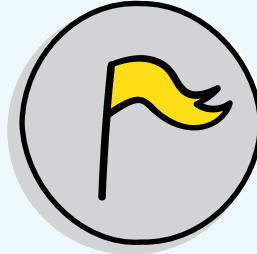
Broadly includes, among other things, ...



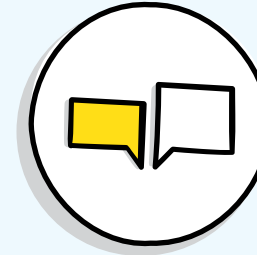
GenAI PLATFORMS



DIGITAL ASSISTANTS



OCR



NLP



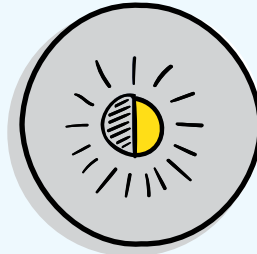
Digital Robots



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)

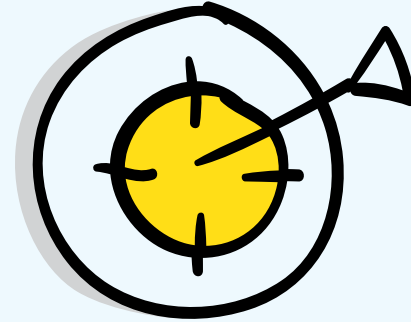
*Introducing Technology without STRATEGY will bring marginal results at best and create chaos at worst.*

# Priorities / Opportunities

Focus - Goals

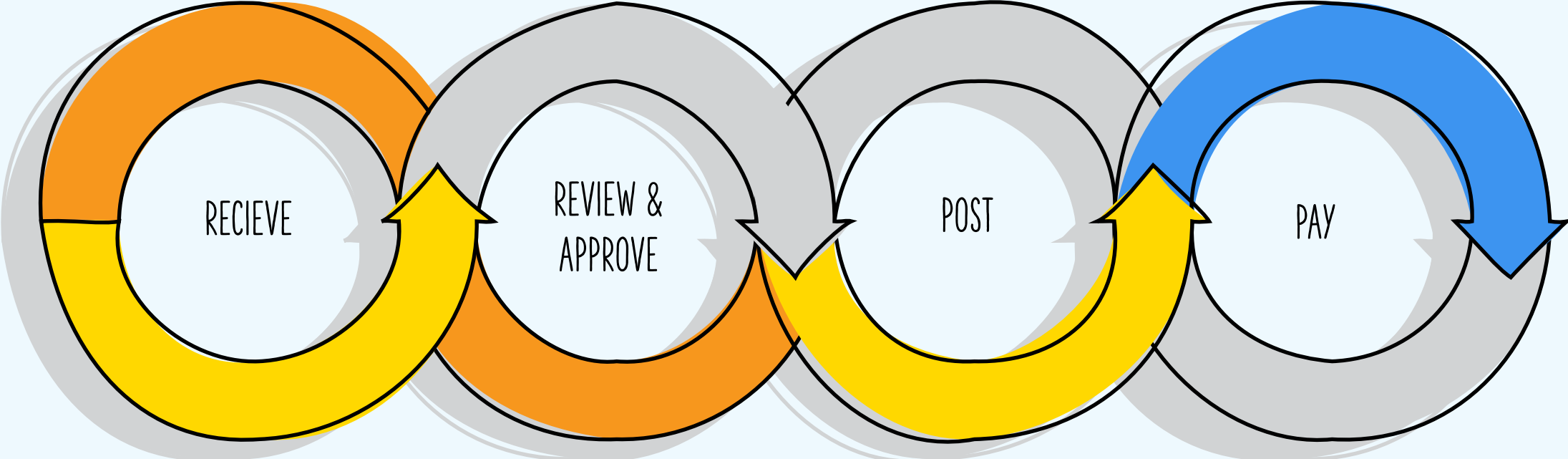


# Vendor Invoice Processing



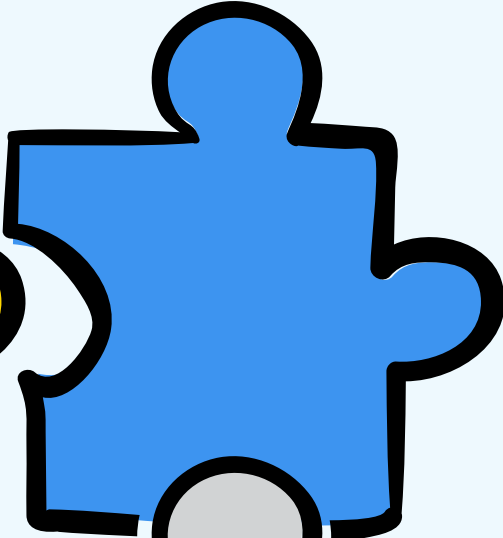
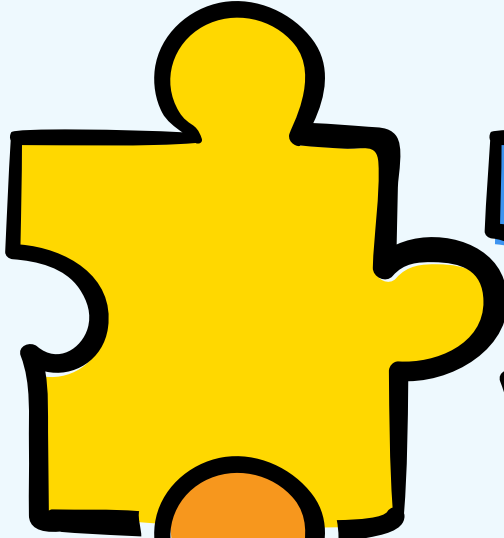
What it takes to process Vendor invoices

# INVOICE PROCESSING



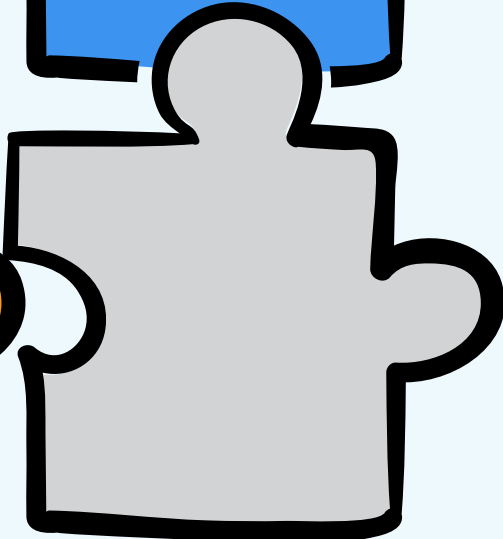
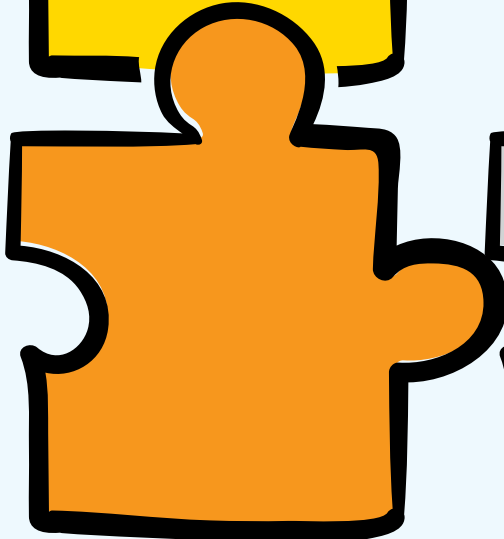
# TYPES OF INVOICES

PO INVOICES



NON-PO INVOICES

CHECK REQUESTS

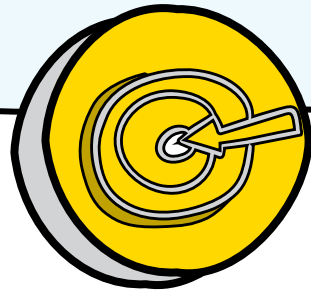


UTILITY INVOICES

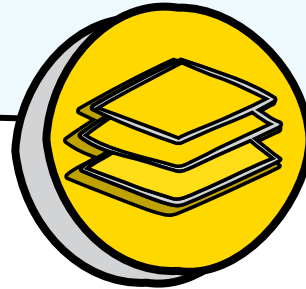
# UTILITY INVOICES

## KEY FEATURES

*\* Footer note goes here*



You can't dictate how you receive the invoices

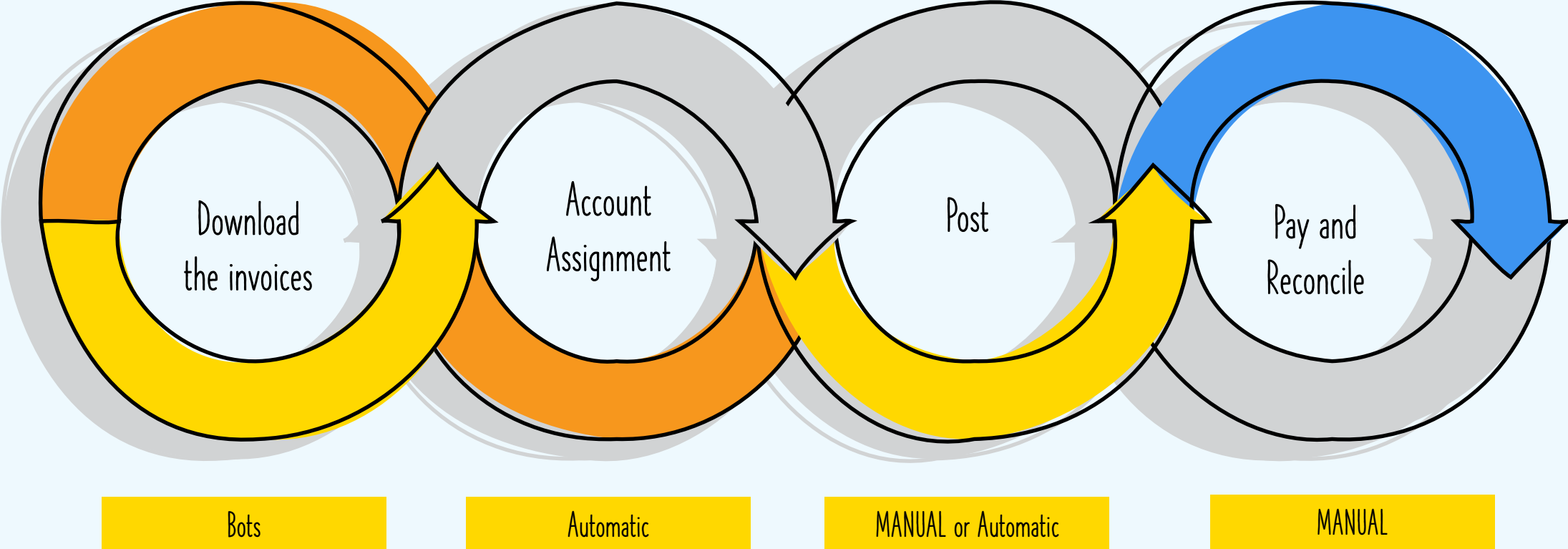


Have to generally pay first and then dispute

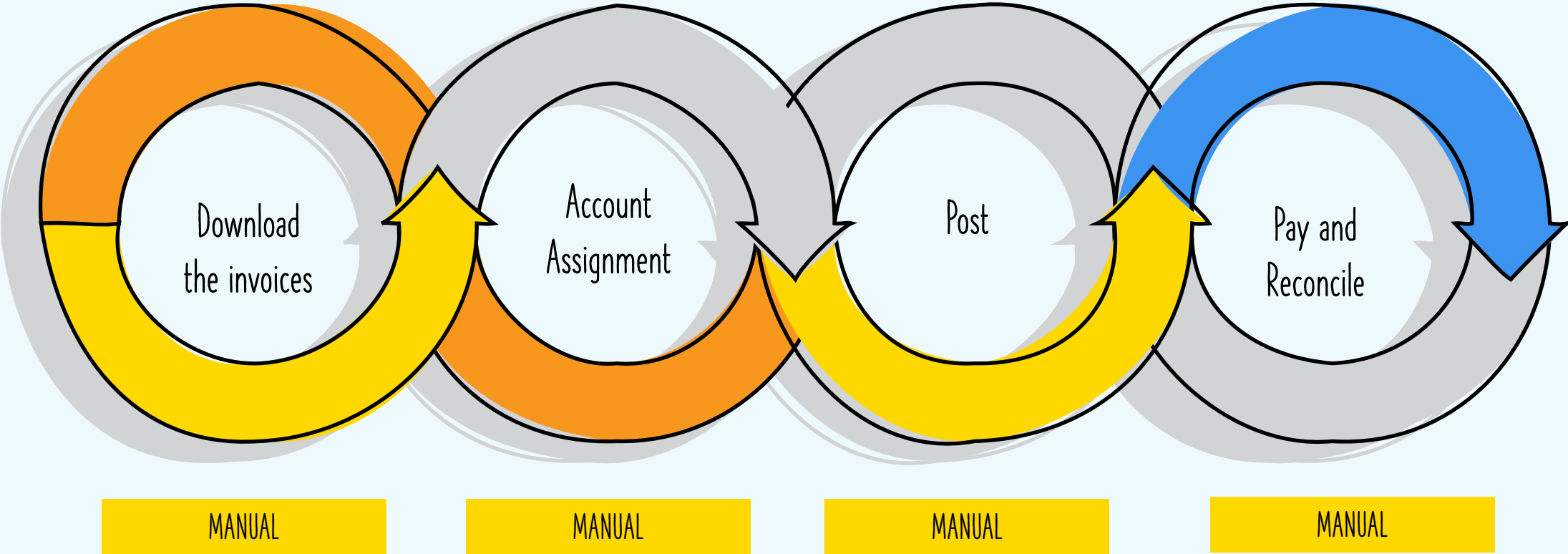


Difficult to find responsible owners

# Utility Invoice Process Flow - with SmartDocs AI Platform



# Typical Utility Invoice Process Flow





# 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**

Eastward	Westward
0	0
17.6	17.6
35.2	35.2
52.8	52.8
70.4	70.4
88.0	88.0
105.6	105.6
123.2	123.2
140.8	140.8
158.4	158.4
176.0	176.0

*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**





# The Pennsylvania Turnpike System Map

Website: [www.paturnpike.com](http://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

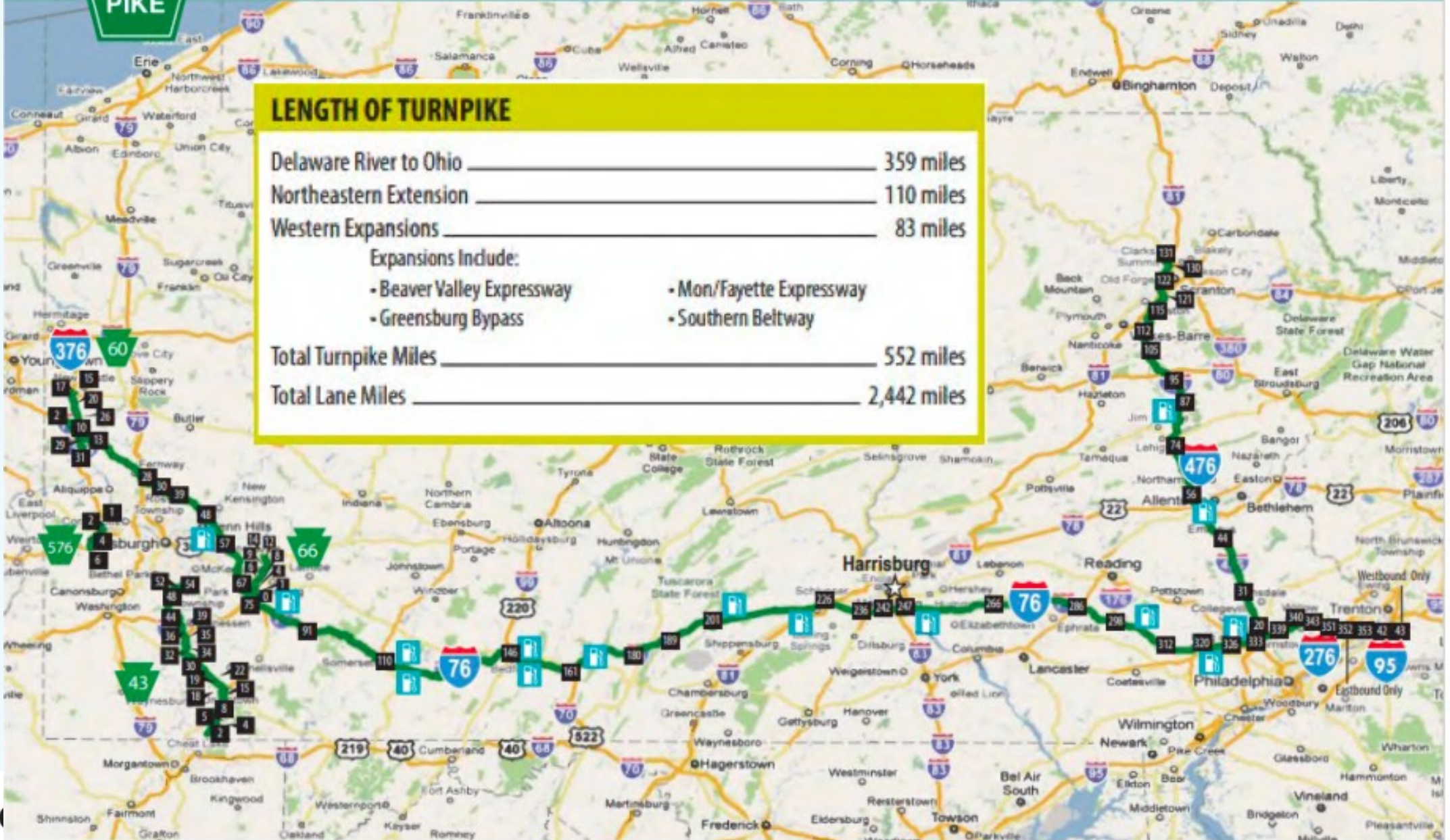
Western Expansions \_\_\_\_\_ 83 miles

Expansions Include:

- Beaver Valley Expressway
- Greensburg Bypass
- Mon/Fayette Expressway
- Southern Beltway

Total Turnpike Miles \_\_\_\_\_ 552 miles

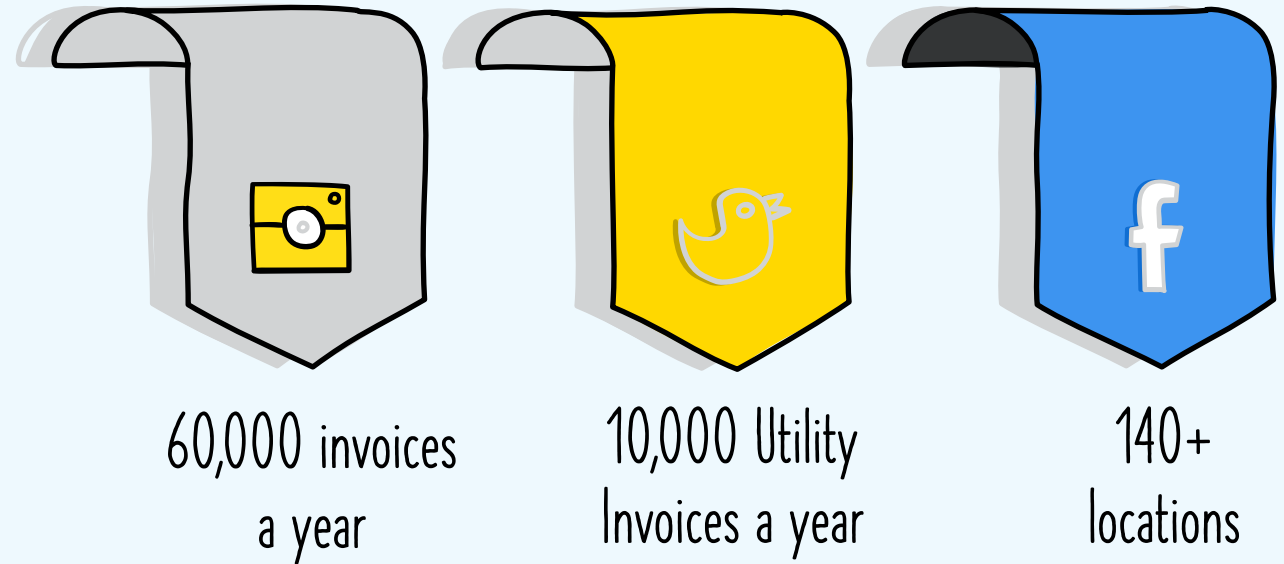
Total Lane Miles \_\_\_\_\_ 2,442 miles



# 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



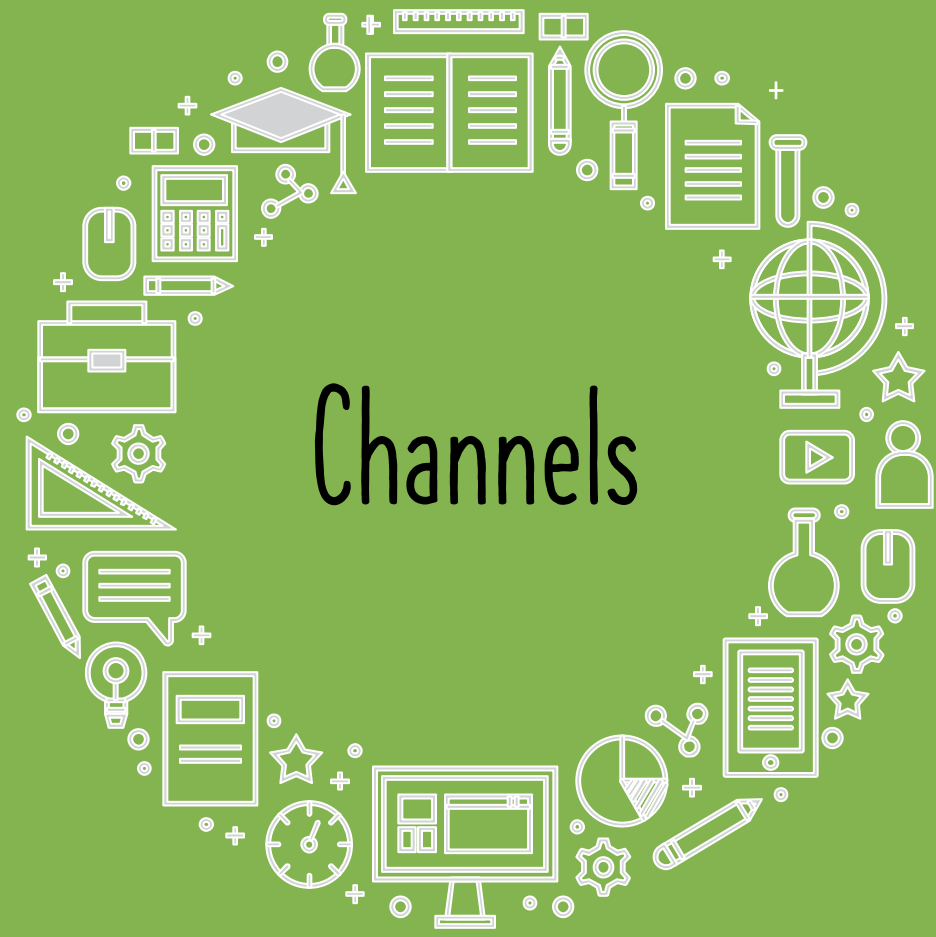
Vault  
Vendor Website  
credentials



Smart Task List (STL)  
Workflow list

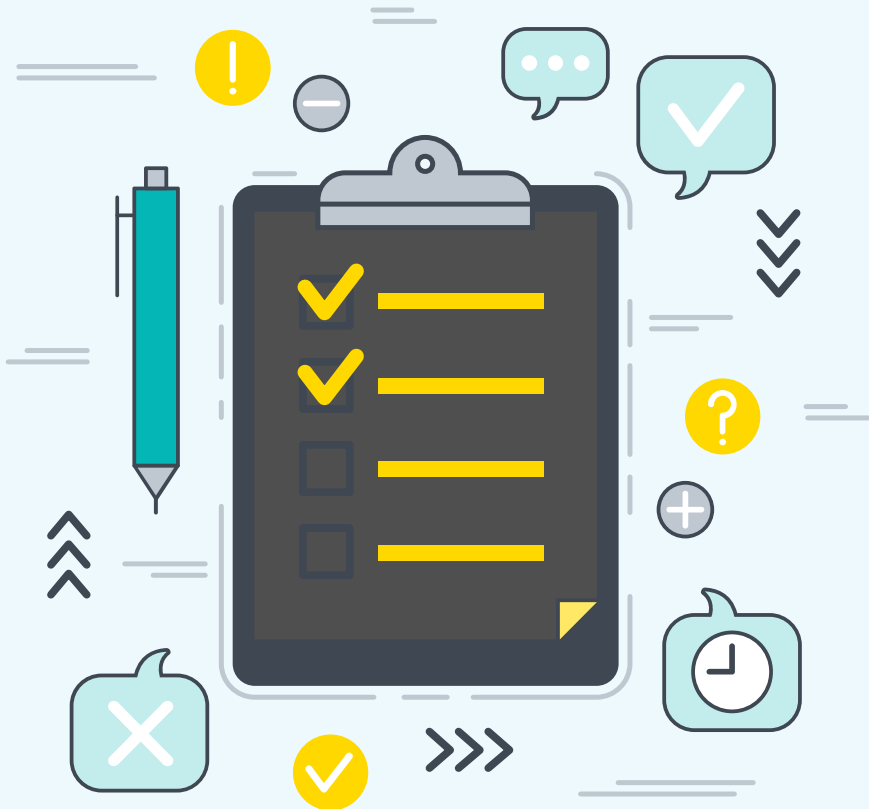


Invoice Cockpit  
SAP screen for invoice  
processing



# Channels

# Invoice Ingestion



## 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](mailto:SVC_VP_utilityinv@paturnpike.com)



Forwarding Emails received  
at [accountspayable@paturnpike.com](mailto:accountspayable@paturnpike.com)

Channel: AutoPilot - Email

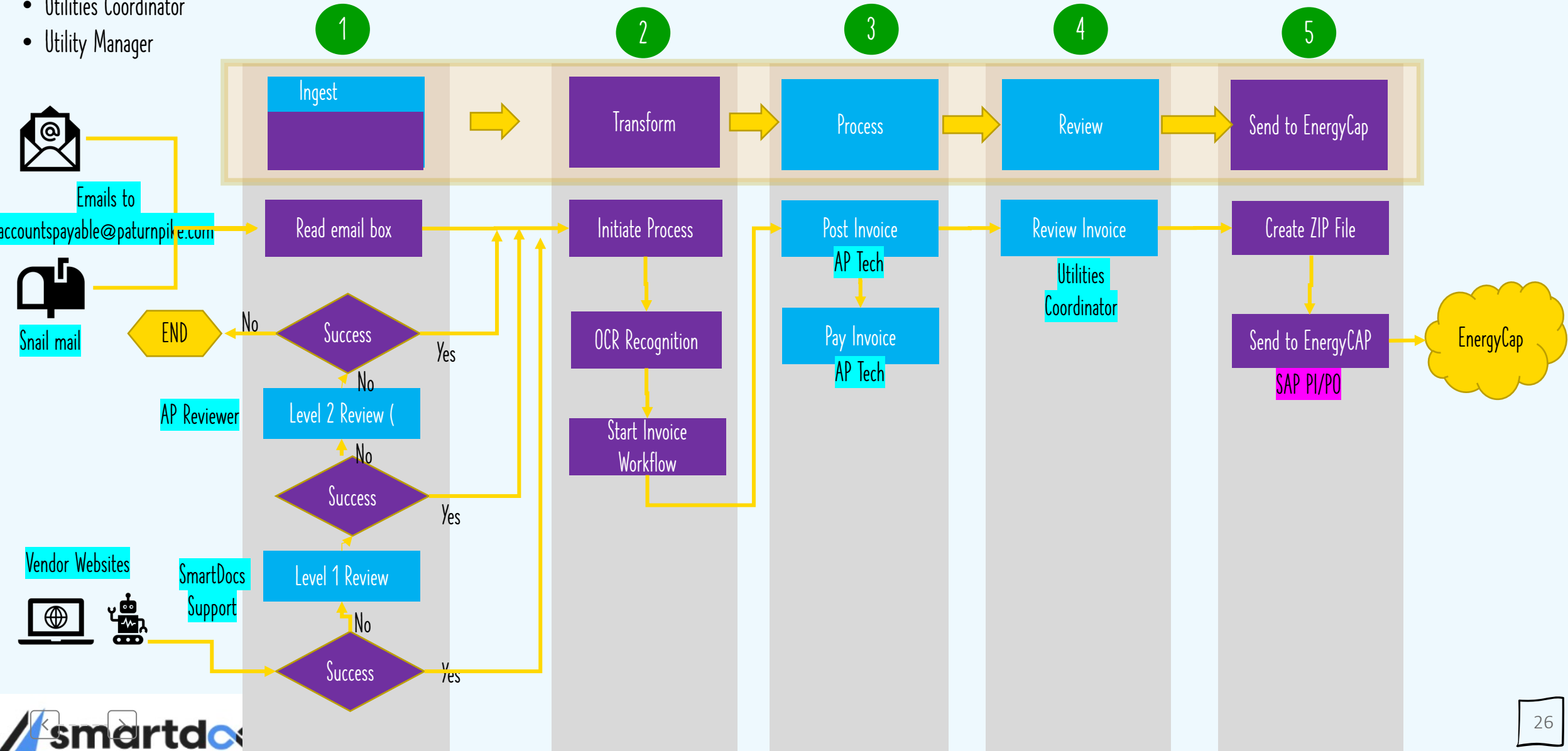
Emailed to [SVC\\_VP\\_utilityinv@paturnpike.com](mailto:SVC_VP_utilityinv@paturnpike.com)



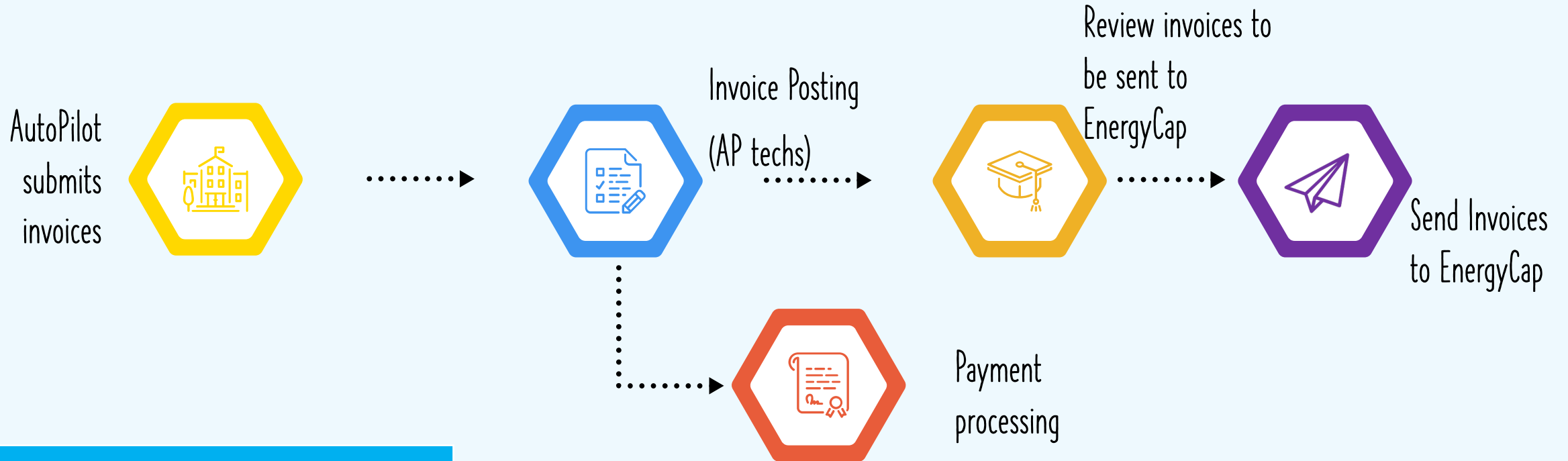


# Utility Invoice Processing

- 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

Map showing locations in Harrisburg, PA area.

Bills from All Assets

Asset Location	Bill Count	Other 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?

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

View all →

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# Credentials Vault

**Vault [282]**  
Vault consists of a collection of secrets that can be used to provide sensitive information, such as credentials & passwords

Secret ↑	User Id
2000000006_All 2000000006_All	accountspayable
2000000088_All 2000000088_All	accountspayable
2000000094_All 2000000094_All	invoiceproce
2000000107_All 2000000107_All	accountspayable
2000000134_All 2000000134_All	accountspayable
2000000168_All 2000000168_All	accountspayable
2000000174_All 2000000174_All	accountspayable
2000000199 2000000199	accountspayable
2000000291_All 2000000291_All	accountspayable
2000000300_All 2000000300_All	invoiceprocessin

**Edit Secret**

Secret Name \*

2000000006\_All

Provide a unique name without whitespace or special characters

Description

2000000006\_All

Key \*

accountspayable@paturnpike.com

Password \*

.....

User Email

accountspayable@paturnpike.com

Cancel Save

**Back to Utility Vendors**

(2000000339)AQUA PENNSYLVANIA INC Primary Contact N/A Email [Visit Official Site →](#)

Accounts Bills **Vault**

**Vault**  
Credentials

Secret name goes here

Login URL  
<https://schedulepayment.com/aqua>

invoiceprocessin  Copy to clipboard

qpM9WA5yDi6iNz4VHudw==  Copy to clipboard

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1	<a href="#">Edit</a>	<a href="#">Delete</a>
1	<a href="#">Edit</a>	<a href="#">Delete</a>
1	<a href="#">Edit</a>	<a href="#">Delete</a>
1	<a href="#">Edit</a>	<a href="#">Delete</a>

Items per page: 10 1 - 10 of 282

# 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

<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 <b>Vertex Homes</b> 2118 Thornridge Cir. Syracuse, Connecticut 35624	6557000265	9506932861	Jan 08, 2022	Jan 12, 2022	Auto Pilot	64,120.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input checked="" type="checkbox"/>	CG 2-174 Columbia Gas of PA	9507 <b>Triangle Heights</b> 2464 Royal Ln. Mesa, New Jersey 45463	2377471239	2112032819	Nov 27, 2021	Jan 12, 2022	Auto Pilot	24,120.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input checked="" type="checkbox"/>	W 2-415 Windstream	9621 <b>Dream Max</b> 8502 Preston Rd. Inglewood, Maine 98380	2112032819	5351022502	Nov 27, 2021	Jan 12, 2022	Auto Pilot	14,120.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input checked="" type="checkbox"/>	VA 2-3015 Verizon Albany	1906 <b>Russell Contracting</b> 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="button" value="Print"/> <input type="button" value="Share"/>
<input type="checkbox"/>	A 401 AmeriGas	2452 <b>Sthapatya Green</b> 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="button" value="Print"/> <input type="button" value="Share"/>
<input type="checkbox"/>	AE 2-364 Adams Electric	1988 <b>Precious Homes</b> 6391 Elgin St. Celina, Delaware 10299	1565015004	1883798829	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input checked="" type="checkbox"/>	CG 2-174 Columbia Gas of PA	9617 <b>Western Builds</b> 1901 Thornridge Cir. Shiloh, Hawaii 81063	1883798829	8524792206	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input checked="" type="checkbox"/>	W 2-415 Windstream	5134 <b>B Square Construction</b> 4517 Washington Ave. Manchester, Kentucky 39495	9501956750	2377471239	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>
<input type="checkbox"/>	VA 2-3015 Verizon Albany	2227 <b>Everest Height</b> 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="button" value="Print"/> <input type="button" value="Share"/>
<input type="checkbox"/>	A 401 AmeriGas	2754 <b>Bright Stone</b> 4140 Parker Rd. Allentown, New Mexico 31134	1641617565	1565015004	Nov 20, 2021	Jan 12, 2022	Auto Pilot	42,620.0 USD	Posted	Actions <input type="button" value="Print"/> <input type="button" value="Share"/>

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

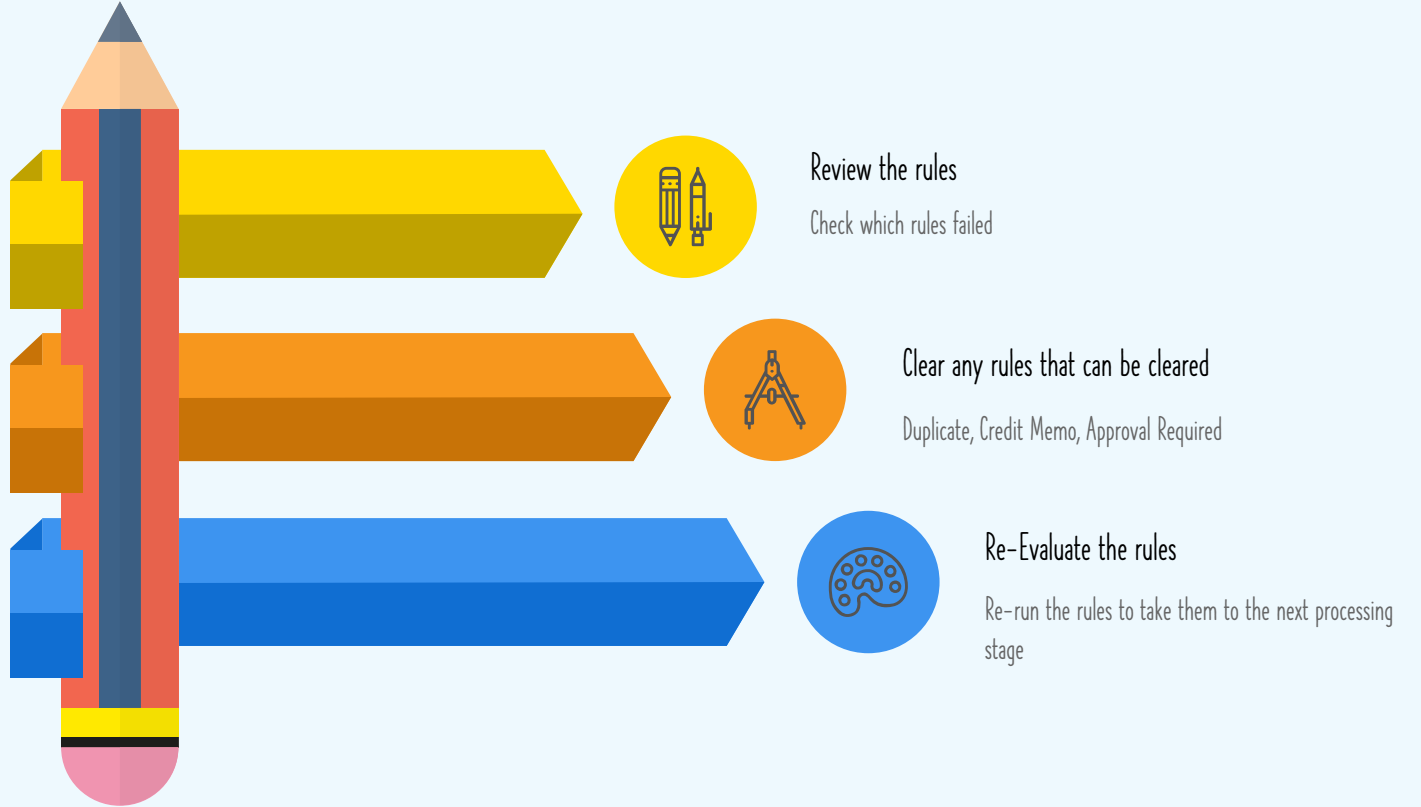
[Main](#) [General](#) [Vendor Details](#) [Last Period Invoices](#)

Invoice Date	<input type="text" value="12/15/2022"/>	<a href="#">Go to Vendor link</a>	<a href="#">Go to Asset link</a>
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

# Utilities Audit Report in SAP

**SAP** SmartDocs Utility Invoices PAR

SAP Inbox SmartPayables Invoice PAR Cancel

**SMARTDOCS** Digitize | Botify | Transform

**Selection Criteria**

Document	[ ]	Status	
Create Date	01/02/2023 03/02/2023	Channel	
Vendor		Run Date & Time	03/02/2023 09:40:07

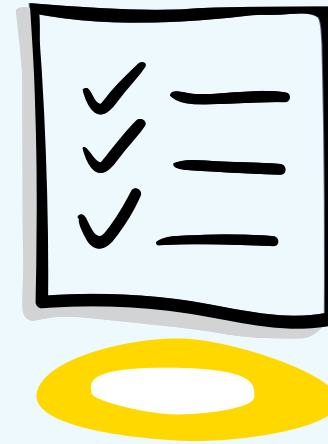
Doc ID	Exceptions	Status	Invoice No.	Invoice Type	Channel	Agent	Current Exception	Asset Code	Account Id	Vendor	Vendor Name	Invoice Numb
<input type="checkbox"/> 400037787		InProcess		Non-PO Utility Invoice	OCR		Missing Mandatory Data			2000000154	PENN TWP SEWAGE AUTHORITY	
<input type="checkbox"/> 400037786		Posted	1900521104	Non-PO Utility Invoice	AUTOPILOT			10247	2388413047	2000000338	PECO Energy Co	REFA2
<input type="checkbox"/> 400037783		Collaborated		Non-PO Utility Invoice	OCR		Utility Invoice Missing on Last Mnth			2000000154	PENN TWP SEWAGE AUTHORITY	06/20/2022
<input type="checkbox"/> 400037782		Collaborated		Non-PO Utility Invoice	AUTOPILOT		Missing Mandatory Data	10247	2388413047	2000000338	PECO Energy Co	
<input type="checkbox"/> 400037781		InProcess		Non-PO Utility Invoice	AUTOPILOT		Missing Mandatory Data	10247	2388413047	2000000338	PECO Energy Co	
<input type="checkbox"/> 400037780		Collaborated		Non-PO Utility Invoice	AUTOPILOT		Missing Mandatory Data	000000010247	2388413047	2000000338	PECO Energy Co	
<input type="checkbox"/> 400037778		InProcess		Non-PO Utility Invoice	OCR		Missing Mandatory Data			2000000798	PA MUNICIPAL SERVICE CO	
<input type="checkbox"/> 400037776		Posted	1900521103	Non-PO Utility Invoice	AUTOPILOT			000000010247	2388413047	2000000338	PECO Energy Co	REFVN

# 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



[www.smartdocs.ai](http://www.smartdocs.ai)