

Insights & Automation

# Robotic Process Automation 101

October 30, 2024

# U.S. Presence

**Top 10** **\$2bn+**

U.S. Public  
Accounting Firm\*

Revenue (2023)

**76**

Markets

**29**

States

**600+**

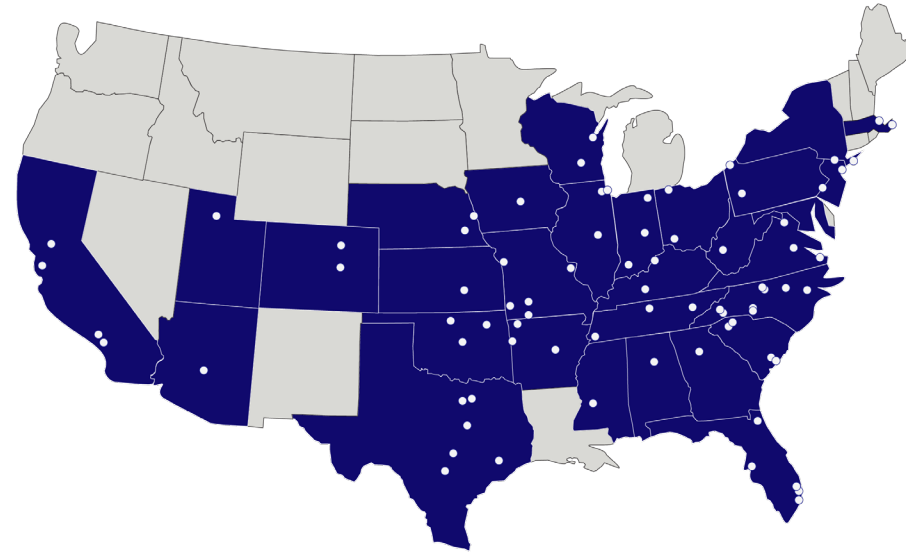
Partners & Principals

**7,000+**

Employees

\*Source: Inside Public Accounting, based on most recent rankings

2023 combined revenues: FORVIS \$1.7bn, Mazars USA (expected) \$305m



As of August 2024

○ Forvis Mazars markets

**Alabama**  
Birmingham

**Arizona**  
Phoenix

**Arkansas**  
Fort Smith  
Little Rock  
Rogers

**California**  
Irvine  
Los Angeles  
Sacramento  
San Jose

**Colorado**  
Colorado Springs  
Denver

**Florida**  
Boca Raton  
Jacksonville  
Miami  
Tampa Bay  
West Palm Beach

**Georgia**  
Atlanta

**Illinois**  
Chicago Downtown  
Chicago Oakbrook Terrace  
Decatur

**Indiana**  
Evansville  
Fort Wayne  
Indianapolis

**Iowa**  
Des Moines

**Kansas**  
Wichita

**Kentucky**  
Bowling Green  
Louisville

**Massachusetts**  
Boston Brewster  
Boston State Street

**Mississippi**  
Jackson

**Missouri**  
Branson  
Joplin  
Kansas City  
Springfield  
St. Louis

**Nebraska**  
Lincoln  
Omaha

**New Jersey**  
Iselin

**New York**  
Long Island  
New York City

**North Carolina**  
Asheville  
Charlotte SouthPark  
Charlotte Uptown  
Greensboro

**North Carolina (cont)**  
Greenville  
Hendersonville  
Raleigh  
Winston-Salem

**Ohio**  
Cincinnati  
Toledo

**Oklahoma**  
Enid  
Oklahoma City  
Tulsa

**Pennsylvania**  
Erie  
Fort Washington  
Pittsburgh

**South Carolina**  
Charleston  
Greenville  
Spartanburg  
Summerville

**Tennessee**  
Knoxville  
Memphis  
Nashville

**Texas**  
Austin  
Dallas  
Fort Worth  
Houston  
San Antonio  
Waco

**Utah**  
Salt Lake City

**Virginia**  
Norfolk  
Richmond  
Tysons, VA

**West Virginia**  
Charleston

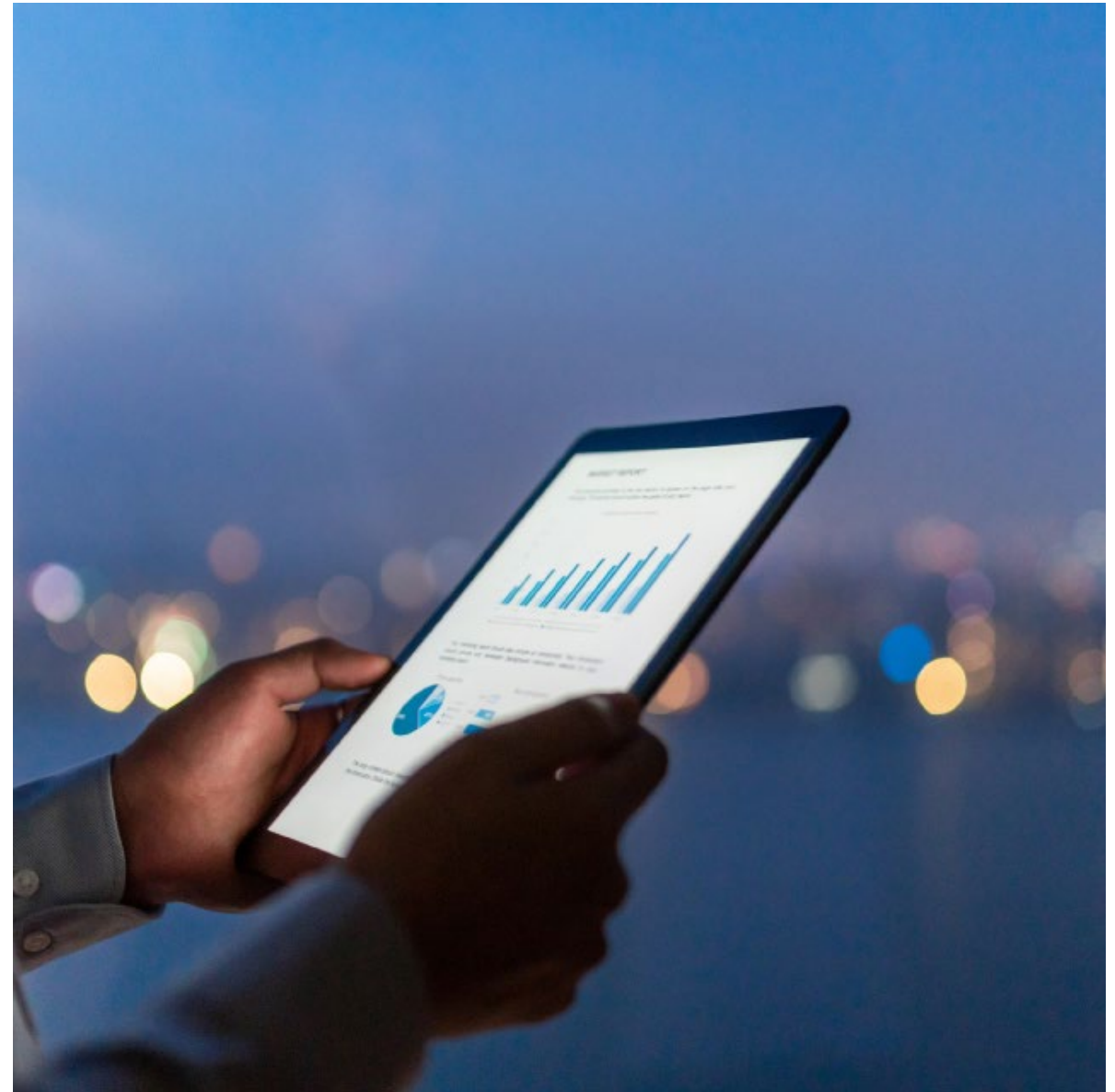
**Wisconsin**  
Appleton, WI  
Madison, WI

# Business Technology Services

Forvis Mazars provides enterprise resource planning (ERP) & customer relationship management (CRM) platform analysis, design, implementation, upgrade, training, & support services.

Our end-to-end solutions help clients achieve their digital transformation goals by:

- Creating effective processes & strategies for future operations
- Designing & implementing modern operational systems
- Reviewing new business-facing technologies
- Leveraging existing investments in legacy technologies
- Integrating data solutions



# Business Technology Services

## ERP

Microsoft Dynamics 365	
Finance	Supply Chain
Commerce	Project Operations
Business Central	Dynamics GP
NetSuite	
Sage & Sage Intacct	
Trimble Viewpoint Spectrum & Vista	

## CRM

Microsoft Dynamics 365	
Sales	Customer Service
Customer Insights	Field Service
Salesforce	
Marketing Automation	

## Advanced Technology

Insights
Microsoft Power BI
Solver Planning & Analysis
Automation
Microsoft Power Platform
Robotic Process Automation (RPA)
App Development

 **Managed Services** for business applications, IT, & cybersecurity support.

Microsoft Partner

ORACLE NETSUITE  
Solution Provider

Sage Partner

salesforce PARTNER

solver

forvis  
mazars

# Presenters



**Kevin Dodd**

Lead Consultant  
Insights & Automation |  
Business Technology  
Services



**Mandy Funk**

Senior Consultant  
Insights & Automation |  
Business Technology  
Services



**Darin Peacock**

Senior Consultant  
Insights & Automation |  
Business Technology  
Services



Insights & Automation

# Robotic Process Automation 101

October 30, 2024

# Agenda

1. Define the fundamentals of RPA, including its definition, capabilities, & limitations
2. Identify potential RPA use cases within your organization
3. Explain the initial steps for implementing RPA
  - i. Demo
4. Questions & Answers

# 01

## Let's Begin

- Defining the fundamentals of RPA
  - What it is
  - What it can do
  - Where its limits exist





# Robotic Process Automation

## What is it?



**It's software that follows your rules.**

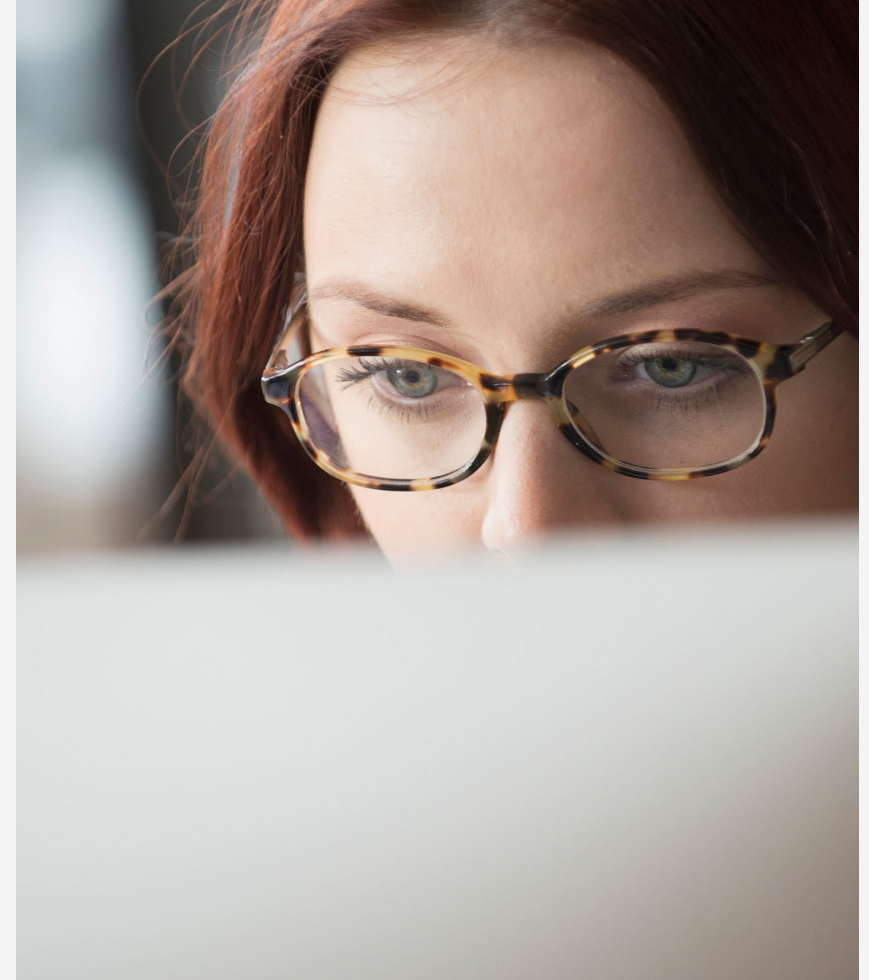
Effectively speaking, if a process has clearly defined rules where a human can perform the actions with a computer, it's very likely RPA can as well (at greater scale).

# Robotic Process Automation

## Well, what is it?

It's software that follows your rules.

- RPA is the act of configuring software on a computer to closely mimic actions that would typically be done by a human
- This ranges from repetitive activities like data entry in Excel to more complex tasks like bank reconciliation or uploading data to multiple systems, applications, & websites



# Robotic Process Automation

## Where should I start?



Power Platform  
Instructor-Led Training

### We like Power Automate Desktop.

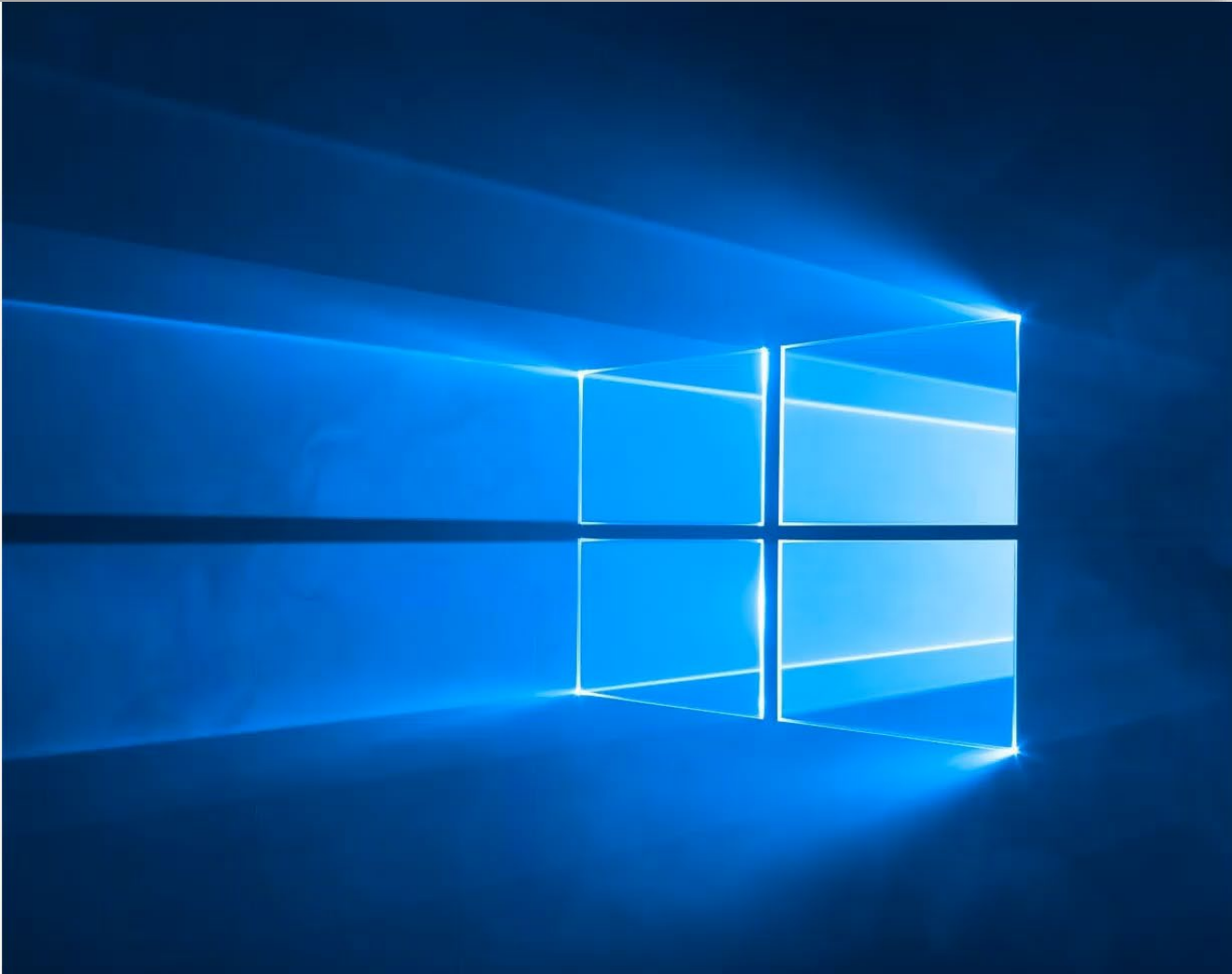
- Power Automate Desktop is part of the Microsoft Power Platform with tight integration with many other Microsoft Cloud services
- Almost all of which has beginner-friendly, instructor-led training provided by Microsoft, free of charge
  - It will require a free Microsoft Learn Account

# Write Invoice Data to System

## Let's see it in action with a short demo.

The screenshot displays an RPA workflow editor with the following steps:

- 1. **Region Initialize** (yellow header)
- 2. **Set variable**: Assign to variable `ProjectPath` the value `'C:\RPA'`
- 3. **Set variable**: Assign to variable `ContosoPath` the value `'C:\Program Files (x86)\Contoso, Inc\Contoso Invoicing\Legacy\InvoicingApp.exe'`
- 4. **Launch Excel**: Launch Excel and open document `ProjectPath \Output\Reconciliation.xlsx` using an existing Excel process and store it into Excel instance `ExcelInstance`
- 5. **Run application**: Run application `ContosoPath` with arguments and store its process ID into `AppProcessId`
- 6. **Get files in folder**: Retrieve the files in folder `ProjectPath \Input` that match `*.pdf` and store them into `PDFFiles`
- 7. **Create new data table**: Create a new data table and store it into `Regex`
- 8. **End region** (yellow header)
- 9. **For each** `CurrentFile` in `PDFFiles`
- 10. **Region Extract Invoices** (yellow header)
- 11. **Extract text from PDF**: Extract text from PDF `CurrentFile` into `ExtractedPDFText`
- 12. **Set variable**: Assign to variable `RowNumber` the value 0
- 13. **For each** `CurrentItem` in `Regex`
- 14. **Parse text**: Parse text `ExtractedPDFText` for regular expression `Regex [ RowNumber ]['Pattern']` starting at position 0 and find the first occurrence only. Store the match found into



# Robotic Process Automation

## Key Benefits



### Efficiency

RPA can automate & handle large volumes of data entry into disparate systems that otherwise would be performed by a human



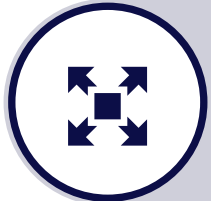
### Accuracy

RPA can systematically gather data from multiple systems, reducing the risk of human errors & aid in the reconciliation, leading to enhanced accuracy in a financial process



### Reallocate

RPA can automate repetitive tasks like data entry or basic customer inquiries. This automation allows workers to focus on activities that require critical thinking to enhance overall business productivity



### Scalability

RPA can automate growing workloads without increasing the number of human resources while providing consistent & rapid processing of tasks

# Robotic Process Automation

## Case Study Examples

Project	Size	Description	Value Realized	ROI %
Order Entry	Large	Automation of manual order entry process into a legacy system	Time Savings	96%
File Moving	Small	Customer related files needed unzipping & moved into a SharePoint folder structure	Increased Sales Time Savings	119%
Query Data & Email Results	Small	Run queries to identify data needed by team & email the results out on a monthly schedule	Time Savings Timely Data	8%

# Robotic Process Automation

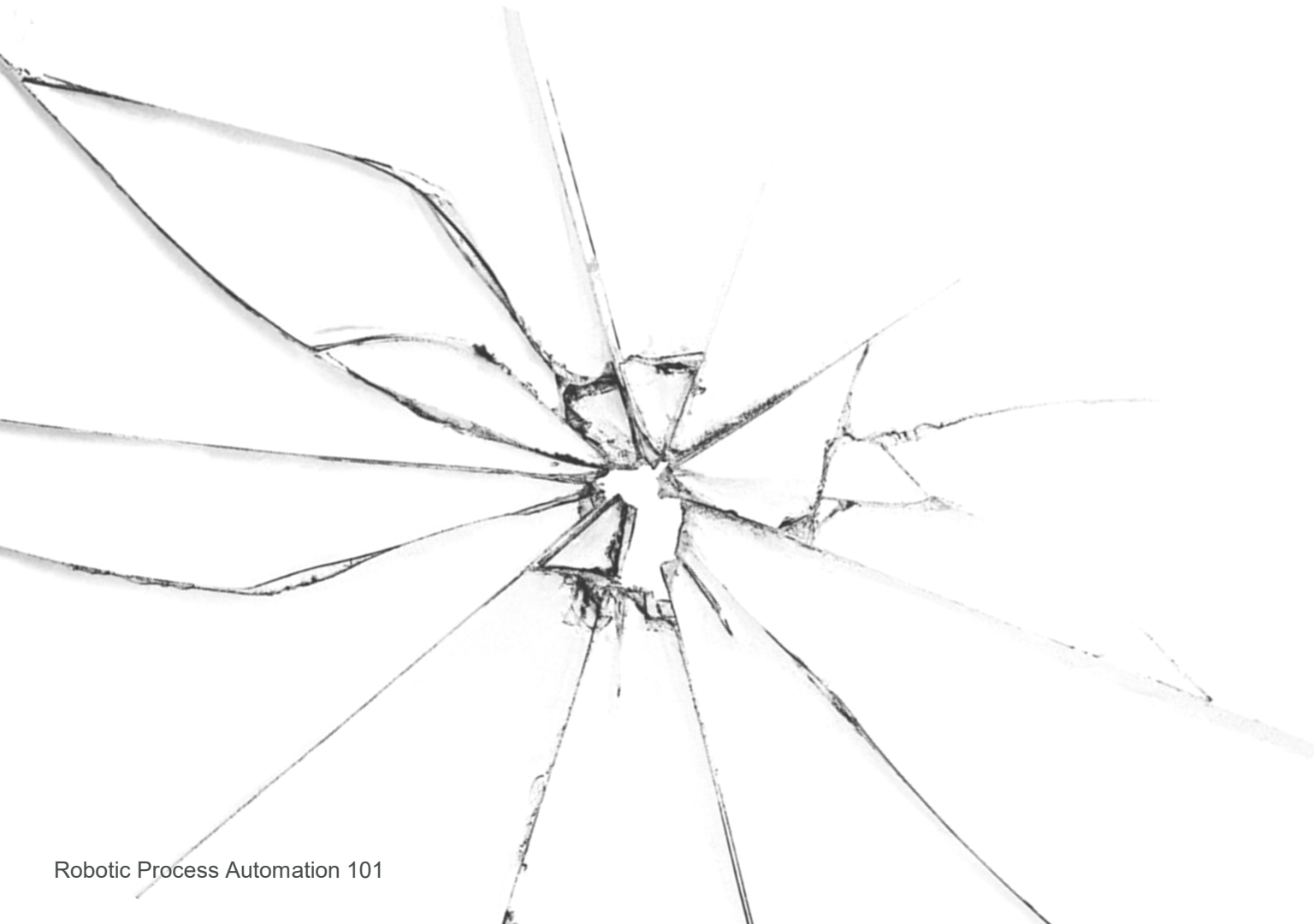
## Sample Use Cases

Challenge	Use Case	Benefit
<b>Data Entry &amp; Data Migration</b>	RPA can automate data entry tasks by extracting data from various sources, validating & processing it, & entering it into target systems	This is particularly useful for migrating data between systems or updating databases with information from multiple sources
<b>Invoice Processing &amp; Accounts Payable/Receivable</b>	RPA bots can streamline invoice processing by extracting data from invoices, validating it against predefined rules, & updating accounting systems	This can reduce errors, speed up processing times, & improve accuracy in accounts payable & receivable processes
<b>Customer Onboarding &amp; KYC Compliance</b>	RPA can automate the customer onboarding process by collecting customer information, verifying identities, performing Know Your Customer (KYC) checks, & updating customer records in compliance with regulatory requirements	This can help financial institutions & other regulated industries streamline onboarding while following compliance regulations
<b>IT Operations &amp; Infrastructure Management</b>	RPA can automate routine IT tasks such as user provisioning, password resets, system monitoring, & software updates	This can free up IT staff to focus on more strategic initiatives & reduce the time & effort required to manage IT infrastructure
<b>Supply Chain &amp; Inventory Management</b>	RPA can optimize supply chain & inventory management processes by automating tasks such as order processing, inventory tracking, supplier management, & demand forecasting	This can improve inventory accuracy, reduce stockouts & overstock situations, & enhance overall supply chain efficiency

# Robotic Process Automation

## What about limitations?

Automations can be fragile.



- Automations can be surprisingly fragile & require a **highly predictable environment** to be effective
- Any variations in the environment in which an automation runs can drastically impact accuracy & successful automation
- As the adage about data goes: **“Garbage in, garbage out.”**



# Robotic Process Automation

## What about limitations?

Infrastructure can get complicated.



- Running RPA requires a system to run on!
- This means there are considerations for where RPA workstations may reside
- Not all IT departments move as fast as automation can & sometimes hardware procurement is a roadblock

# Robotic Process Automation

## What about limitations?

Time: Time to test & time to testify!



- The efficiency & ease of some automation tasks can lead to a false sense of simplicity, which can bring about unrealistic expectations
- Automations should be given the time to test thoroughly in a development environment with sample data/tasks that are representative of what the automation will be handling
- Most importantly, conduct enough testing & validation that any questions over accuracy or stability can be met with a resoundingly confident answer

# Robotic Process Automation

## What about limitations?

Building trust & reliability in RPA.



- RPA can only do what it's built to do (whether it's supposed to or not)
- An automation that outputs bad results or incorrect data will continue to do so until the offending issue is found & resolved
- It's similar to a human making mistakes that need to be corrected, but these mistakes can happen at a much greater volume
- Unlike humans, though, the sheer volume of mistakes that can occur can drastically reduce trust in not only RPA but also the design team

# 02

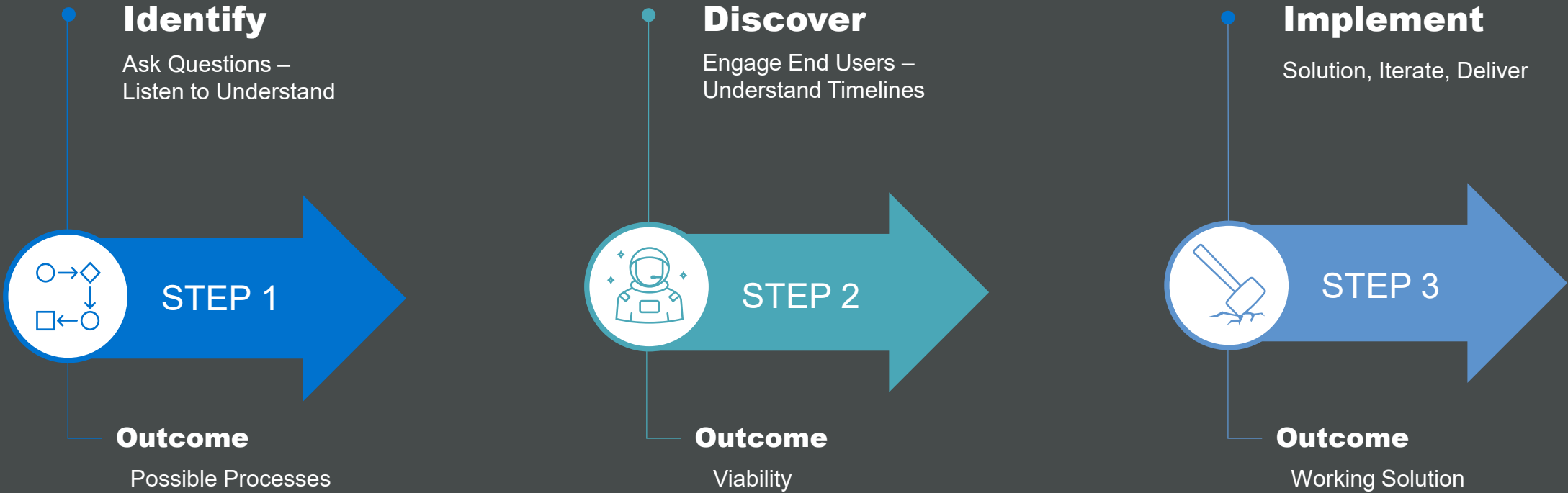
## Where To Start

1. Identify
2. Discover
3. Implement



# Hyper Automation The Process

Successful automation goes through a defined process.



# Be Curious



## Who

Benefits From RPA



## What

Are the Requirements



## When

Timeline



## Where

Does RPA Fit Within Current Processes



## Why

Is RPA Needed

# Discovery

## Determine Automation Viability



Automating process should provide a positive return on investment (ROI). Here are key items to consider.

**01**

### Calculating Value

Have you identified how this automation provides value to the business?

**02**

### Project Champion

Have you identified a champion of this automation to see it through completion?

**03**

### Reoccurring

Are additional reoccurring costs associated with the automation?

**04**

### Level of Effort

What's the estimated LoE to take from concept to deployment?

**05**

### Timeline

Is the timeline realistic to achieve the goals of the automation?

**06**

### Reuse

Will this automation be for a one-time use or repeatable?

# When Is the Right Time for “No”?

- Cost > Benefit
- No defined rules
- No champion or sponsor for the project
- Process is one then done
- Unrealistic timeframe
- Part of a larger process that’s being reimaged



**NO**

*Be a good automation steward.*



# 03

## Implementing RPA



# Robotic Process Automation Prerequisites



## Account

- Entra ID user or service account



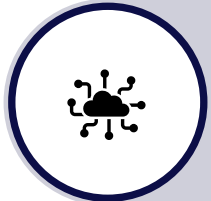
## Licensing

- Power Automate Premium
- Office E3/E5 or M365 E3/E5
- Power Automate Process



## Hardware

- Workstation or Virtual Machines



## Software

- Power Automate Desktop app
- Software required for automation
- Power Platform environments

# Sample Use Case

## Bank Reconciliation

### Process/Workflow Using Power Automate

- Assumptions**

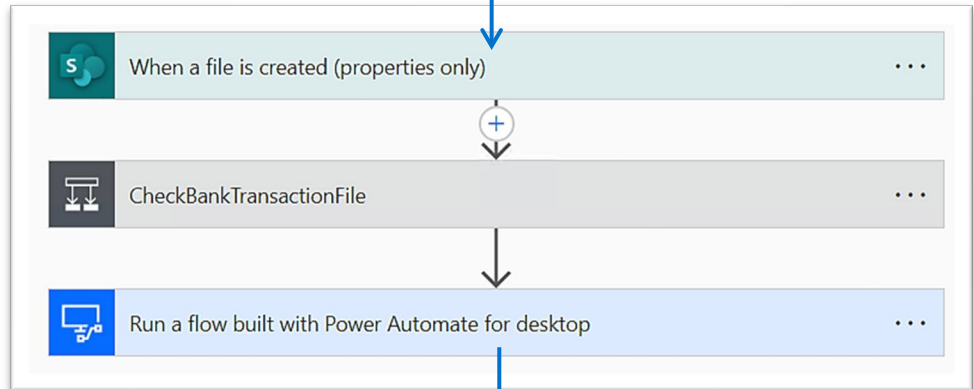
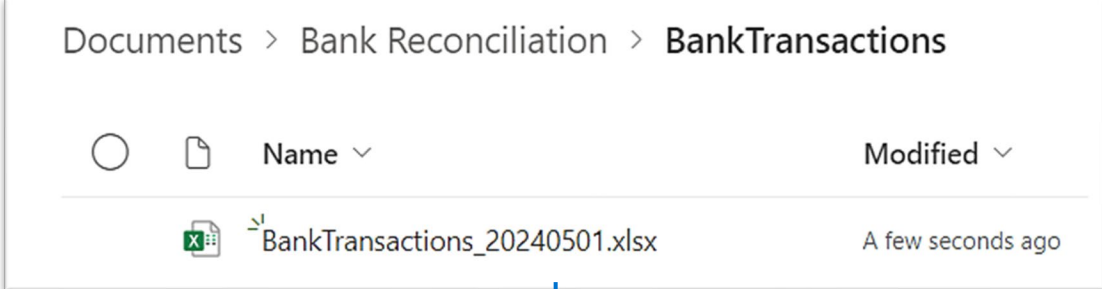
- Bank transaction file will be uploaded to SharePoint
- Get Current Months transaction reconciliation file
- Get ERP transaction details (GL Details 1002/1004) from Munis
- Data will be reconciled in Excel using Power Automate Desktop

- Setup**

- Utilize Microsoft Power Automate as the trigger
- Use Power Automate Desktop to reconcile

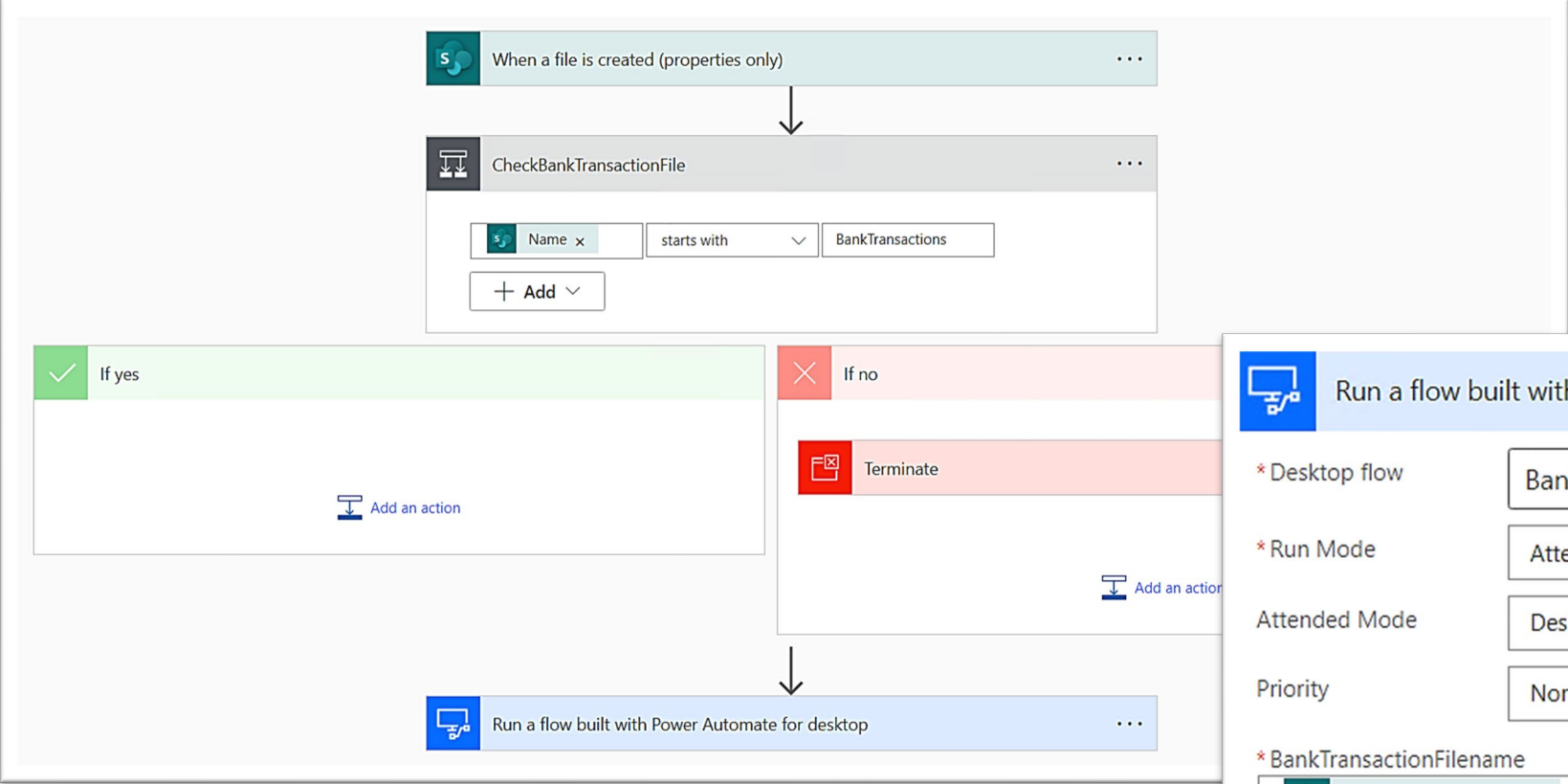
- Output**

- For each bank & ERP transaction
  - Mark if reconciled or still pending



ID	Post Date	Amount	Journal Reference	Reconciled
1	5/1/2024	170	██████████	5/1/2024 12:00:00 AM
2	5/1/2024	-40266.65	██████████	5/1/2024 12:00:00 AM
3	5/1/2024	5580.85	██████████	5/1/2024 12:00:00 AM
4	5/1/2024	4114.21	Research Required	
5	5/1/2024	3430.24	Research Required	

# Implementation Cloud Flow



Configuration for the action **Run a flow built with Power Automate for desktop**:

- \* Desktop flow**: BankRec - Cloud flow triggered (Edit)
- \* Run Mode**: Attended (runs when you're signed in)
- Attended Mode**: Desktop (default)
- Priority**: Normal (default)
- \* BankTransactionFilename**: File name with ...

[Hide advanced options](#)

# Implementation Desktop Flow

The main desktop flow editor interface displays a sequence of 11 steps:

1. **Set variable** (x) Assign to variable `WorkingDir` the value `"C:\Users\... \Documents\Customers\..."`
2. **Get current date and time** Retrieve the current datetime and store it into `CurrentDateTime`
3. **Convert datetime to text** Convert datetime `CurrentDateTime` to text using format `'yyyyMM'` and store it into `YYYYMM`
4. **Run subflow** `YYYYMM Folder Exist`
5. **Launch Excel** Launch Excel and open document `WorkingDir \ ' YYYYMM \ ' YYYYMM ' .xlsx'` using an existing Excel process and store it into Excel instance `ExcellInstance`
6. **Combine the new 1002 & 1004 Files**
7. **Run subflow** `Combine Files`
8. **Run subflow** `Write_Bank_Trans`
9. **Close Excel** Save the Excel document and close the Excel instance `ExcellInstance`
10. **Run subflow** `Reconcile`
11. **Run subflow** `Clean_up`

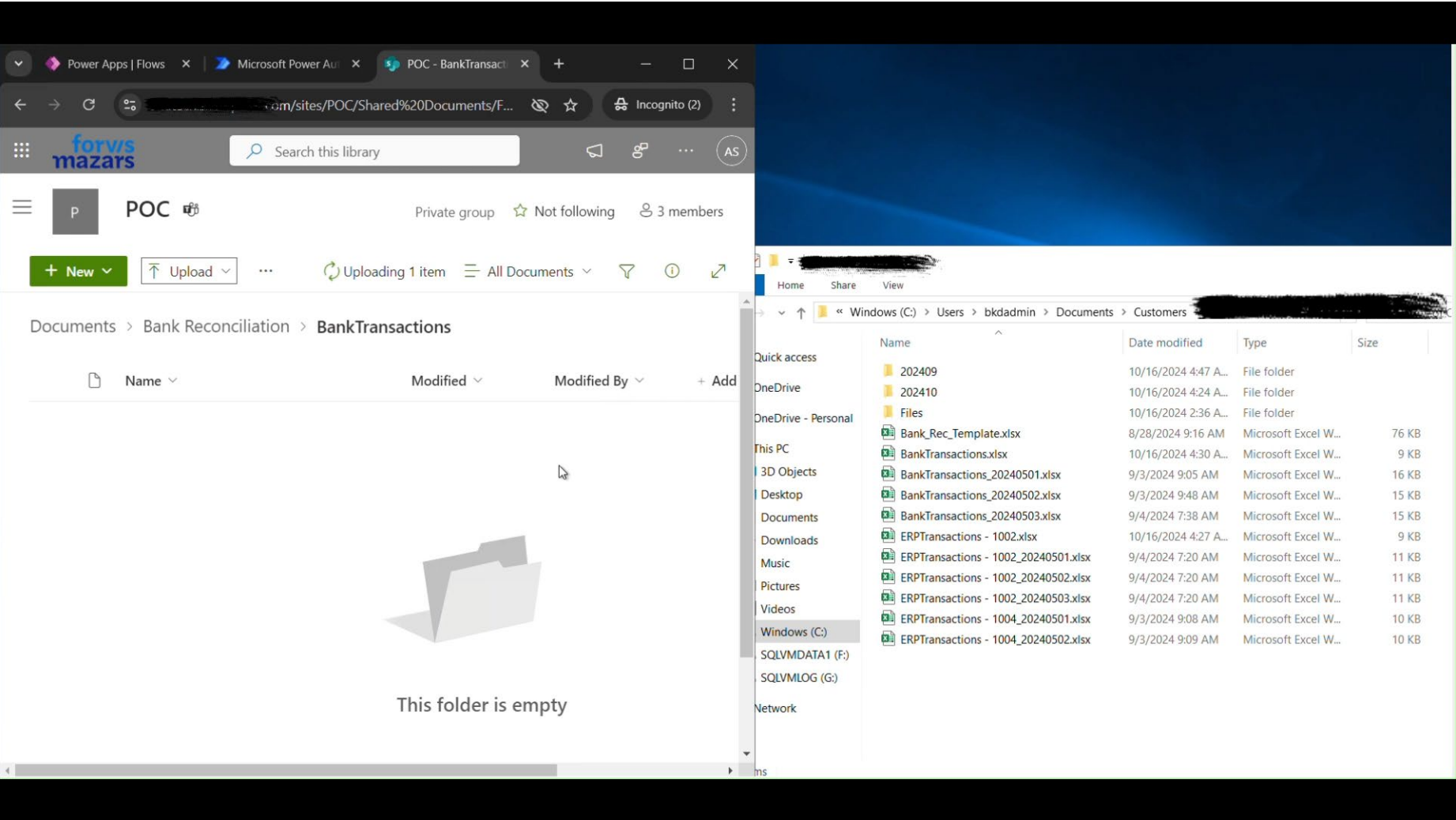
The **Edit input variable** dialog box is shown for the variable `BankTransactionFilename`. The dialog includes the following fields and options:

- Variable name:** `BankTransactionFilename`
- Data type:** `Text`
- Default value:** `Add a text value`
- External name:** `BankTransactionFilename`
- Description:** `The prior days GL transaction files`
- Mark as sensitive:**
- Mark as optional:**

Buttons for **Save** and **Cancel** are located at the bottom right of the dialog.

# Sample Use Case Demonstration

## Bank Reconciliation



# Power Automate Desktop

## What's next?



[Automation in a Day](#)

[Microsoft Learn – Power Automate Desktop Flow](#)

[Power Automate Community](#)

# Q&A



Business  
Technology  
Services

# Questions?



# Contact

## Forvis Mazars

### Kevin Dodd

Lead Consultant

kevin.dodd@us.forvismazars.com

### Mandy Funk

Senior Consultant

mandy.funk@us.forvismazars.com

### Darin Peacock

Senior Consultant

darin.peacock@us.forvismazars.com

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