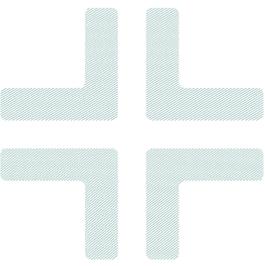


Transforming Construction Operations with Low-Code and Automation

CFMA New England Conference

October 5, 2022

About Dale



Dale Tuttle

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Partner,
Practice
Leader

20+ years experience in IT Consulting
and as an IT Executive

Interests:
Technology, airplanes

Fun Fact: I'm a reformed professor
with a Ph.D in a non-technical
discipline

What we'll do today:

- **Goal: Learn how the latest Automation trends/tools can help improve operations**
- **Dig deeper into newest trends**
 - **Low-Code Tools**
 - **Robotic Process Automation**
- **Talk about what it can do for you**
- **Review some Tools**
- **Illustrate real-life solutions**
- **Discuss practical ways of getting started**

Housekeeping

01

Be willing to share your experiences (I hate droning on)

02

Feel free to ask questions during the presentation

03

Prepare for the quiz at the end of the presentation

- Important Note: There is no Quiz



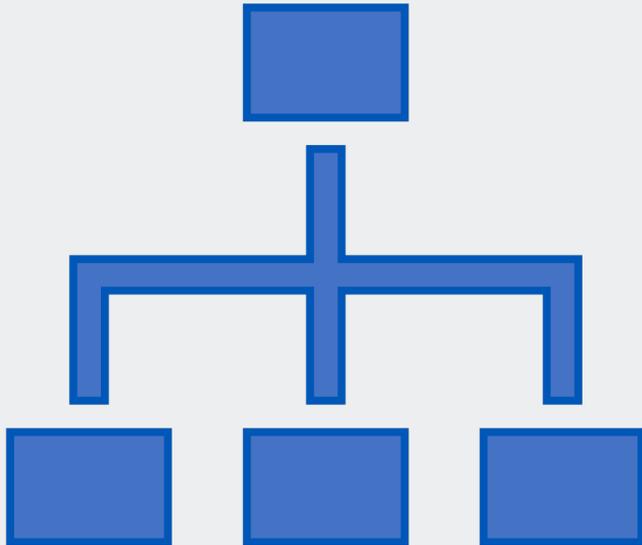
Informal POLL #1

Are you currently using any Automation Tools?
Anyone not getting the intended results from those Tools?

withum 



The Problem:



- Manual processes are still the norm despite technical advances
 - ✓ Invoicing (and general AP/AR processes)
 - ✓ Scheduling
 - ✓ Recruiting
 - ✓ Benefits/Claims Management
 - ✓ Inventory Management
 - ✓ Project Management
- Paper and emails everywhere!
- And...Information is still in silos (after over 20 years of the web/internet)
- Sharing across silos is still largely manual



Important Trends: What is Low-Code / No-Code?



Unlocking the Meaning of Low-Code

- Low-Code means what it says
- You can develop business applications/automations without knowing a development language
- Often called “Citizen Developers”
- Essentially you drag and drop pre-defined activities into a canvas and blocks of code are pre-written to enable that functionality
- Easier for business people to build their own apps
- Faster, cheaper, to have third party build custom apps

Low-Code is not a fad

500 million new apps will be built in the next 5 years—more than all apps built in the last 40 years!¹

Demand for mobile apps is growing **5x** faster than IT departments can deliver²

Over **85%** of surveyed organizations struggle to analyze unstructured data³

86% of surveyed organizations struggle to find technical talent⁴

1. Satya Nadella, Microsoft FY19 Q4 earnings call, July 2019, 2. "Achieving business resilience with cloud application development," Microsoft Azure blog, 3. IDG: Big Data Survey 2017, 4. "Microsoft Goes All-In On Hybrid Cloud And Edge At Ignite 2019," Forbes, 5. "Gartner Magic Quadrant for Enterprise Low-Code Application Platforms," Gartner



65%

of enterprise application development will be in the low-code category by 2024⁵



Why is this a Big Deal?

Biggest current trend in software development (including automation tools)

Truly democratizes the creation of business applications

Large Vendors piling in

Microsoft has built a whole suite of apps around the concept (Power Apps)

Other specialized vendors use this approach too

Brings app dev to SMB market

Revives the custom app market (build a solution that works for you)

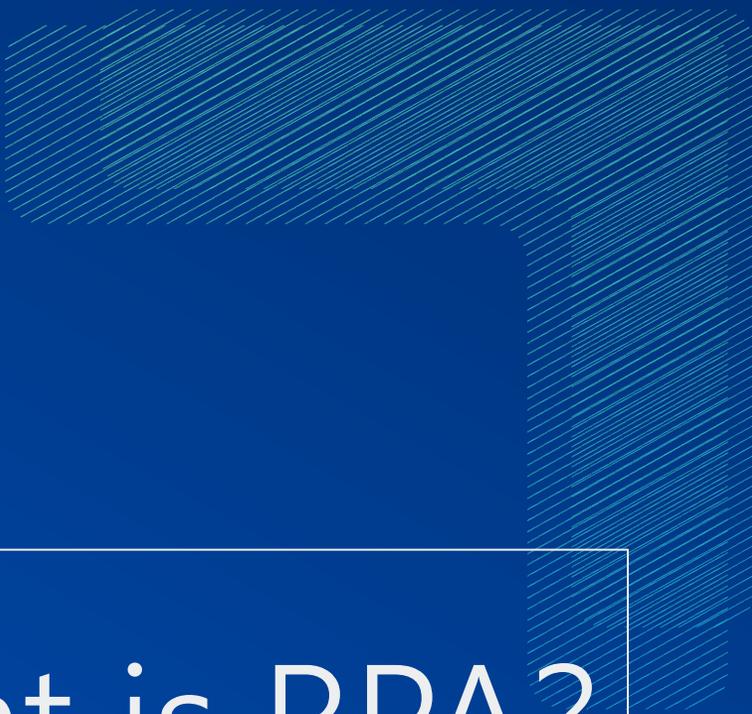
Whole
Platforms
around
Low-Code
are Already
Here

Microsoft Investing Heavily
(Power Apps Platform)

A series of low-code applications
that do specialized things

Amazon Web Services: Honeycode

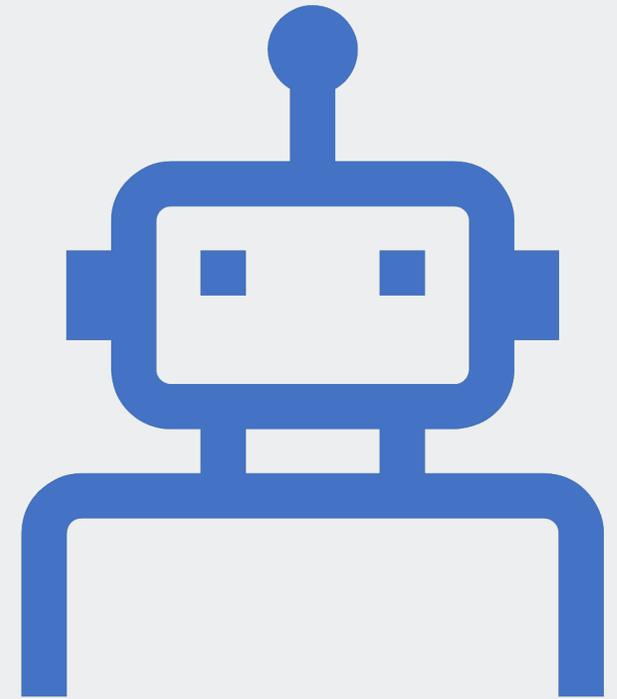
Individual Vendors with purpose-
built tools like RPA



Important Trends: What is RPA?

What is RPA?

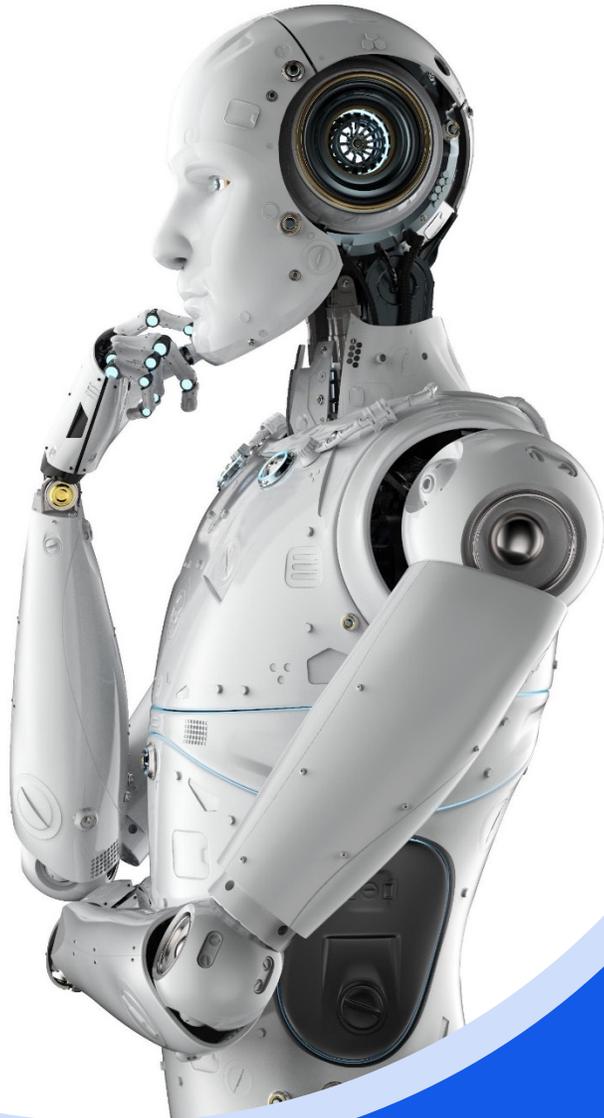
- Robot Process Automation
- It is a ***type*** of automation
- Next level of business process automation
- A machine (robot) mimics the actions of a human
- Think of it as an intelligent Macro
- The trick is to know when and how to use it





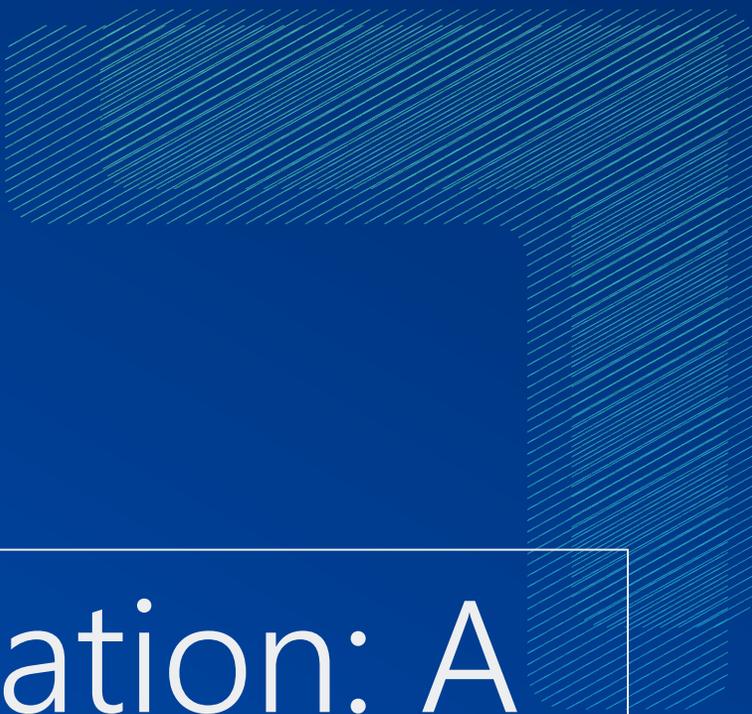
Why Use RPA?

- Programming interfaces (APIs) are not always available for the systems you use
- If there are APIs, you can typically write code to “programmatically” share data between systems
- APIs often cost additional \$\$ (not to mention spending for development)
- If you don’t have programmers (developers) or an API is not available, then an RPA tool may make sense



How do Robots Work?

- Highly recommended to map your process out (there are tools to do this)
- The RPA agent (aka your robot) watches the human perform their tasks
- That script is loaded into the tool and runs attended (people still in the loop) or unattended (let it rip).
- Usually an iterative process



Implementing Automation: A Look at the Power Platform

Transform Operations with Power Platform



No code

Drag and drop experiences that are like PowerPoint



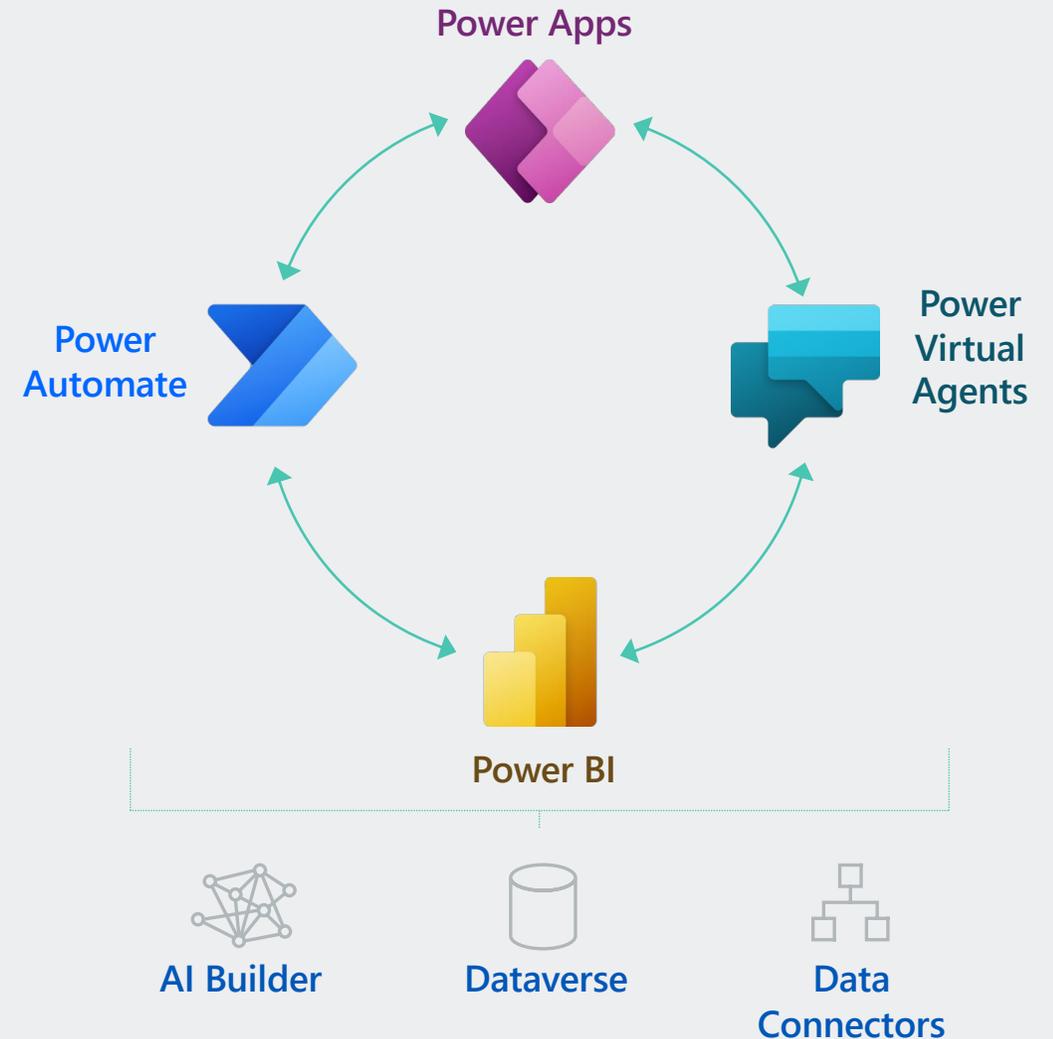
Low-code

Drag and drop plus Excel-like formulas for functionality



Code first

Professional development & extensibility across Microsoft



500+ built-in connectors



Seamless hybrid connectivity to on-premises systems via the on-premises data gateway



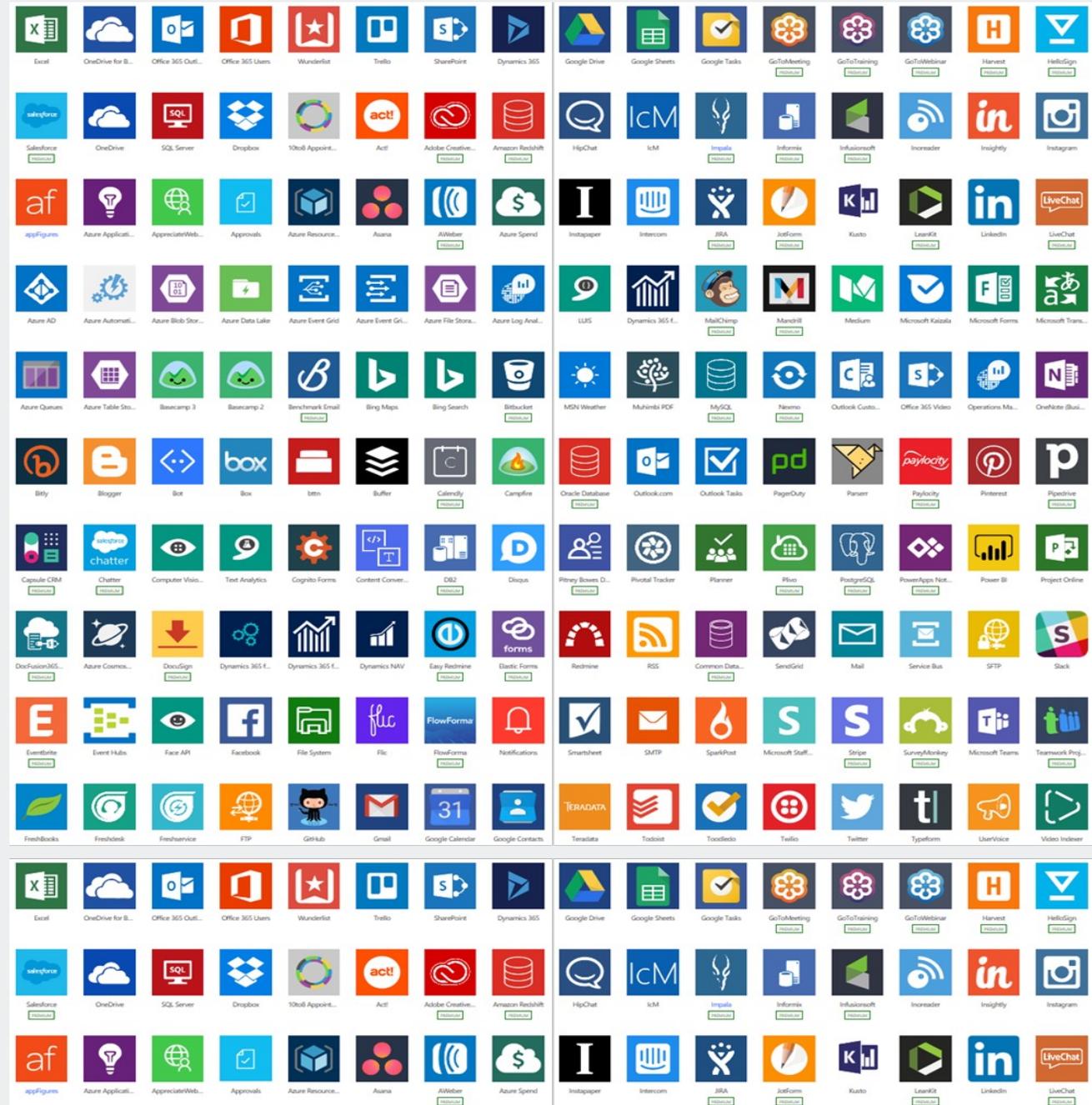
Develop and register custom connectors as a building block for citizen developers



Use multiple data sources in a single application for processes that span systems



Connect to cloud services, content services, databases, and APIs



Automation and Application Examples



Common Power Apps examples are listed below.

Approvals

Collect approval from one or more sources

- Automated granting of permissions
- Employee travel request
- Overtime request
- Timesheet submission

Lifecycle and Workflow Management

Track, move records through a well-defined process

- Contract lifecycle tracker
- Employee onboarding
- Employee promotion evaluation
- Expense reporting process
- Request management
- Service desk tickets

Communication and Announcements

Publish news and info to employees, customers

- Announcement viewer
- Company-wide communications
- Corporate news management
- Learning or Product catalogs

Asset Management

Manage inventory or other assets

- Asset check-out
- Asset rollout
- Inventory management
- Supply order management

Inspection and Audits

Create standardized questionnaires and forms

- Collection of customer data
- Daily job-site inspection, store audits
- Incident reporting
- IoT-based monitoring
- Quality control checklist, Safety, compliance audits
- Supply tracking

Event management

Manage registration, planning, executing events

- Attendance
- Attendee bios
- Registration
- Session scheduling

Scheduling

Assign resources based on calendar availability

- Book a meeting room, tool or vehicle
- Find an available sales associate
- Find rooms for employee touchdown space
- Schedule customer appointment, crew members

Calculate or Transform Data

- Cost or project estimation
- Decision support
- Field technician app
- Generating a work order or estimate
- Tracking monthly sales goals
- Translation of common phrases

Project Management

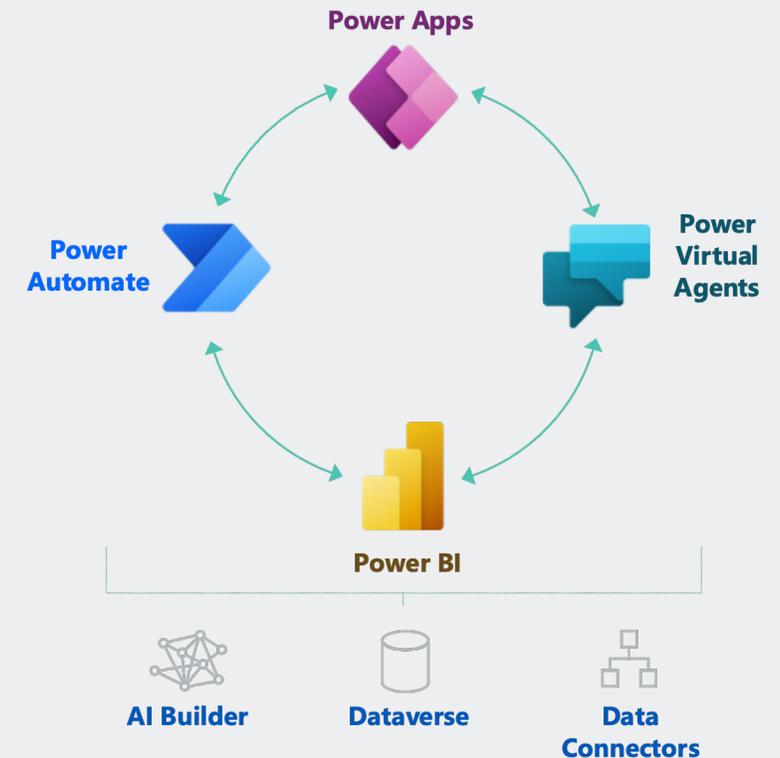
Track a project from inception to completion

- Project management

Power Platform Examples

Recent Low Code Solutions We Have Built on the Power Platform

- ✓ Corporate Credit Card Request Form – Power Apps Canvas App
- ✓ Monthly Closing Checklist – Power Automate Workflow
- ✓ Expense Reimbursement Request – Power Apps Model Driven App + Dataverse
- ✓ Revenue Recognition – Power Apps Model Driven App + Dataverse + Azure Logic Apps + Azure Data Pipeline + Azure Data Warehouse
- ✓ Invoice Data Extraction – AI Builder + Power Automate



Example: Invoice Processing Automation

Track invoices with Microsoft SharePoint Syntex

1



Set up a library to store invoice documents

2



Upload your invoices and train the model to recognize fields

3



Choose which fields to extract from the invoice and track in a list

4



Add Power Automate flows to notify you when you need to take action



Featured Example: Revenue Recognition

- Power Apps Model Driven App
- Dataverse
- Azure Logic Apps
- Azure Data Pipeline
- Azure Data Warehouse

▶ 183.102

▶ 154.178

▶ 2455

Revenue Recognition

The screenshot shows a Power Apps interface for 'Revenue Recognition Transactions'. The top navigation bar includes 'Power Apps', a search bar, and utility icons. The main content area is divided into four columns: 'New Transactions' (63 items), 'Flagged Transactions' (102 items), 'Flagged & Waiting Transactions' (empty), and 'Reviewed Transactions' (166 items). Each column has a 'Filtered' label and a 'Modified On' dropdown. The 'Flagged & Waiting Transactions' column displays a 'No data available' message with a database cylinder icon. The left sidebar contains navigation options like Home, Recent, Pinned, and various transaction-related views.

Power Apps | Revenue Recognition ... | Search | + | Filter | Settings | ? | AM

← | Show Visual Filter | Show Global Filter | Switch to Tile View | + New | Set As Default | Refresh All

Revenue Recognition Transactions | This Month 2/1/2022 To 2/28/2022

- New Transactions** (Filtered): 63 items, Modified On
- Flagged Transactions** (Filtered): 102 items, Modified On
- Flagged & Waiting Transactions** (Filtered): No data available.
- Reviewed Transactions** (Filtered): 166 items, Modified On

Navigation: Home, Recent, Pinned, Transactions (Dashboard, Grid View, Recognition), Opportunities (Opportunities, Amendments), Batches (Batches, Periods), Scorecard Push.

Revenue Recognition

Power Apps | Revenue Recognition ...

Search

Save Save & Close New Deactivate Delete Refresh Check Access Assign Share Email a Link Flow Word Templates

Home Recent Pinned

Transactions Dashboard Grid View Recognition Opportunities Opportunities Amendments Batches Batches Periods Scorecard Push

Transaction - Saved

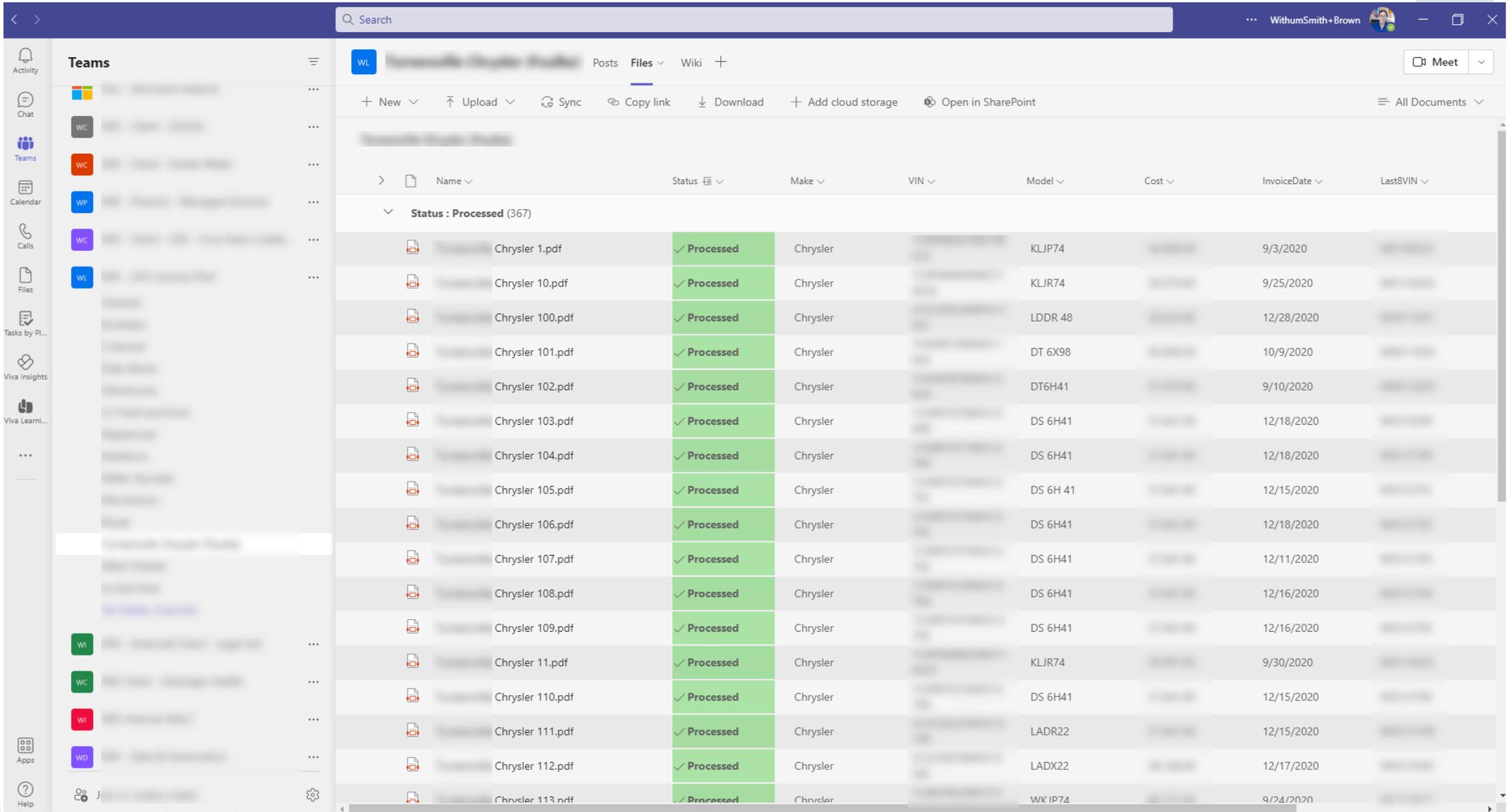
Transaction Details Recognition Related

Name	Review Date	---	Reviewer	---
Status Flagged	Publish Date	---	Fee Received	\$2,712.50
Record Type	Check Date	2/16/2022	Catch-Up Revenue Amount	\$0.00
Project Name	Start Date Used	* 2/1/2022	Payment Structure	Single Payment
	End Date Used	* 1/1/2023	Transaction Notes	
Opportunity	Period	---		
Opportunity Detail				

Recognition Calculation

Recognition for this Transaction	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023
	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.04	\$226.06

Invoice Processing Automation



The screenshot displays a Microsoft Teams interface with a file explorer view. The left sidebar shows navigation options like Activity, Chat, Teams, Calendar, Calls, Files, and Viva Insights. The main area shows a search bar and a list of files. The files are filtered by 'Status: Processed (367)'. The table below lists the details of these processed invoices.

Name	Status	Make	VIN	Model	Cost	InvoiceDate	Last8VIN
Chrysler 1.pdf	✓ Processed	Chrysler		KLJP74		9/3/2020	
Chrysler 10.pdf	✓ Processed	Chrysler		KLJR74		9/25/2020	
Chrysler 100.pdf	✓ Processed	Chrysler		LDDR 48		12/28/2020	
Chrysler 101.pdf	✓ Processed	Chrysler		DT 6X98		10/9/2020	
Chrysler 102.pdf	✓ Processed	Chrysler		DT6H41		9/10/2020	
Chrysler 103.pdf	✓ Processed	Chrysler		DS 6H41		12/18/2020	
Chrysler 104.pdf	✓ Processed	Chrysler		DS 6H41		12/18/2020	
Chrysler 105.pdf	✓ Processed	Chrysler		DS 6H 41		12/15/2020	
Chrysler 106.pdf	✓ Processed	Chrysler		DS 6H41		12/18/2020	
Chrysler 107.pdf	✓ Processed	Chrysler		DS 6H41		12/11/2020	
Chrysler 108.pdf	✓ Processed	Chrysler		DS 6H41		12/16/2020	
Chrysler 109.pdf	✓ Processed	Chrysler		DS 6H41		12/16/2020	
Chrysler 11.pdf	✓ Processed	Chrysler		KLJR74		9/30/2020	
Chrysler 110.pdf	✓ Processed	Chrysler		DS 6H41		12/15/2020	
Chrysler 111.pdf	✓ Processed	Chrysler		LADR22		12/15/2020	
Chrysler 112.pdf	✓ Processed	Chrysler		LADX22		12/17/2020	
Chrysler 113.pdf	✓ Processed	Chrysler		WK 1P74		9/24/2020	

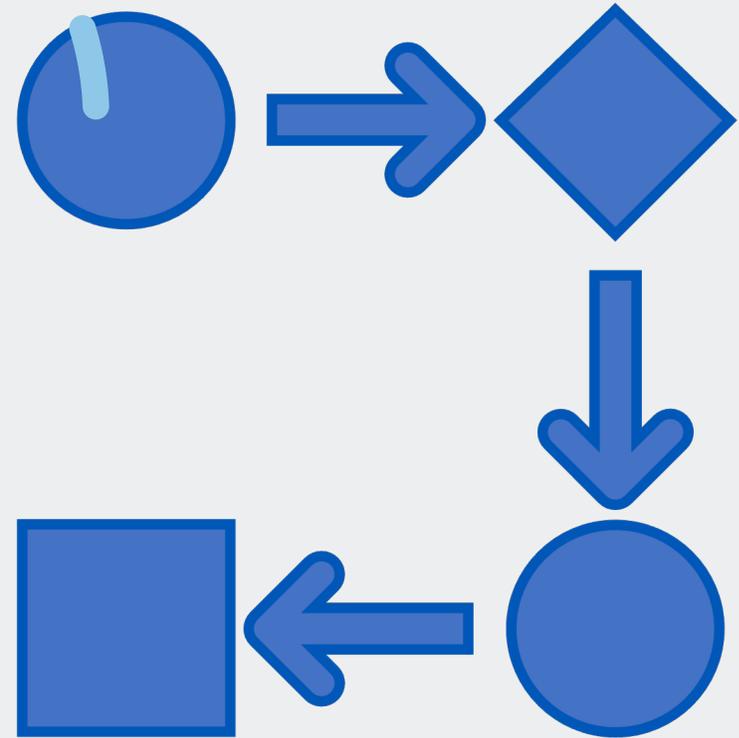
How to Get Started and Wrap Up

Start with an Assessment

- Review your most important processes
- Document the issues they typically have
- If they have significant number of manual steps or paper based, those are good candidates
- Prioritize based on ROI
- Optimize (don't just automate the steps in an existing process...review them first)
- Do a POC on your top candidate(s)

Tool Evaluation Criteria

- Know your IT Platform/Backbone and strategic direction
- Development Capabilities
- Who needs to use it?
- Determine ROI (it's pretty simple for manual processes)
- Understand how automation can make your staff more productive



Key Takeaways



Low-Code / No-Code is here to stay



RPA and Automation is within reach of most firms (via Low-Code tools)

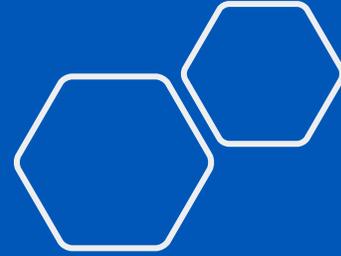


The Power Platform is secure, proven, and can scale to fit your needs over time



If you have M365 you may have what you need to get started

Questions?



Deeper Questions?

- Contact us to discuss the opportunities
- Email me at: dtuttle@withum.com

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No Junk - Just What Matters Most to You

