



K2's Time To Advance Automation

Strategies And Tools For Efficiency

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Learning Objectives



- Outline the primary benefits of advanced automation in business processes
- Select appropriate automation tools for data extraction and transformation
- Identify Microsoft 365 plans and other tools that offer powerful automation capabilities like Power Automate
- Compare and contrast the functionalities and applications of Power Automate and Zapier
- Recognize business tasks that you should automate



Let's get started...

WHY THE RUSH TO AUTOMATION?



Automation Isn't New...

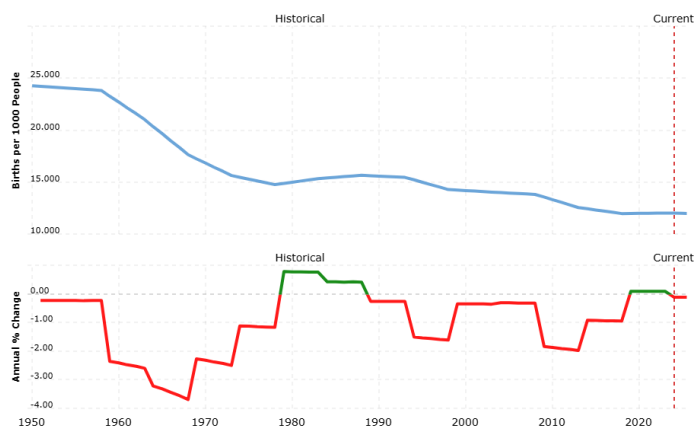
- One could argue that **automation dates to the early days of manufacturing lines**...Ford's Model T, for instance
 - Ford standardized how workers built the vehicle and, because of that, they were able to **mass produce the Model T at a lower per-unit cost**
 - Further, **standardization helped to increase the quality and reliability of the vehicle**
- Today's automation efforts seek to do the same: *work efficiently, with higher quality and reduced errors*

The Labor Shortage: A New Driver



- Today's **labor shortage** has created an additional driver for **automation efforts**
 - There simply are not enough qualified workers to do all the work that needs to be done
 - This condition was going to happen with or without COVID
- Consider the chart on the next slide...

US Birth Rate From 1950



- The **birth rate in the US (and most other countries)** has **declined precipitously** since 1950
- Today, 12.009 people are born each year per 1,000 people in the population

Source: [Macrotrends.net](https://www.macrotrends.net)

Automation Is Critical For Success



- What can/should you automate?
 - Look for transactions with **one or more of the following characteristics**

Repetitive transactions

- Monthly journal entries

Transactions requiring entry into a database

- Entering W-2 forms into a personal tax return

Standardized transactions with little variability

- Accounts payable bills from the same vendor

Automation Benefits



Time savings

Improved internal control

Better accuracy

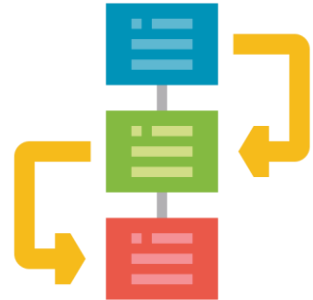
Faster turnaround times

Improved customer/client service

Evaluate Your Repetitive Tasks



- Determine what would be gained by automating the task
- Will automation reduce errors?
- Will automation save time?
- Will it allow a workflow to be tracked more easily?
- Will a human double-check still be required?
- Analyzing why you want to automate a task helps you find the right tool to automate the task with



Three Primary Types Of Automation



Digital Process Automation

- DPA seeks to digitize end-to-end processes
- Purpose is to optimize and streamline workflows
- Often automates content flows from completed forms

Robotic Process Automation

- Uses technology to automate tasks human workers might perform
- Examples include extracting data, form-filling, moving files from one storage location to another

Business Process Automation

- Generally, BPA is more complex than either DPA or RPA
- BPA for example might be used to automate credit approval decisions

Examples



- DPA
 - A customer or client fills in an on-line form. DPA could be used to extract and store that data elsewhere. This should be a relatively simple process because the fillable form structures the data
- RPA
 - A public accounting firm might use RPA to extract data from clients' tax documents such as W-2s, 1099's, and K-1s and automatically populate a tax return with the data
- BPA
 - Automating A/P workflows through automatically approving payments

ODBC – An Automation Facilitator



- Automation efforts sometimes require **linking data from one database or application to another**
- This task is sometimes completed by **Open Database Connectivity (ODBC)**, somewhat of a “legacy” technology
- ODBC is a **vendor-neutral way of linking data** from one location to another
- A common use of ODBC is **automating reporting processes, such as linking accounting data to Excel for reporting purposes**



LET'S SEE AN EXAMPLE...

Using ODBC To Link Data



- Perhaps you want to create a report in Power BI or even Excel that **uses data from your QuickBooks Desktop database**
 - Of course, **you want to link the data**, not export it/import
 - By linking **you can refresh your report on demand**
- To do this using ODBC, you'll need a connector such as one available from [CData](#)

Using ODBC To Link Data



- In Excel and with QuickBooks open, click **Get Data** from the **Data** tab of the Ribbon
- Choose **From Other Sources, From ODBC**
- Specify the **CData QuickBooks Source**
- **Expand the folders**
- **Click the table** to link to Excel
- Create your report
- Once created, you only need to **refresh the report, not rebuild**

Using ODBC To Link Data



Navigator

Preview downloaded on Wednesday, June 23, 2021

Display Options: ☐ Select multiple items

Navigation tree:

- PurchaseOrderLinkedTransactions
- SalesOrderLinkedTransactions
- StatementChargeLinkedTransactions
- Templates
- Transactions
- VendorCreditLinkedTransactions
- WorkersCompCodes
- Accounts
- BillExpenseItems
- BillLineItems
- BillPaymentChecks
- BillPaymentChecksAppliedTo
- BillPaymentCreditCards
- BillPaymentCreditCardsAppliedTo
- Bills**
- BuildAssemblies
- BuildAssemblyLineItems
- CheckExpenseItems

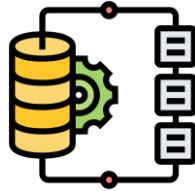
Table: Bills

ID	VendorName	VendorID
2432-1071510295	Timberliff Lumber	10000-933272059
2434-1071510389	Perry Windows & Doors	10000-933272056
2448-1071521705	Perry Windows & Doors	10000-933272056
2485-1071506703	Timberliff Lumber	10000-933272056
2488-1071507040	MacClean Appliances	10000-933272059
2588-1071523852	Keswick Insulation	10000-933272056
2589-1071523719	Midfield Drywall	10000-933272056
258C-1071523824	Perry Windows & Doors	10000-933272056
2590-1071524883	Hughes Construction Rentals	10000-933272056
25-933279688	Shan Roofing	10000-933272056
2590-1071525146	C.L. Electric	10000-933272056
2599-1071525440	Express Delivery Service	10000-933272059
2640-1071507194	Shan Roofing	10000-933272056
2648-1071524019	Daigle Lighting	10000-933272056
26C2-1071499817	Hanlon Metal	10000-933272056
272F-1071518960	Thomas Kitchen & Bath	10000-933272056
2756-1071525440	MacClean Appliances	10000-933272059

The data in the preview has been truncated due to size limits.

Excel Preview:

1	Sum of Amount	Column Labels	2024	2025	Grand Total
2					
3					
4	Row Labels				
5	Bayshore Bank_v			\$ 10,000,001.99	\$ 10,000,001.99
6	Bayshore Times	\$	700.00	\$ 1,400.00	\$ 2,100.00
7	Cal Telephone			\$ 822.00	\$ 822.00
8	Davis Office Equipment	\$	15,000.00	\$ 92,641.81	\$ 107,641.81
9	East Bayshore HMO			\$ 13,750.00	\$ 13,750.00
10	Falco, Christina			\$ 5,000.00	\$ 5,000.00
11	Garrett Printing	\$	306.00	\$ 12,600.00	\$ 12,906.00
12	Hallock Book Store_v			\$ 35,000.00	\$ 35,000.00
13	Holly Office Supplies & Rentals_v	\$	500.00	\$ 42,500.00	\$ 43,000.00
14	Keswick Consulting_v			\$ 27,500.00	\$ 27,500.00
15	King, Vicki - Petty Cash Custodian			\$ 173.22	\$ 173.22
16	Lew's Restaurant_v			\$ 3,200.00	\$ 3,200.00
17	Oliveri Accountants	\$	1,000.00	\$ 5,000.00	\$ 6,000.00
18	Payroll	\$	10,640.00	\$ 234,080.00	\$ 244,720.00
19	Perry's Journal			\$ 1,500.00	\$ 1,500.00
20	Rand Properties			\$ 37,400.00	\$ 37,400.00
21	Russell Insurance			\$ 4,800.00	\$ 4,800.00
22	Rutherford Pension Fund			\$ 6,600.00	\$ 6,600.00
23	Thomas Conferences			\$ 1,500.00	\$ 1,500.00
24	US Postmaster			\$ 340.00	\$ 340.00
25	Grand Total	\$	28,146.00	\$ 10,525,809.02	\$ 10,553,955.02



Microsoft, Apple, And Google Already Have Automation Built Into Their Tools

USEFUL AUTOMATION TOOLS FOR YOUR BUSINESS

Often There Is Automation Inside Applications You're Already Using



Most applications have various methods to automate routine tasks or make complicated actions easier

- **Templates** - You memorize commonly used or customized formats and reports
- **Macros** - You can record your actions and keystrokes and play them back
- **Rules & Filters** - You can set up procedures to categorize and organize your work
- **Communication** - You can set up actions to communicate about your work through email or chat
- **Integration with third-party tools** - It's common to integrate external tools to provide additional functionality or data



Examples Of Built-In Automation



You can find automation everywhere!

- Categorizing email through rules or filters
- Saving your common searches or views in Explorer, Outlook, etc.
- Recording actions with a macro in documents and spreadsheets
- Creating templates of your commonly used documents
- Use Windows Task Scheduler to launch tasks automatically



Microsoft Excel



Examples of integration and automation features

- Macros (and more recently, Scripts) and **LAMBDA** can automate the tasks you repeatedly do
- **Power Automate** can significantly improve your process of extracting, transforming, and loading data inside of Excel
- There are countless third-party add-ins to assist with reporting and processing inside the application
- You can use the quick action toolbar to pin your most-used shortcuts
- **Flash Fill** can automatically fill your data when it recognizes a pattern
- **Analyze Data** and **Recommended Pivot Tables** can help you better understand your data



Adobe Acrobat DC



Tons of automation inside your favorite PDF tool

- Adobe Acrobat DC is hands down the best tool to create, edit, and organize PDF documents
- There are also some fantastic automation tools inside the application that you should know:
 - Integration with Microsoft Office
 - E-Signature with Adobe Sign
 - Sharing and send for comments
 - Custom multi-actions



Calendly



Schedule meetings without the back-and-forth emails

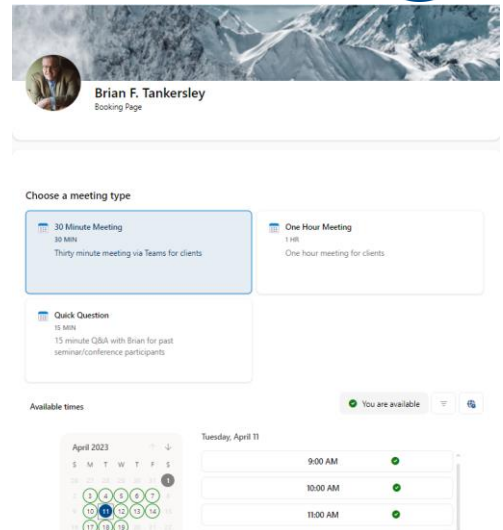
- Calendly takes the headache out of scheduling meetings and events. Your team or clients schedule appointments with you based on your real-time availability
- **Create simple rules** - Let Calendly know your availability preferences, and it'll do the work for you
- **Share your link** - Send guests your Calendly link or embed it on your website
- **Get booked** - They pick a time, and the event is added to your calendar



Microsoft Bookings



- Bookings is a tool which integrates with your Microsoft 365 calendar to create a website with links for self-service appointment scheduling
- It can be enabled as an app by your Microsoft 365 Admin in:
 - Office 365: A3, A5, E1, E3, E5, F1, F3
 - Microsoft 365: A3, A5, E3, E5, F1, F3
 - MS 365 Business Standard
 - MS 365 Business Premium
- A companion Bookings app for Android/iOS is also available online

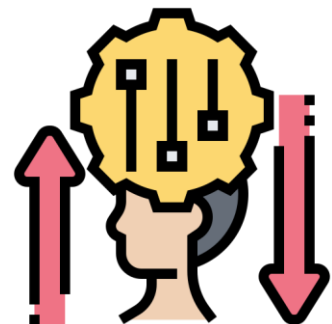


Change Detection



Get automatically notified when a website changes

- Ever need to keep up a website? Maybe you want to know when your favorite band announces new tour dates? Perhaps you want to know when a law or regulation changes?
- Change Detection will regularly and automatically check websites for additions, changes, and deletions of content
- When it detects something has changed, it will notify you through email, Teams, or other methods
- It's a free and open-source tool, but you would need to host and install it yourself. Alternatively, there are paid plans which include installation and hosting
- Learn more at <https://changedetection.io>



Automation In Accounting Apps



Data entry, such as scanning vendor bills into accounts payable

Automatically **routing documents for approvals**

Matching documents, such as A/P bills to purchase orders to receiving reports

Using smartphones to take pictures of T&E employee expense reporting

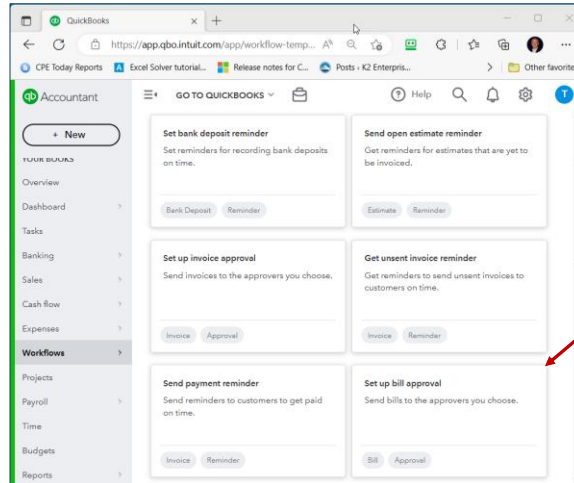
And, of course, **bank feeds**

Built-In Automation



- An increasing number of **accounting platforms offer built-in automation options**
 - You only need to activate them and customize them to your needs
- Further, **many of these tools allow you to create custom automation routines**

Built-In Automation



Built-In Automation



Create workflow

1. Do this in QuickBooks

What do you want QuickBooks to do?

Send for approval

Note:

- Bills entered in QuickBooks are part of books.
- Bills created by approvers are auto-approved.

How would you like this action to happen?

☒ Create an approval task in Tasks

Assign task to: Tommy Stephens

Task name: Approval due for Bill Bill Number

[Learn more about variables](#)

☒ Send a company email

Cancel Save Save and enable

You Can Create Custom Automations



Create custom workflow

Workflow name: Source transaction:

1. Do this in QuickBooks

What do you want QuickBooks to do? Days: Time frame:

How would you like this action to happen?

- ☐ Create a reminder task in Tasks
- ☐ Send a client email
- ☐ Send a company email

CONSIDER THE IMPROVEMENT TO INTERNAL CONTROL AND EFFICIENCY!





POWER QUERY



Power Query And Automation

- What can we do with Power Query?
 - **Link** data from external data sources
 - **Manipulate** that data with “transformations”
 - **Combine** data
 - **Create** “refreshable” reports
 - **Construct** data models
- From an automation perspective, all the above mean **if we can get a “project” – often a report – right one time, we never have to rebuild it...we merely refresh it**

An Example...



- Use Power Query to link data from multiple tables in a database, **delete unnecessary columns**, **join the tables** in a data model, and **summarize the data** using a PivotTable
- Steps
 - **Data, Get Data, From Database, From Microsoft Access Database, AdventureWorks Data.accdb, Import**
 - Choose **Select Multiple Items**
 - Select the **Sales_Customer**, **SalesOrderHeader**, and **SalesOrderDetails** tables
 - Click **Transform Data**

An Example...Continued



- **Apply transformations** such as sorting, filtering, deleting columns, adding user-defined calculations, etc.
- Click **Close and Load**
- **Utilize PowerPivot to join the tables into a data model**
- **Generate your report**

Why Do We Go Through These Steps?



- Because once you do, **you never have to create your reports again!**
- Remember, **the data links to the report...**therefore, you can simply **refresh on demand**
 - Alternatively, you can put your queries on **timed updates or auto-update whenever you open the workbook**
 - Further, you can **combine data from multiple data sources!**
- ***Reports are repeatable tasks...automate them!***



Take care of what's essential. Automate the rest

**POWER AUTOMATE FOR EVEN MORE
POWER AND CONTROL**

Power Automate And “Flows”



- In Power Automate, **“flow”** to describes the automated workflows run in the service
- The three primary types of flows are:
 1. **Automated flows**, which occur when a specific event – “trigger” – happens or occurs
 2. **Instant cloud flows**, which run when a manual trigger occurs
 3. **Scheduled cloud flows**, which run on a designated schedule

Power Automate Templates



- Like similar tools, **Power Automate provides templates you can use “as-is” or customize for specific needs**
 - For most beginners, this is the right place to start
- Of course, **you can also build your own flows from “scratch”** if there is a suitable template from which to get started
- **Power Automate also provides numerous connectors** enabling you to connect to Microsoft and non-Microsoft data sources

Examples Of PA Templates



Start an approval when a file is added to Sharepoint

By Microsoft



Auto Approve Time Off Requests

By Microsoft



Send a customized email when a new file is added

By Microsoft



Notify a team when Planner tasks change status

By Microsoft



Get today's weather forecast for my current location

By Microsoft



Click a button to track work hours and work location in Google Sheets

By Microsoft



Send an email when an event is added, updated or deleted in Outlook

By Microsoft Power Automate Community



Save comments on Instagram posts to Google Sheets after one day

By Microsoft



Welcome new teams members and share their bio

By Microsoft



Email me with a list of upcoming Calendar events

By Microsoft



Protect a PDF document with a password and send via email

By PDF Blocks

Power Automate Connectors



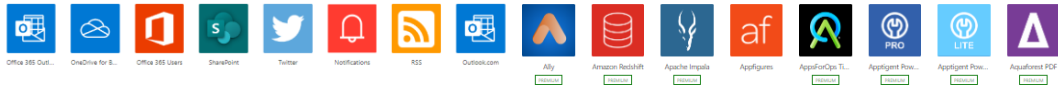
- **Power Automate has hundreds of connectors available** to allow you to connect to your data
- **Many of these connectors are available at no charge**
 - However, there are fees for others
- You will **use connectors to access the data you want to incorporate** into your Power Automate flows

Power Automate Connectors

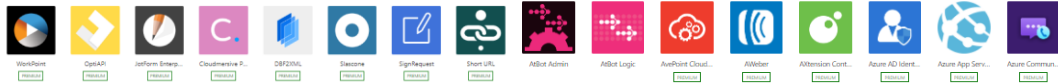


Connect Power Automate with everything!

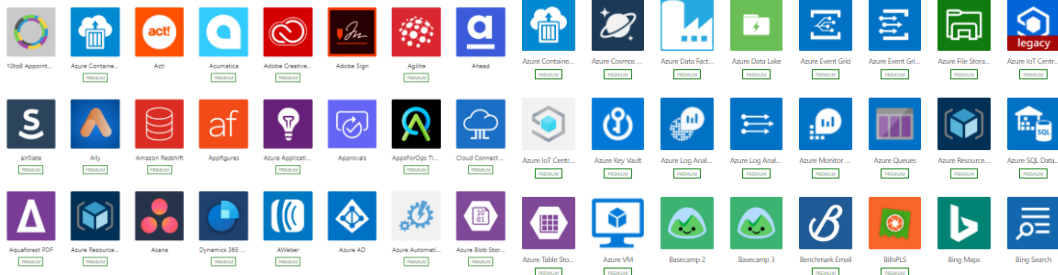
Popular connectors



Recently added connectors

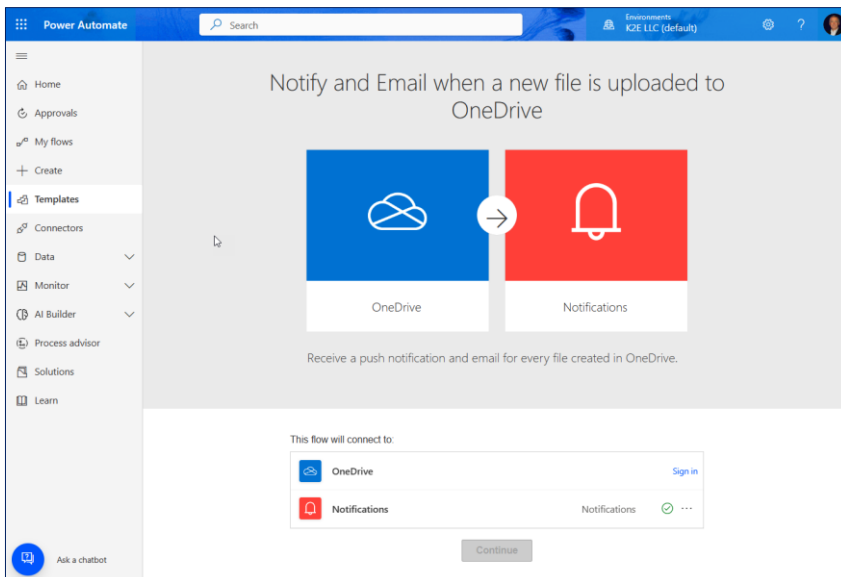


All connectors



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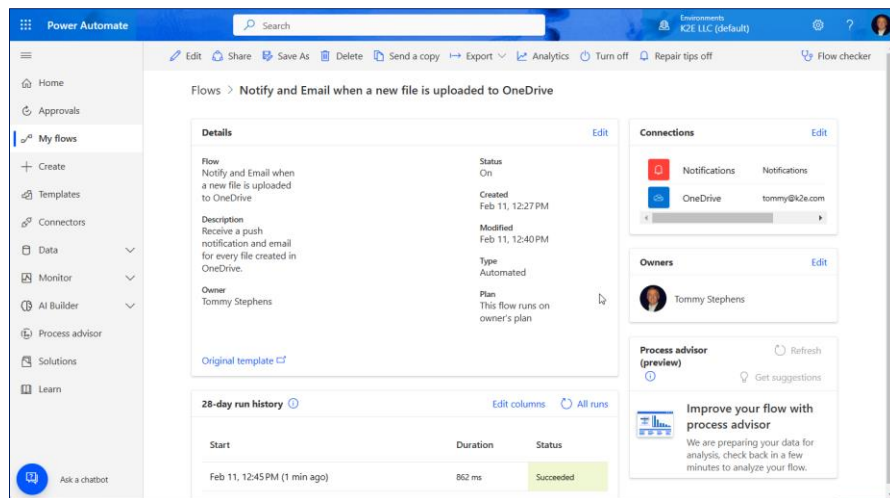
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Select A
Template
To Use

K2 Enterprises

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Configure
The
Template
And Use
It



Integration Platform as a Service

IPAAS TOOLS

Integration Platform As A Service

Trigger and action workflow tools



- Will have a “trigger” that will initiate a series of actions in other systems
- Web and app-based integration tools allow for data sharing and integration with minimal technical and coding expertise
- Virtually all configuration is done on the mobile handset or a webpage using your favorite browser
- The tool takes care of all the security, authentication, and data management
- Great option for simple integration projects, just getting started or exploring options
- Virtually all the logic and programming needed to connect services are provided to you



Example Using QuickBooks And HubSpot CRM

Easily push and pull data between systems

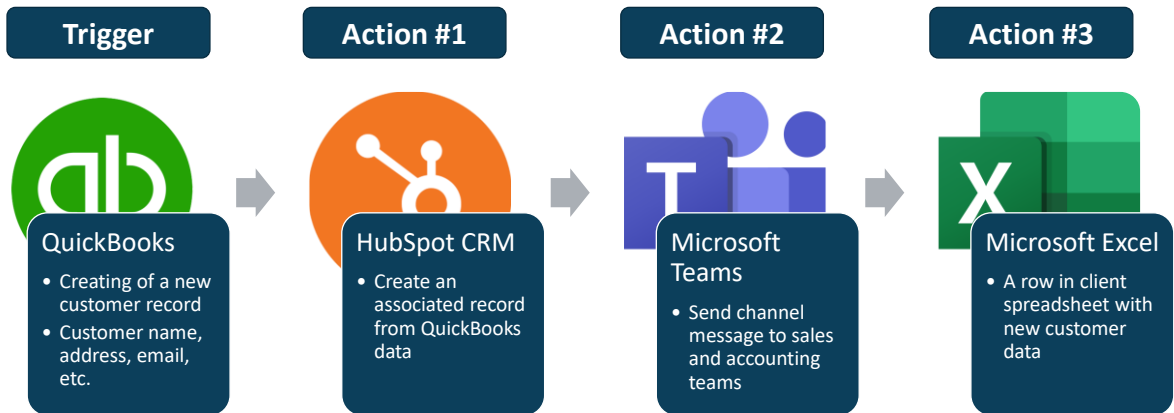


iPaaS tools can be used to automate several routine business functions around the accounting system. For example:

- Trigger, a new customer is created in QBO. Action, iPaaS tool creates the customer record in HubSpot
- Trigger, the sales team updated the customer address in HubSpot. Action, iPaaS tool updates the customer address in QBO
- Trigger, a new invoice is created in QBO. Action, iPaaS tool posts a message in Teams to let the sales team know
- Trigger, an invoice is paid in QBO. Action, iPaaS tool updates the customer record showing the invoice as being paid in QBO and updates an Excel workbook tracking AR



Triggers & Actions With iPaaS Tools



Integration And Data Sharing Tools



Major examples of this category of tool

- **If This, Then That (IFTTT)** - A fantastic option for the home, IoT, and personal projects
- **Zapier** - Great option when many integration touchpoints are required and mostly web-based
- **n8n (pronounced n-eight-n)** - An awesome option that utilizes FREE and open-source technology
- **Zoho Flow** - A great option for users who are already leveraging the power of Zoho



Comparison Of Integration Tools



	Power Automate	IFTTT	Zapier	N8n	Zoho Flow
Primary User Case	Business	Personal	Business	Personal and Business	Business
Price (month/user)	\$15 to \$150	Free and Paid Plans	Free up to \$69/Month	Free and Paid Plans	\$24-41
Number of Integrations	Hundreds	Hundreds	Thousands	Hundreds	Hundreds
Ease of Use	Medium	Easy	Medium	Medium	Medium

Summary



- Almost **every business of every size can benefit today from automating various business processes and practices**
- An increasing number of applications – such as accounting applications – offer built-in automation offering **improved internal control and efficiency**
- But you can use other tools, such as **Power Automate, Zapier,** and **Automation Anywhere** to create your own automations
- No matter the tool(s) you use, ***now is the time to automate!***