Why Microsoft Flow and PowerApps Rock!

Boston Office 365 User Group - David Lozzi

March 15th, 2018

slalom

David Lozzi

Solution Architect

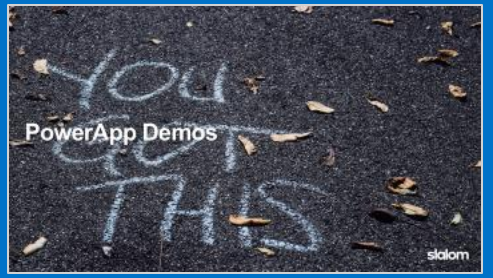
slalom

david.lozzi@slalom.com
@DavidLozzi
www.DavidLozzi.com

Boston O365
User Group

@Bos365
bit.ly/bos365

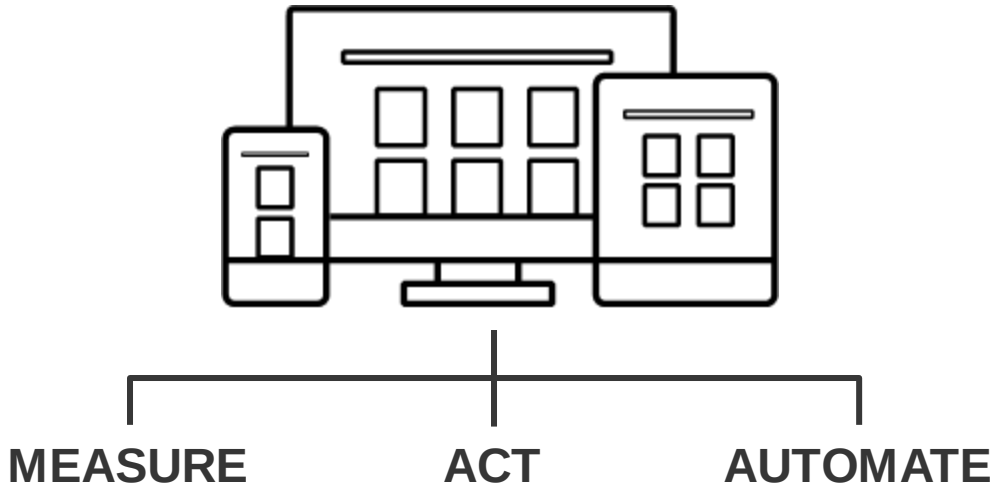
Today's Goals



Introduction

Business Application Platform

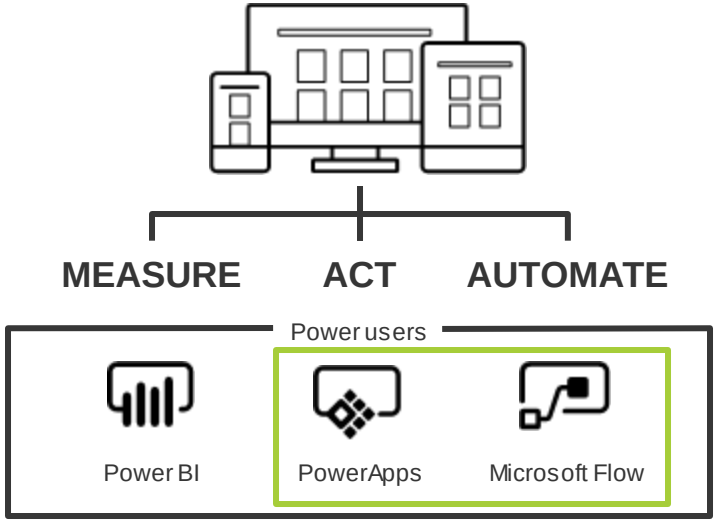
Let's innovate faster



Compose analytics, user experiences, and automation together using a complete and integrated set of services from Microsoft.

Business Application Platform

Power users who understand their business challenges the best can now quickly build and deliver solutions without writing code.



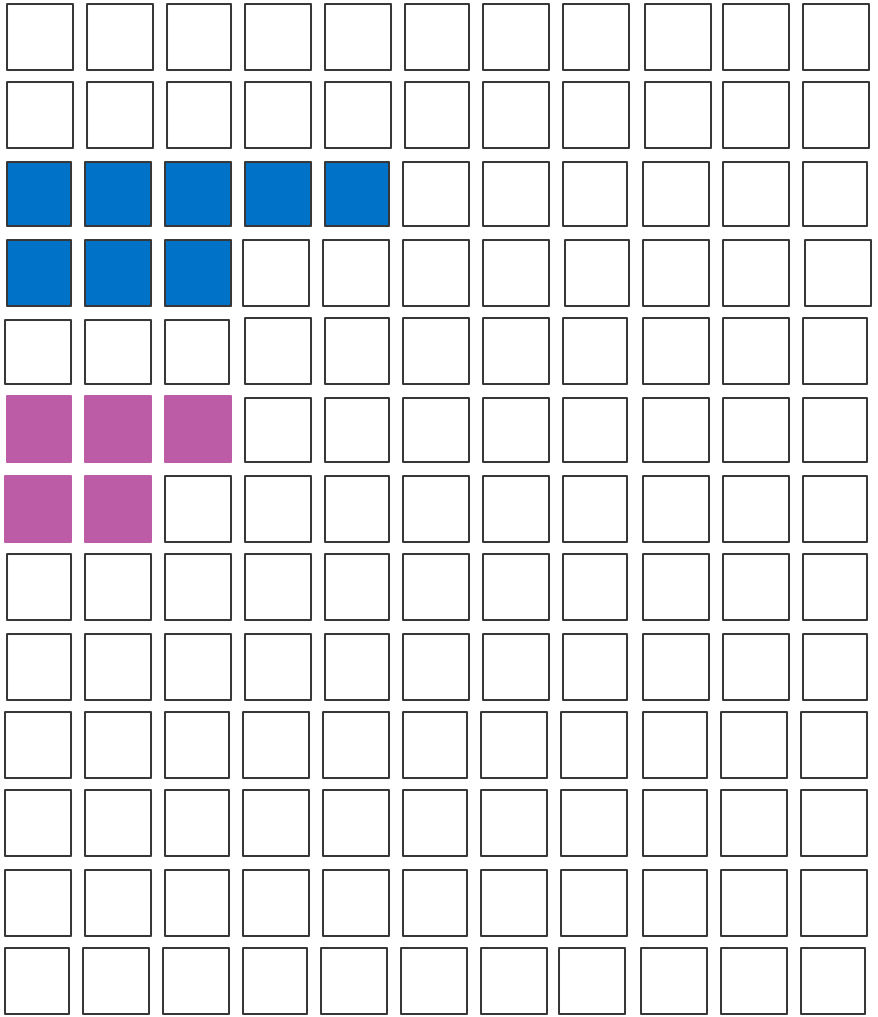
Only so many problems can be solved with

off-the-shelf SaaS

Custom software development

is time consuming and costly

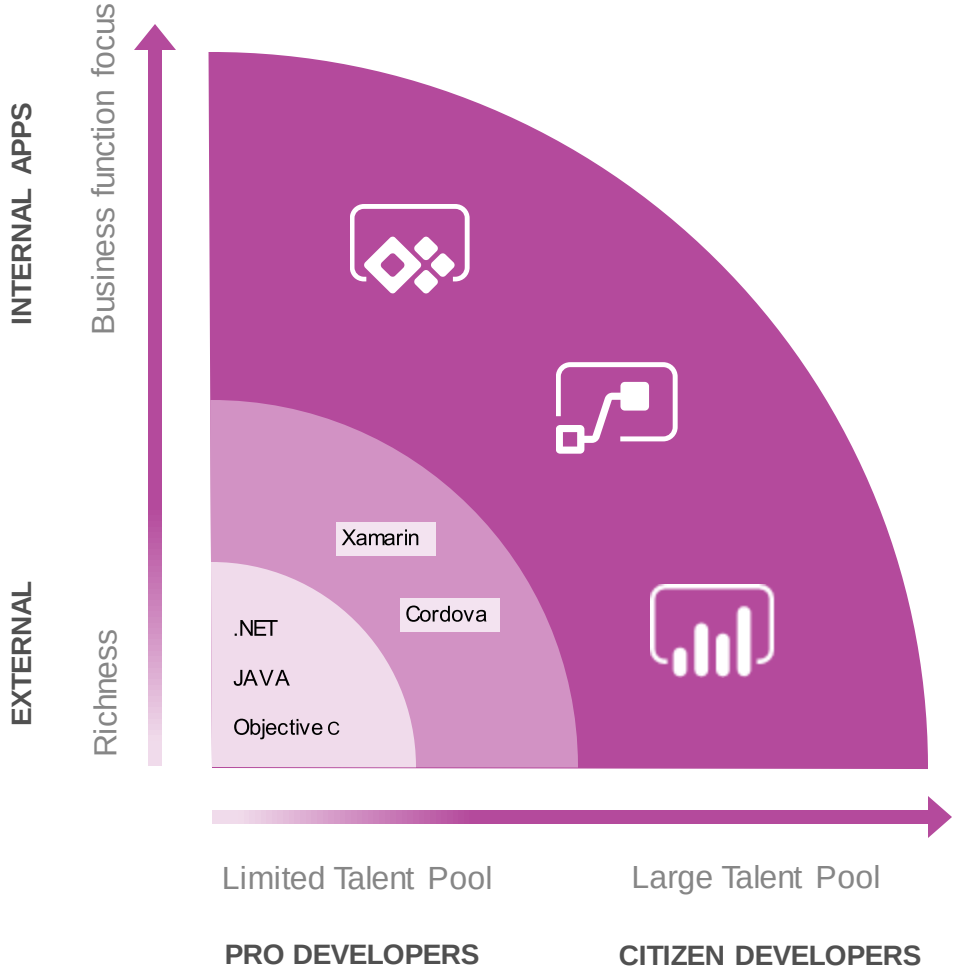
Everything else is a missed opportunity to optimize.



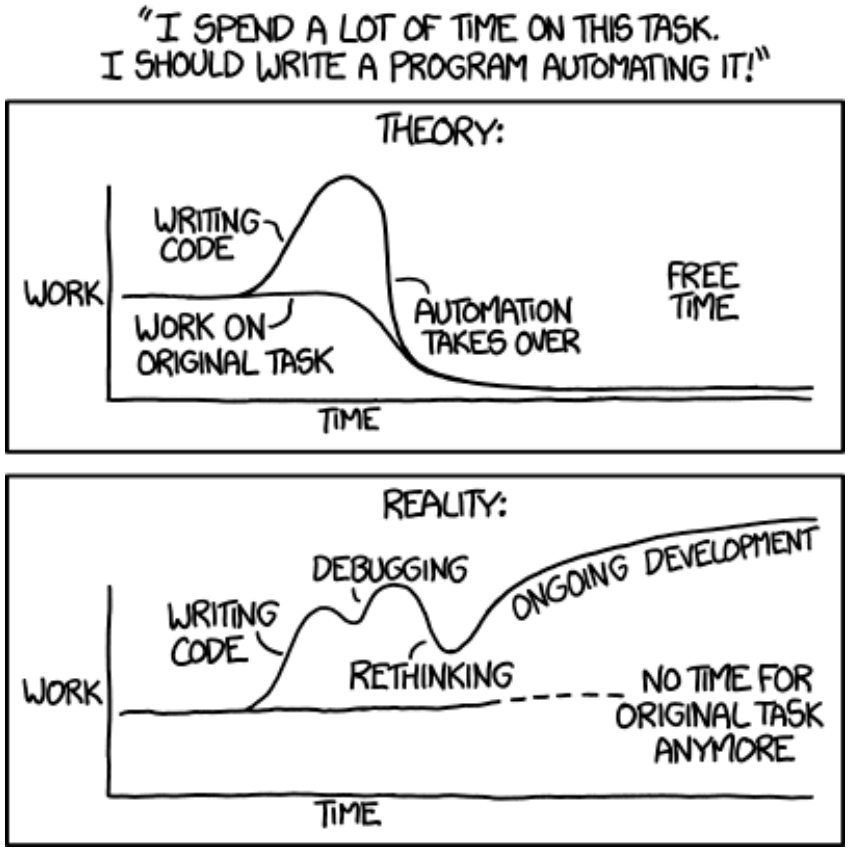
The platform for business apps, empowering analysts and power users

Cross platform tools for pro-developers

Native development for pro-developers



It’s about **automation** and **ease of use** streamlining your…



ref: https://xkcd.com/1319/

'Automating' comes from the roots 'auto-' meaning 'self-', and 'mating', meaning 'screwing'.

What is changing now?

Nearly half of all jobs face losses to automation from software robots that complete increasingly complex tasks.

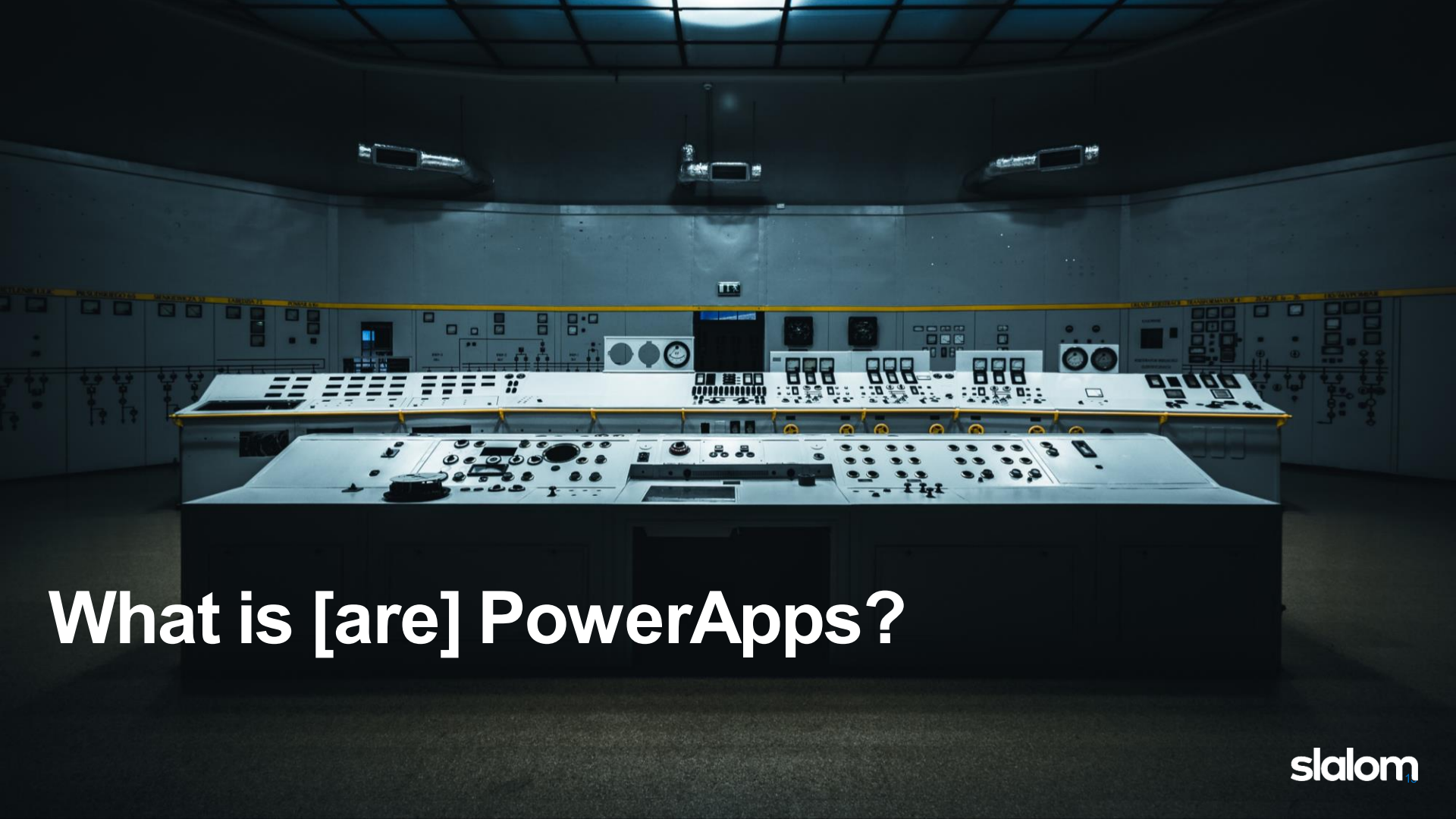
What will happen by 2020?

Humans will work alongside software robots, and leaders will manage workforces that are part robot and part human.

source: Forrester “The Top 10 Technology Trends To Watch: 2018 To 2020”

These robots don’t herald a **gloomy future for jobs**. As we showed in our report The Future Of Jobs, 2027: Working Side By Side With Robots, automation will replace some jobs and **create others**…

source: Forrester “The Top 10 Technology Trends To Watch: 2018 To 2020”

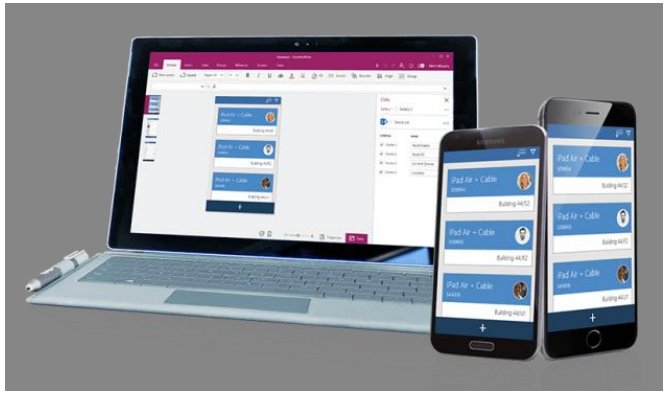


What is [are] PowerApps?

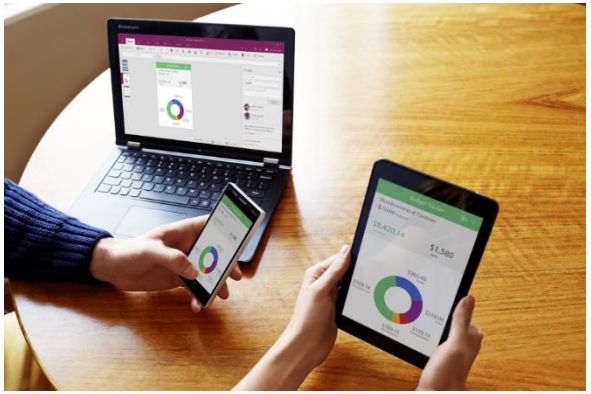
slalom

Microsoft PowerApps is a service for creating and using custom business apps across platforms

Connect to data & systems you're already using; create the data you need



Create apps, forms, and workflows without writing code

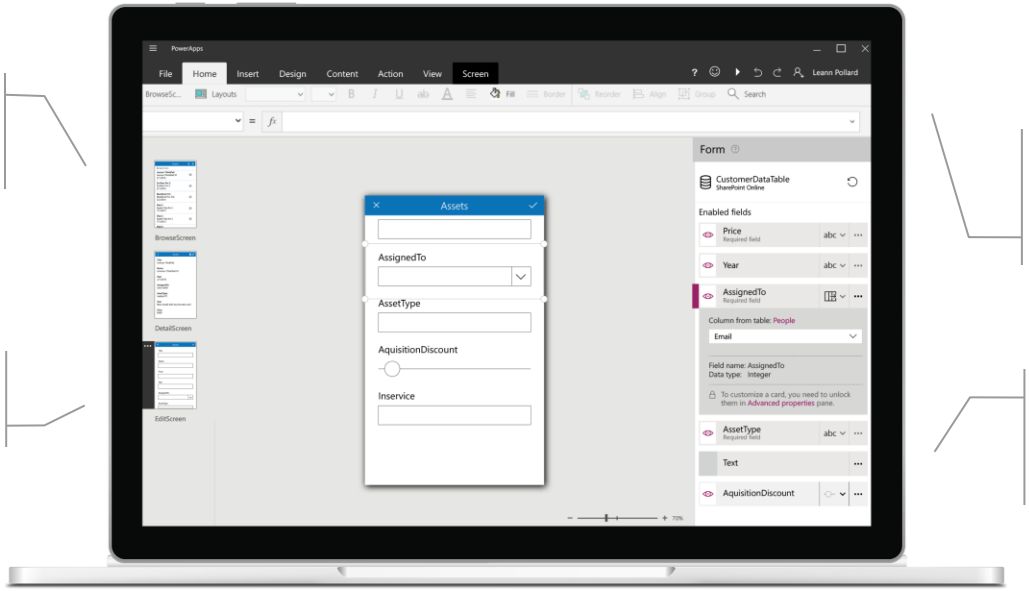


Use apps on web and mobile

Build useful apps without writing code

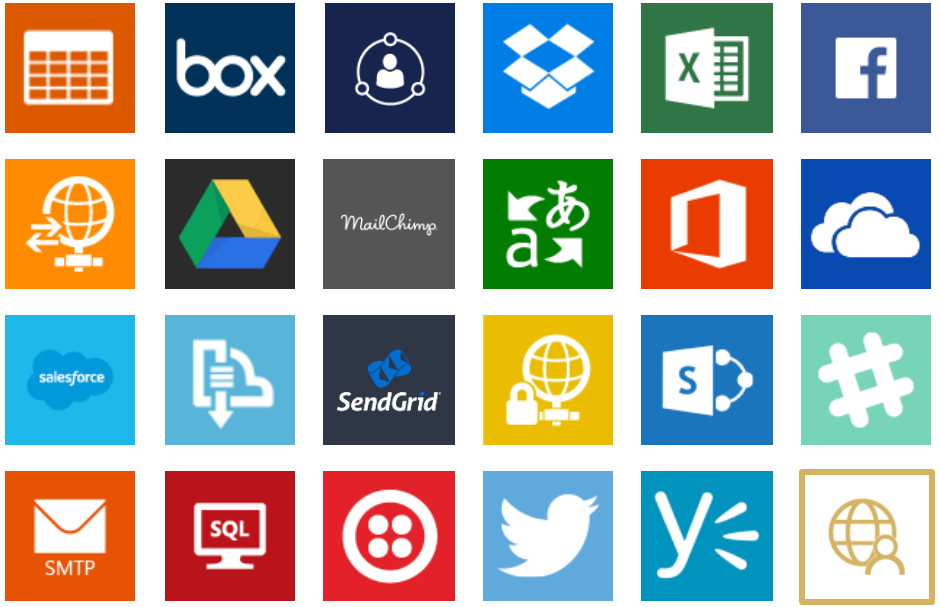
Craft forms and screens in a visual designer that helps you see exactly what you'll get

Take advantage of device capabilities like cameras, GPS, and pen controls



Build business logic into your apps with an Excel-inspired expression language

Extend the capabilities of connected data sources, or focus just on the bits you need



Connect to the systems you're already using

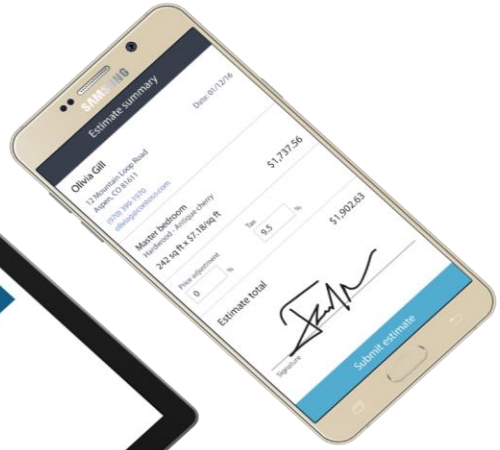
Quickly generate and customize apps based on SharePoint Online lists, SQL Databases, Dynamics 365, Salesforce records and more. You can even connect to any restful APIs via custom connectors.

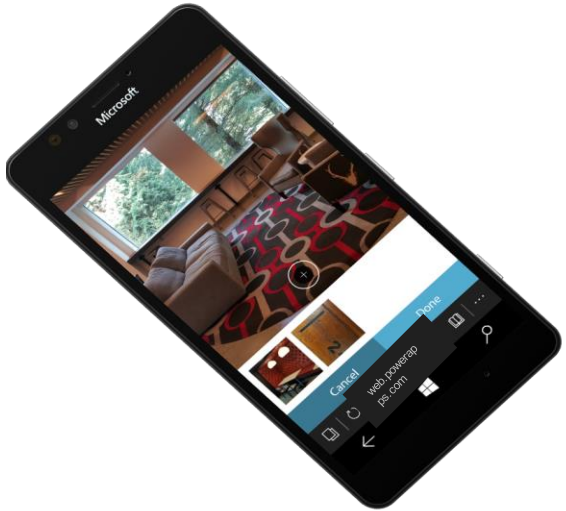
Even connecting to data in your on premise systems through a common Data Gateway.

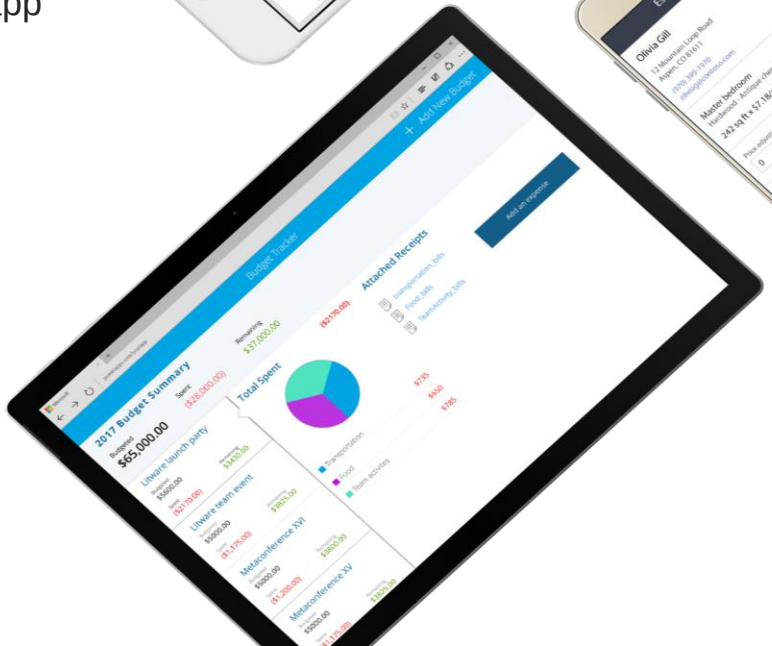
Your apps will be able to fully interact with underlying sources and will respect the permissions you've already established in them.

Publish apps instantly for web and mobile

Get apps to your team when and where they're needed, whether that's on the web, Windows, iOS or Android—no app store required.







PowerApp Demos

slalom

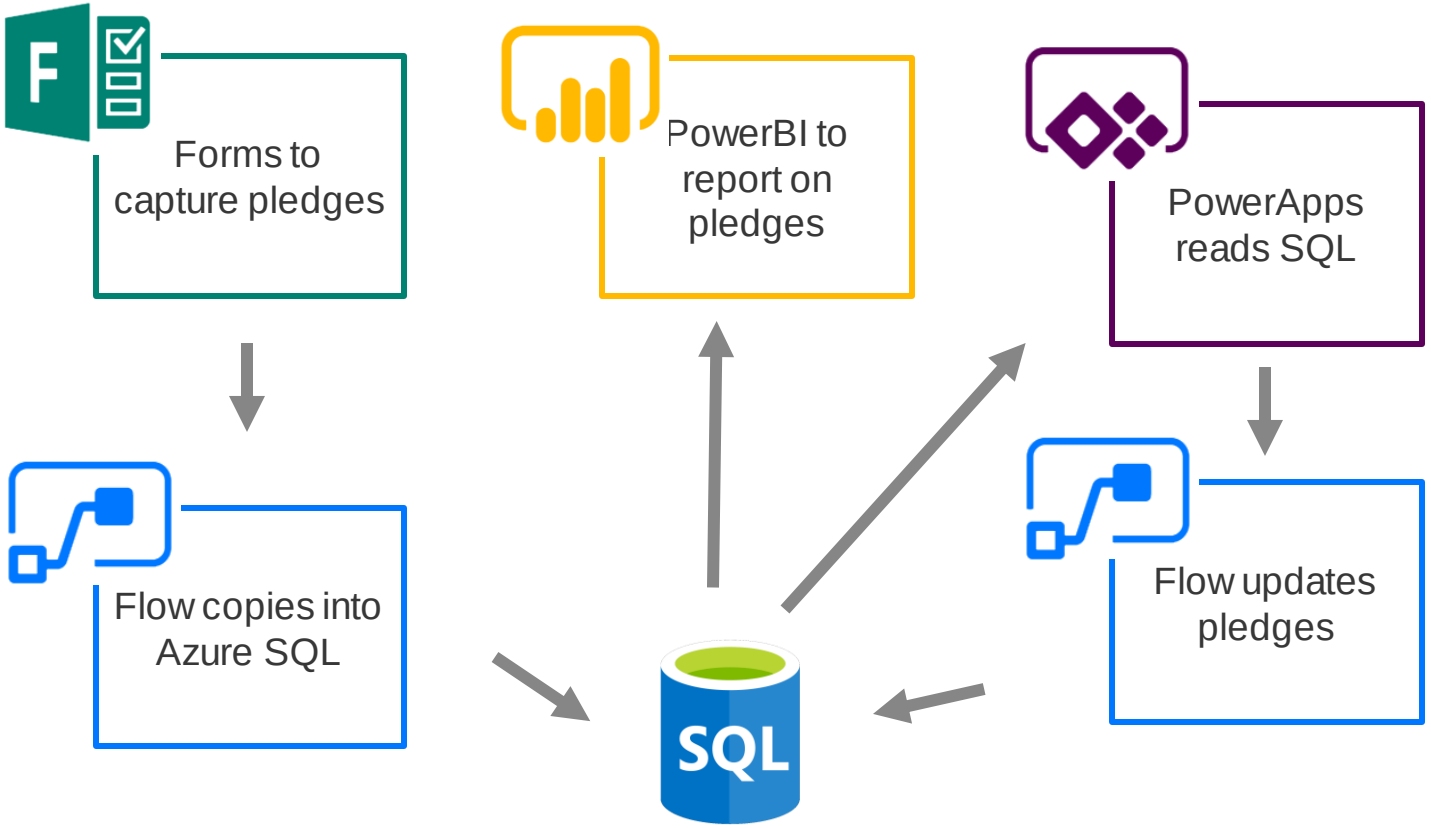
Starting fresh - Demo

Gates Foundation Demo

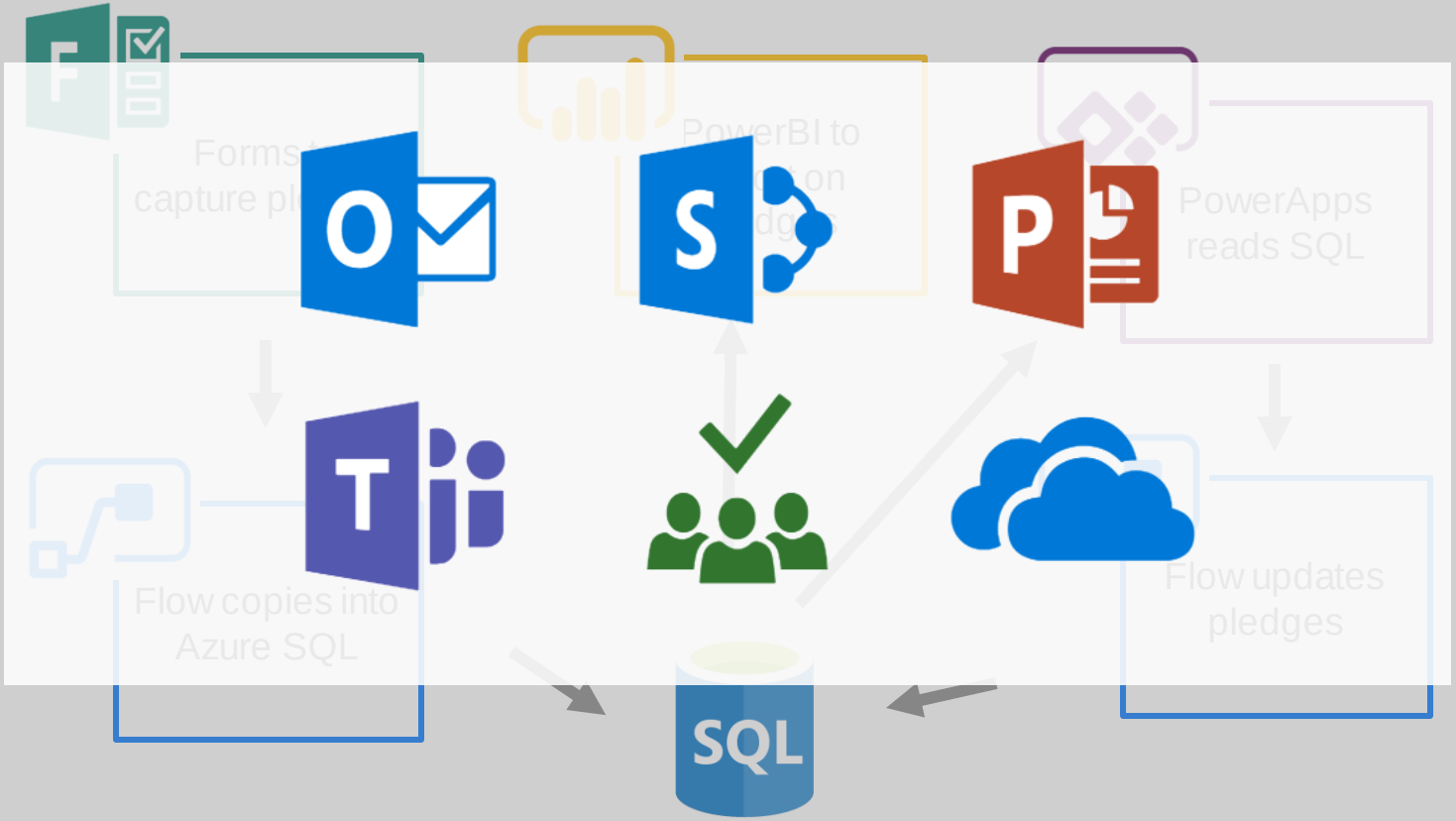
Ordering Device Demo

Green Scene Demo

Across the Office 365 Stack



Across the Office 365 Stack



What about SharePoint Online?

InfoPath and Access Web Apps

InfoPath/ SharePoint Designer

No new versions, supported through 2026

Access Web Apps

PowerApps / Flow

Successors to InfoPath, Access Web Apps and SharePoint Designer workflows

Starting fresh on SharePoint - Demo

PowerApps Tips & Tricks
slalom

CSS – Cascading Style Sheets

- Not possible, true CSS is not available in PowerApps
- Custom Style Sheets – CSS :)
- Set OnVisible of main screen to set properties for the app

- More at http://bit.ly/PowerAppsCSS

```
Set(BrandColors,{
    Primary:RGBA(0,114,200,1),
    Secondary:ColorValue("#3CB3E7"),
    Tritary: ColorValue("#B34A9B"),
    Highlights: ColorValue("A6CE38"),
    GrayDarkest: RGBA(129,130,131,1),
    GrayDarker: RGBA(193,195,197,1),
    Gray: RGBA(223,226,225,1),
    GrayLighter: RGBA(236,238,240,1),
    GrayLightest: RGBA(244,245,246,1)
})

;Set(BrandTypography,{
    Normal: Font.Arial,
    Subtitle: Font.Georgia,
    Title: Font.Georgia,
    Note: Font.Arial,
    Input: Font.Arial
})

;Set(AppFonts,{
    NormalFont: BrandTypography.Normal,
    NormalFontSize: 18,
    InputFont: BrandTypography.Input,
    InputFontSize: 18,
    TitleFont: BrandTypography.Title,
    TitleFontSize: 22,
    TitleFontWeight: Bold,
    TitleColor: BrandColors.Primary,
```

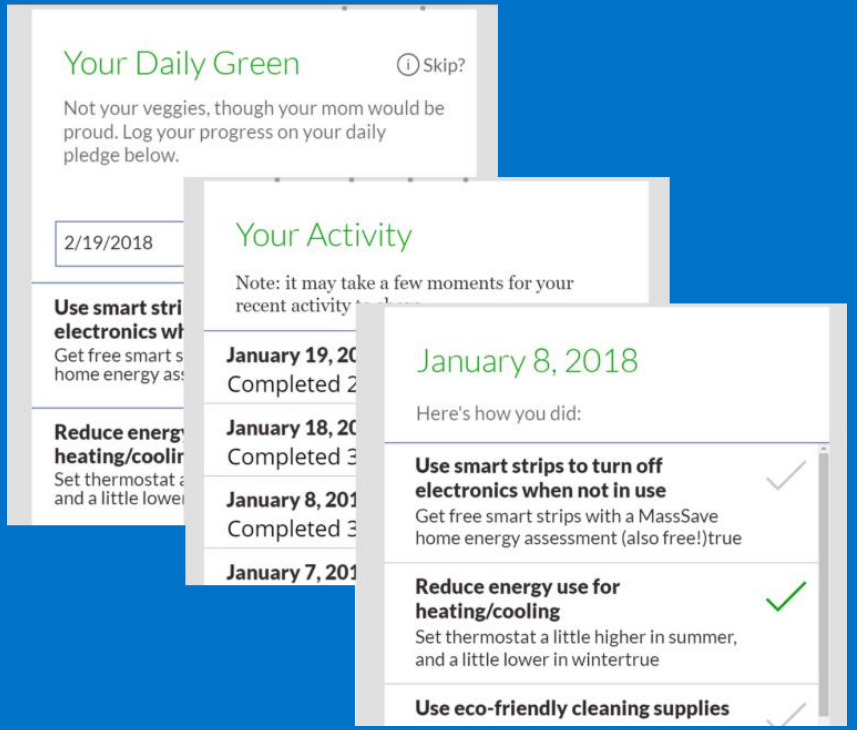
Property Dependencies

- Let your controls rely on each other.
- Streamlines layouts and changes.

Copy & Paste is your Bae

Bae - a person's boyfriend or girlfriend

- Copy & Pasting controls copies everything about it: formatting, layout, actions, etc. including property dependencies



Performance

- PowerApps can feel a little sluggish
- Query your data and load into an object, only load from source when needed
- Handles 500 items by default, can increase

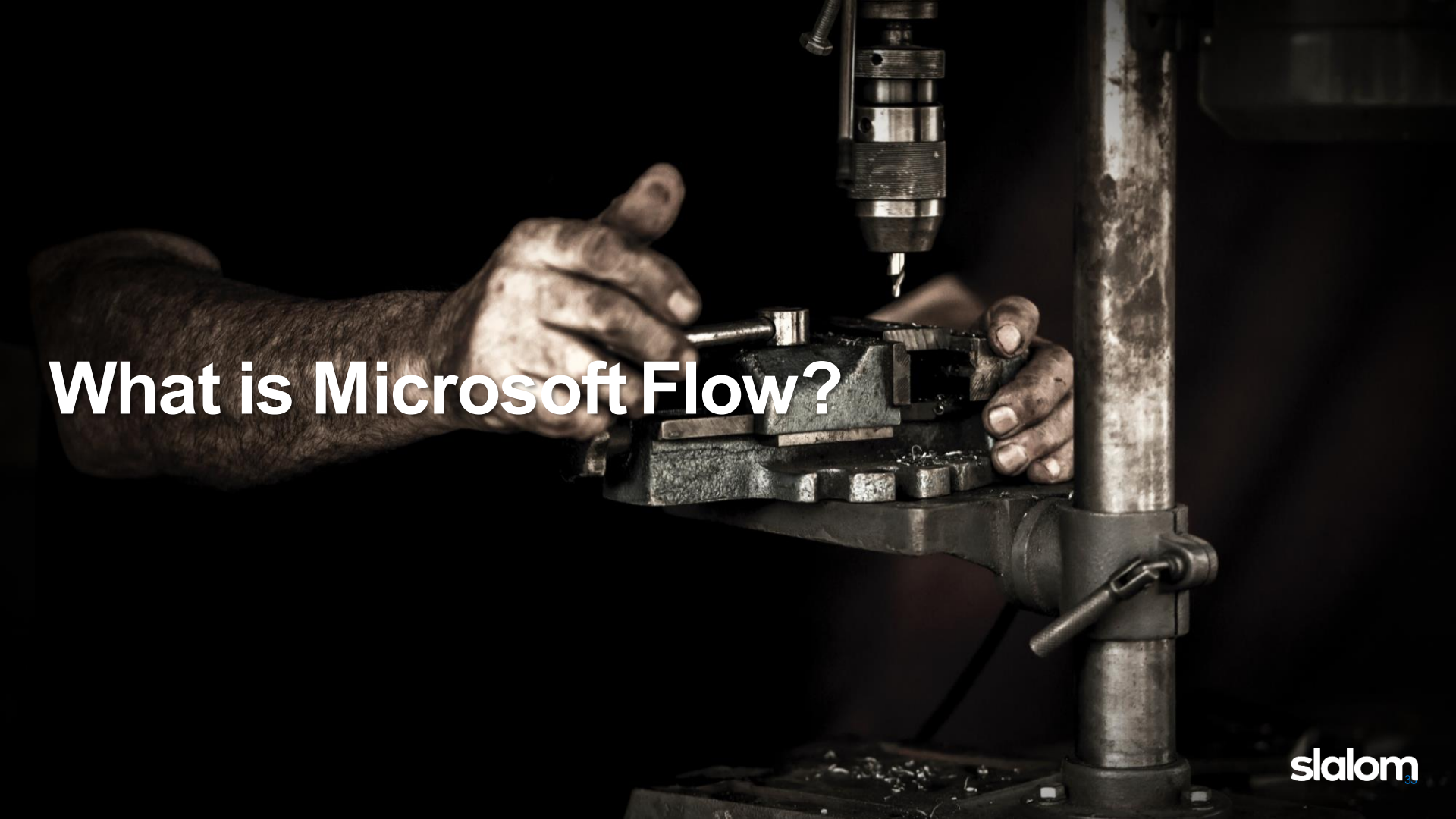
```
;ClearCollect(QuestionGroups,GroupBy('[dbo].[Questions]',"Group","ID"))

;ClearCollect(Pledge,Filter('[dbo].[UserPledges]',UserID = CurrentUser.ID))

;Set(TotalPledgeQs, CountRows(Pledge))

;If(DateDiff(Date(2017,12,16),Today()) >= 0,
     Set(AllowDaily,true),
     Set(AllowDaily,false))

;Set(AppLoaded,true)
```


What is Microsoft Flow?

if t hat

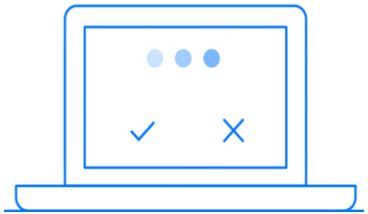
ifttt.com

Microsoft Flow helps **non-developers** work smarter by automating workflows across apps and services

Connect to data & systems you're already using; create the data you need

Create workflows using triggers & actions without code or scripts

Edit flows on web and mobile



Approve requests or manage them on web and mobile

What makes up a Flow?

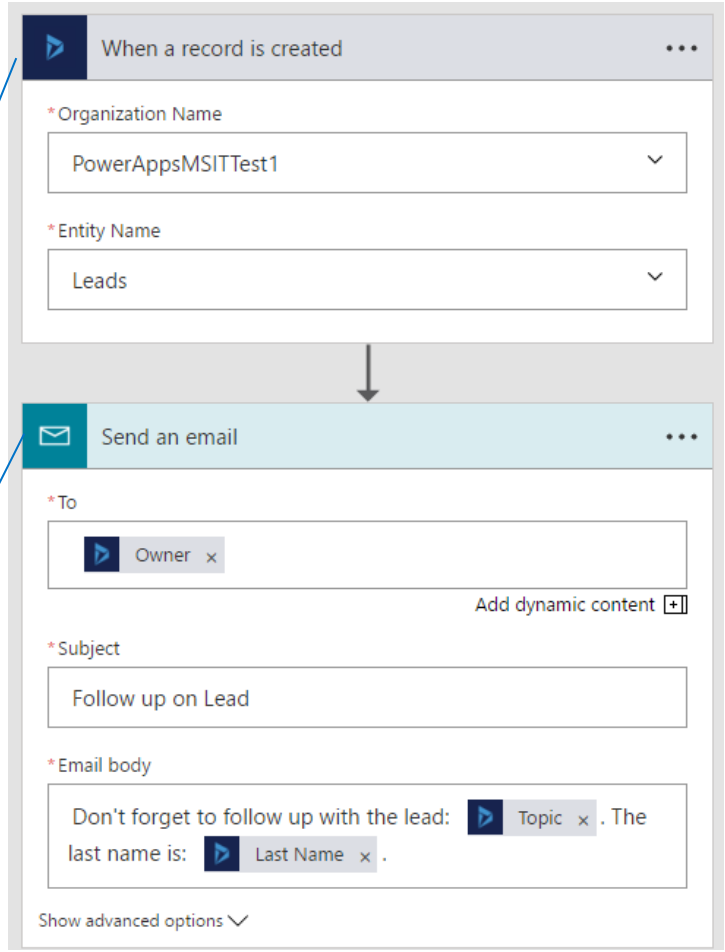
Example: Notification Flow

Trigger – the event that kicks off the flow:

- Manually
- on a schedule
- on an event in the cloud

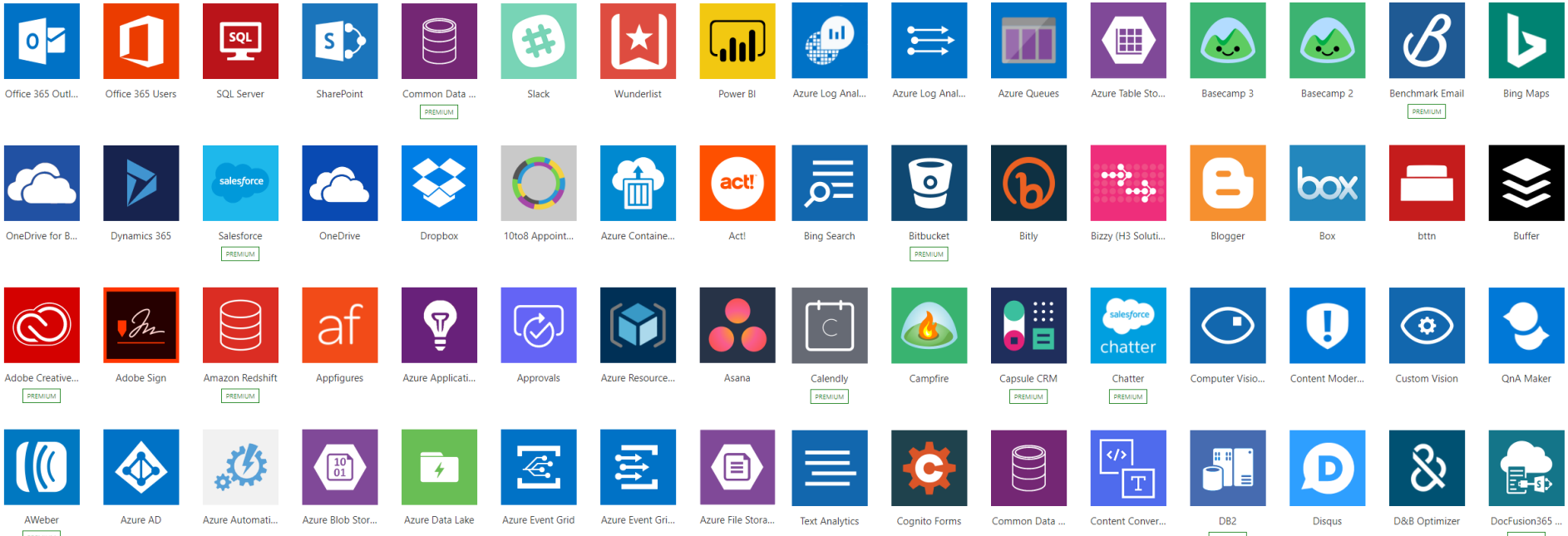
Actions – what the flow does

Uses data from the trigger

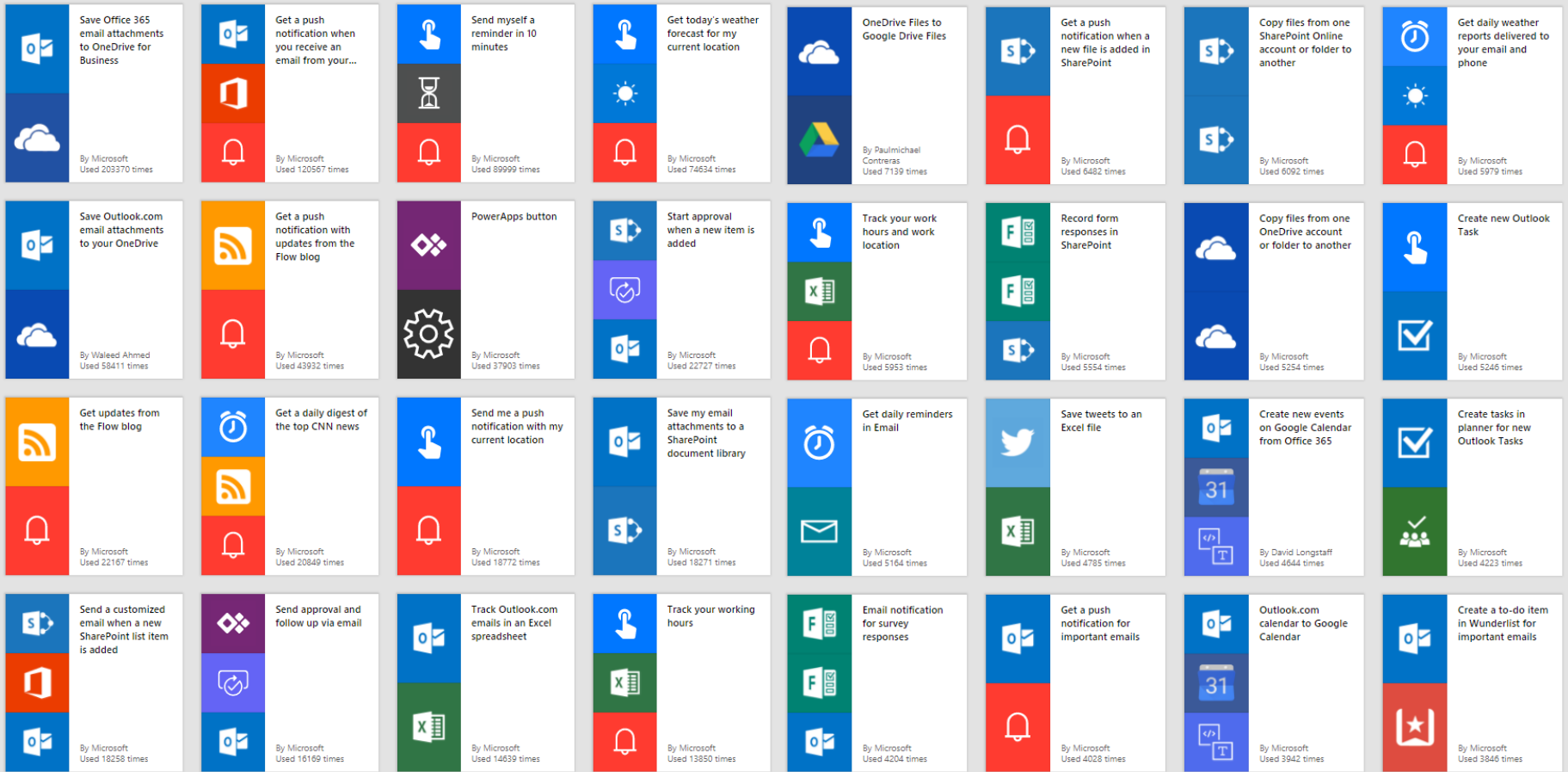


Connect to cloud and on premises data

Nearly 150 out of the box connectors with new connectors every week
Use Custom Connectors to connect to any custom REST endpoint
Connect to on-premises data using gateways



Templates help users to get started



Flow Demos

slalom

Create a Flow from a Template

Create a Flow from Scratch Demo

Notify Teams of new Group Event Demo

https://davidlozzi.com/2018/01/26/update-your-team-with-events-from-your-outlook-group-calendar-using-microsoft-flow/

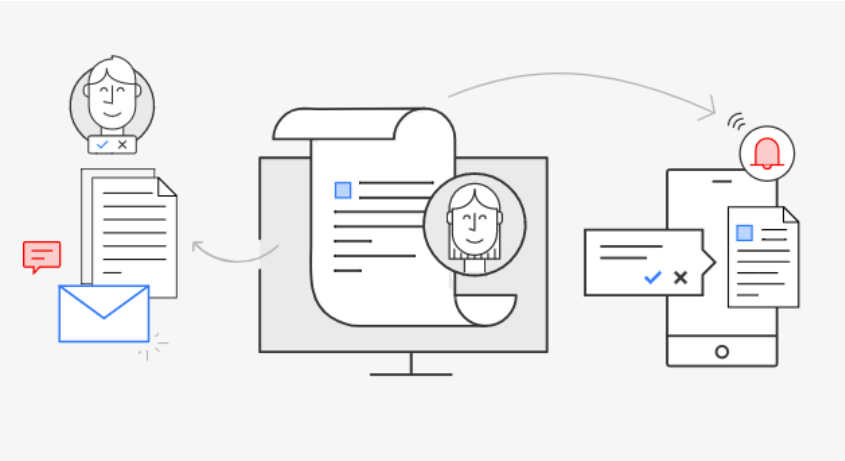
Green Scene Flows Demo

Manage Outlook Flagged Emails as Tasks in Wunderlist Demo

What about SharePoint Online?

Automating approvals

- Approval processes are an integral part of all businesses
  - HR request forms – vacation requests, travel authorization, travel expense, mileage reimbursement, equipment rental, equipment inspections, etc.
  - Document approvals – contracts, specs, designs, sales quotes
  - Issue tracking
  - Lead generation
- Flow is the successor to SharePoint designer workflows and approvals were the most common workflow scenario in SPD



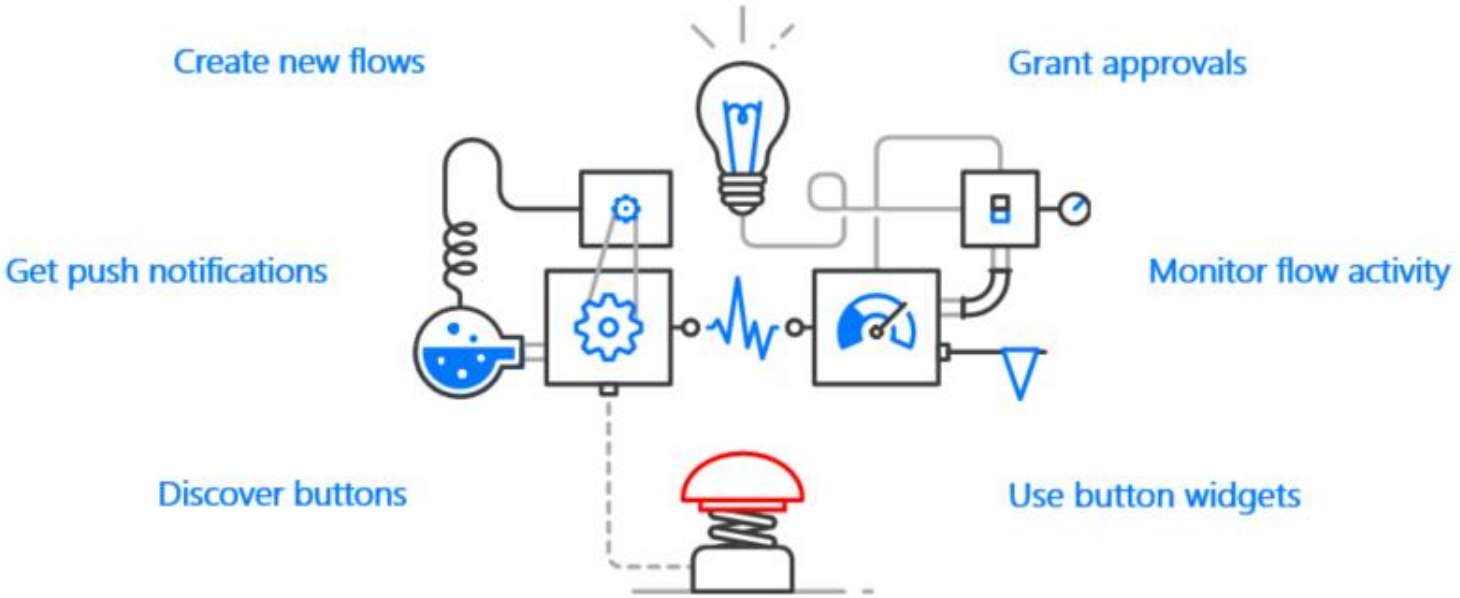
Modern Approvals in Flow

- Streamline business processes for data in SharePoint, Dynamics 365, Forms, SQL, etc.
- View sent and received requests in a unified approvals center
- Do approvals on the go - from your phone or directly from your inbox
- Customize to fit *your* business process:
  - Sequential or hierarchical approvals
  - Parallel approvals
  - All Assigned Must Approve

Approving Content in SharePoint Online Demo

Microsoft Flow Mobile & Devices

Work less and do more, from anywhere



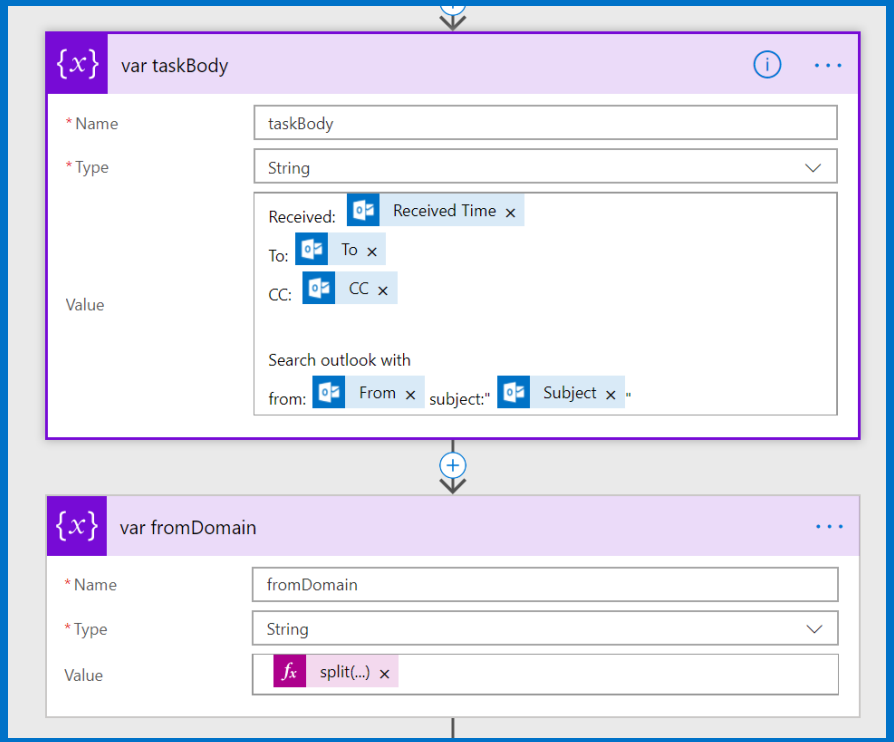
Create, run, and manage automated workflows between your favorite apps and services – even when you're on the go!

Automating advanced scenarios with Flow

- Scheduling – run a flow at a particular frequency, delay, delay until
- Expressions - perform simple, inline calculations like string manipulation (e.g. substring, replace) or arithmetic (e.g. add, subtract, multiply)
- Control flow – switch-case, parallels, do until, apply to each, handle timeouts and failures
- Nested workflows

Microsoft Flow Tips & Tricks
slalom

Use Variables

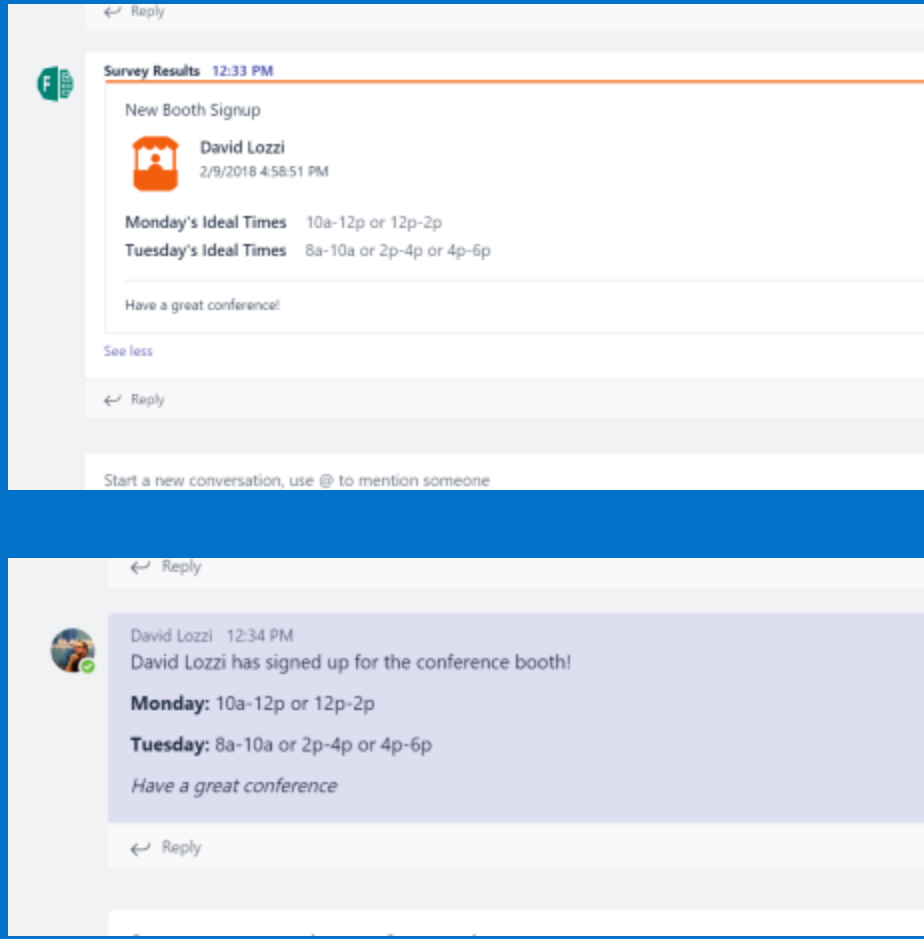


- "Clean code" practices preach to use well named variables, apply here too.
- Allows for reusable values throughout your Flow

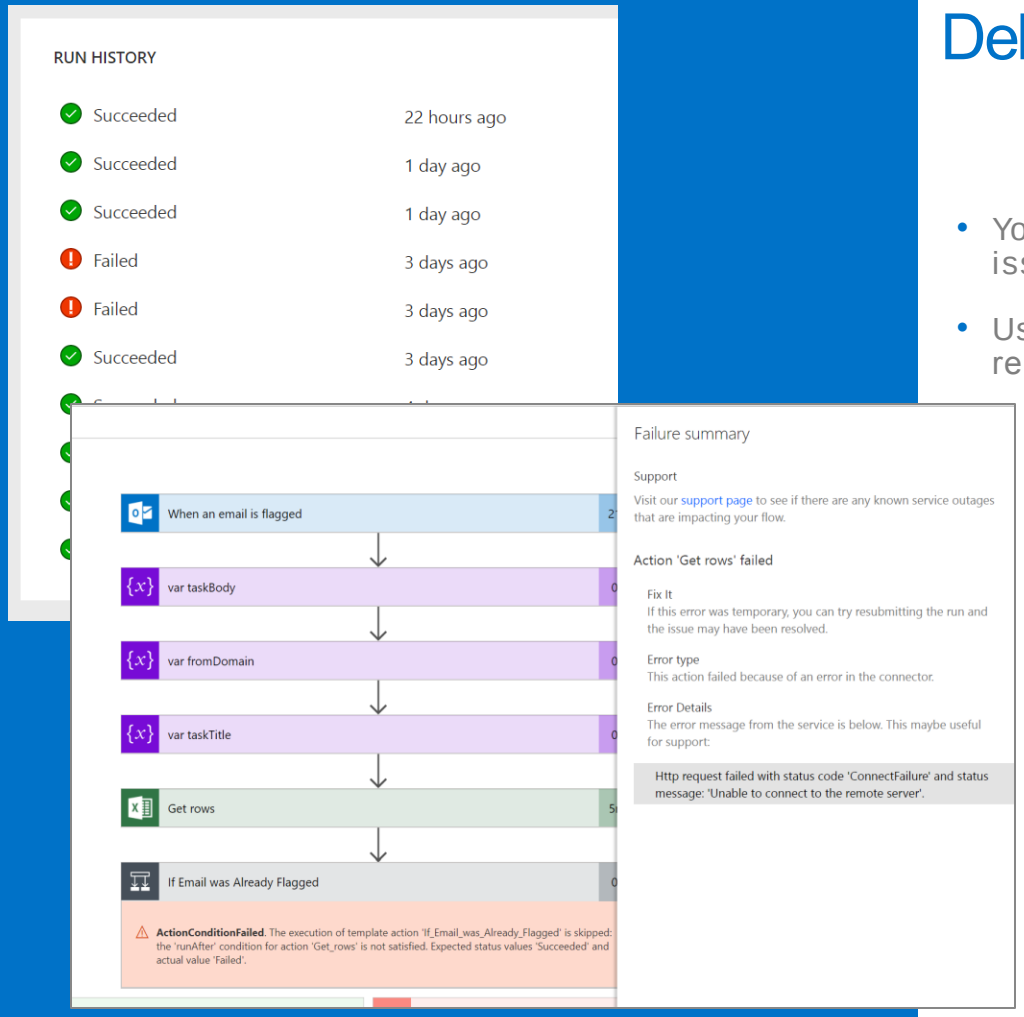
Incoming Webhooks vs Posting

- Consider other methods of posting, i.e. to posting Teams
- Services that offer incoming webhooks will provide richer capabilities when posting.

- More at https://davidlozzi.com/2018/03/01/posting-to-teams-incoming-webhook-verses-teams-post-message-in-flow/



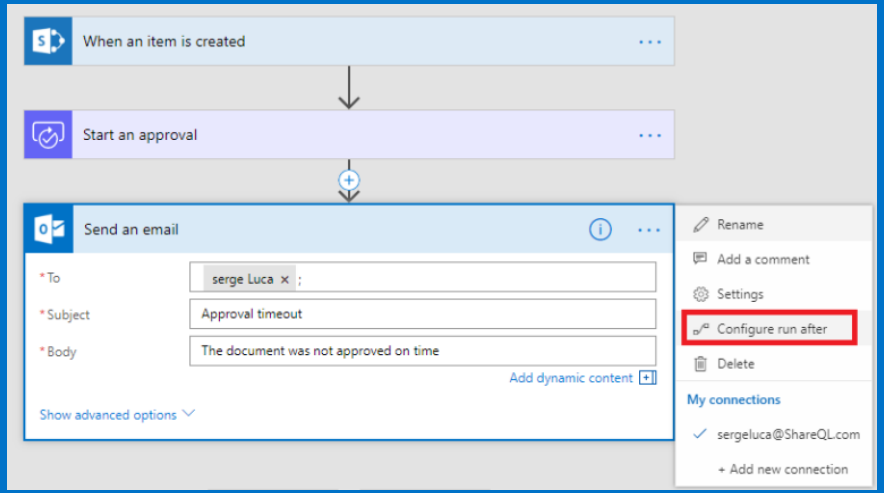
Debugging

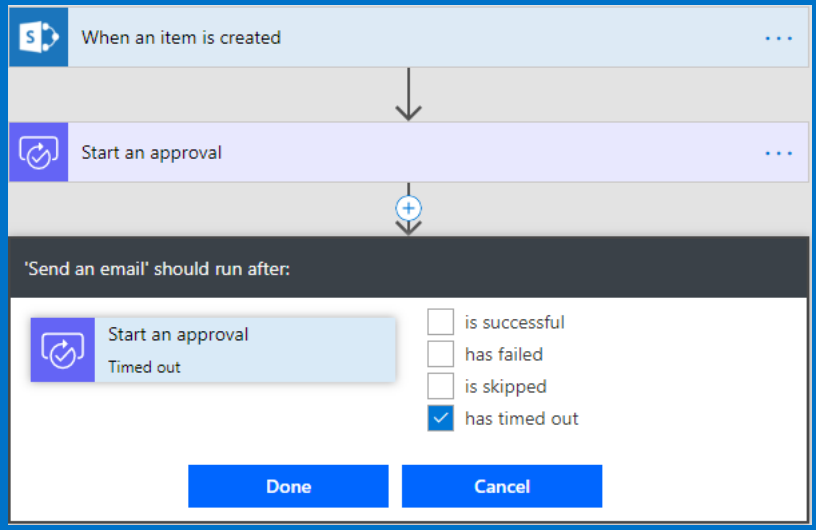


- You get great detail in the run history to help debug issues.
- Use notifications actions to test data and steps, then remove once you're happy.

Error Handling

- Set your actions to run only when something bad has happened
- More at https://sergeluca.wordpress.com/2018/03/12/pattern-for-microsoft-flow-error-handling/





Administration

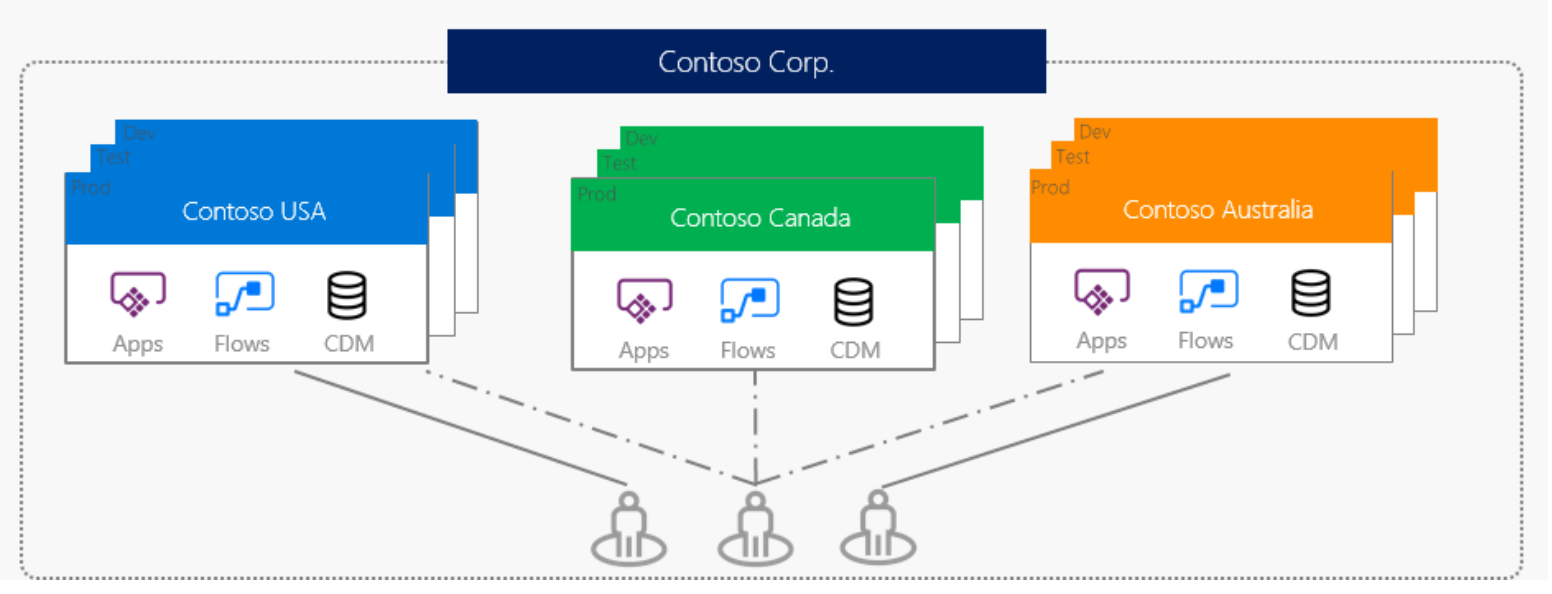
slalom

Environments

Environment is a space to store your organization's flows, apps, and business data

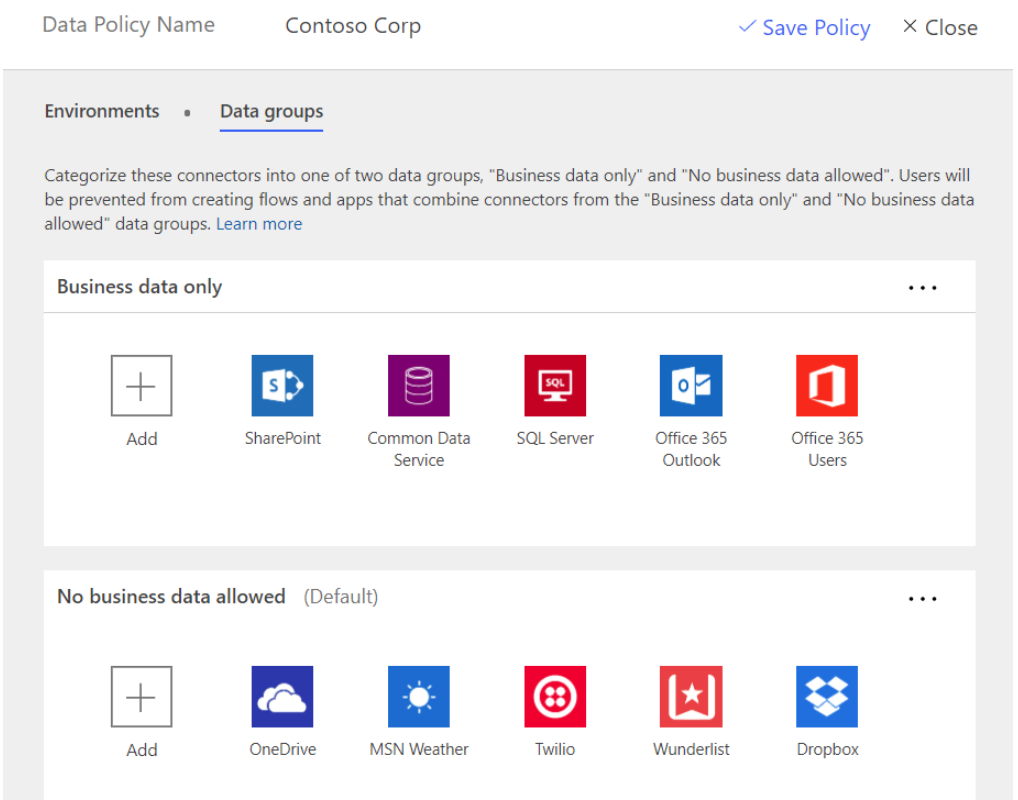
Used to separate flows and apps that have different roles, security requirements, or target audiences

Move solutions across environments using packages



Admin Center

- Environment administration
  - Lifecycle and management for all resources
  - View, delete/suspend, and add as co-owner
  - Manages roles and role membership
  - View license and quota consumption
- Data Loss Prevention
  - Provide IT-administrators with full control of how data within an organization moves
  - Set policies for classification of services
- Audit Logs in the O365 Security and Compliance Center



Pricing and Licensing - PowerApps

	PowerApps for Office 365 & Dynamics 365	PowerApps Plan 1 $7/user/month	PowerApps Plan 2 $40/user/month
Flows run per month per user	2,000	4,500	15,000
Connect to Office 365 and Dynamics 365 services	✓	✓	✓
Connect to cloud-based services like Azure SQL, Dropbox, Twitter & More!	✓	✓	✓
Use premium connectors like Salesforce, DB2 & More!		✓	✓
Automate workflows	Includes Flow for Office 365 and Dynamics 365	Includes Flow Plan 1	Includes Flow Plan 2
Use Common Data Service		✓	✓
Create environments			✓
Establish company policies regarding the usage of different connections and apps			✓

ref: https://powerapps.microsoft.com/en-us/pricing/

Pricing and Licensing - Flow

	Flow Free	Flow for Office 365 & Dynamics 365	Flow Plan 1 $5/user/month	Flow Plan 2 $15/user/month
Unlimited automated flows				
Maximum number of runs per month	750	2,000	4,500	15,000
Maximum flow frequency	15 minutes	5 minutes	3 minutes	1 minute
Connect to Office 365 and Dynamics 365 services				
Connect to cloud-based services like Azure SQL, Dropbox, Twitter & More!				
Use premium connectors like Salesforce, DB2 & More!				
Create environments				
Establish company policies regarding the usage of different connections and apps				

ref: https://us.flow.microsoft.com/en-us/pricing/

In closing…

slalom

It’s about **automation** and **ease of use** streamlining **you**

Resources

- Microsoft PowerApps
  - https://docs.microsoft.com/en-us/powerapps/
- Microsoft Flow
  - https://docs.microsoft.com/en-us/flow/
- Microsoft Power Users – PowerBI, PowerApps, Flow, Stream
  - https://powerusers.microsoft.com/
- Microsoft Flows on DavidLozzi.com
  - https://davidlozzi.com/microsoft-flow/
- Microsoft Tech Community – blogs, forums
  - https://techcommunity.microsoft.com/
- Friday Functions series on YouTube:
  - https://www.youtube.com/playlist?list=PLnFZgEkUYL03vyWro12HGW6xRtNToIQIc
- Microsoft Ignite on demand videos
  - https://myignite.microsoft.com/videos
- The key differences between InfoPath and PowerApps
  - https://collab365.community/infopath-vs-powerapps-differences/

David Lozzi
david.lozzi@slalom.com
@DavidLozzi

slalom