

#CollabDaysBE

Understanding M365 Surfaces and Azure Services

Edin Kapić | @ekapic



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Platinum



Gold



Silver



SharePint



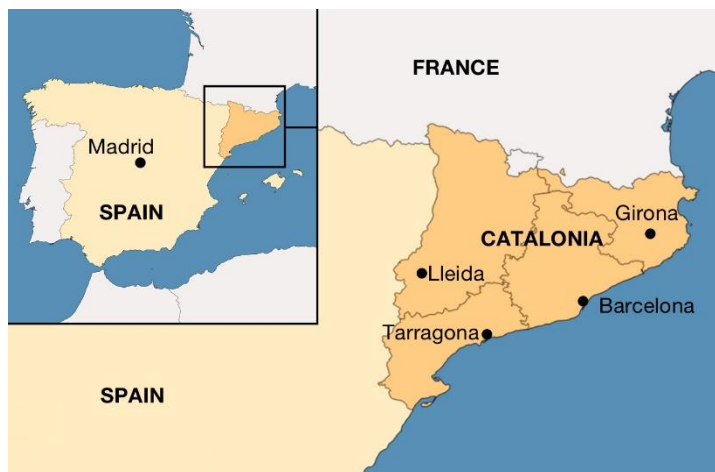
Community



Organized by



About me



What will
you learn
today?

What extensibility options
are there in M365?

What are the pros/cons of
each of them?

What Azure services do
you need for them?

Extend Microsoft 365 experiences



Documents



Conversations



Portals



Timeline



Search

Build your experience



Web apps



Bots & agents



Device & native



Daemon apps



Workflow automation



Analytics apps

Microsoft Graph API



Microsoft 365



Users



Chats



Files



Devices



Mail



Alerts



Events



Security




Search



Events





In the
beginning
there was
SharePoint...



Web parts

- Configurable UI “widgets”

My Office 365 Groups

T Test

T TestProvisioning

H Hub

TS Test Site 3

C Copy

C CalibrationTracker

- Azure Storage / CDN for deployment
- Azure Web applications or Functions for custom logic


react-my-groups


Description

Group Name

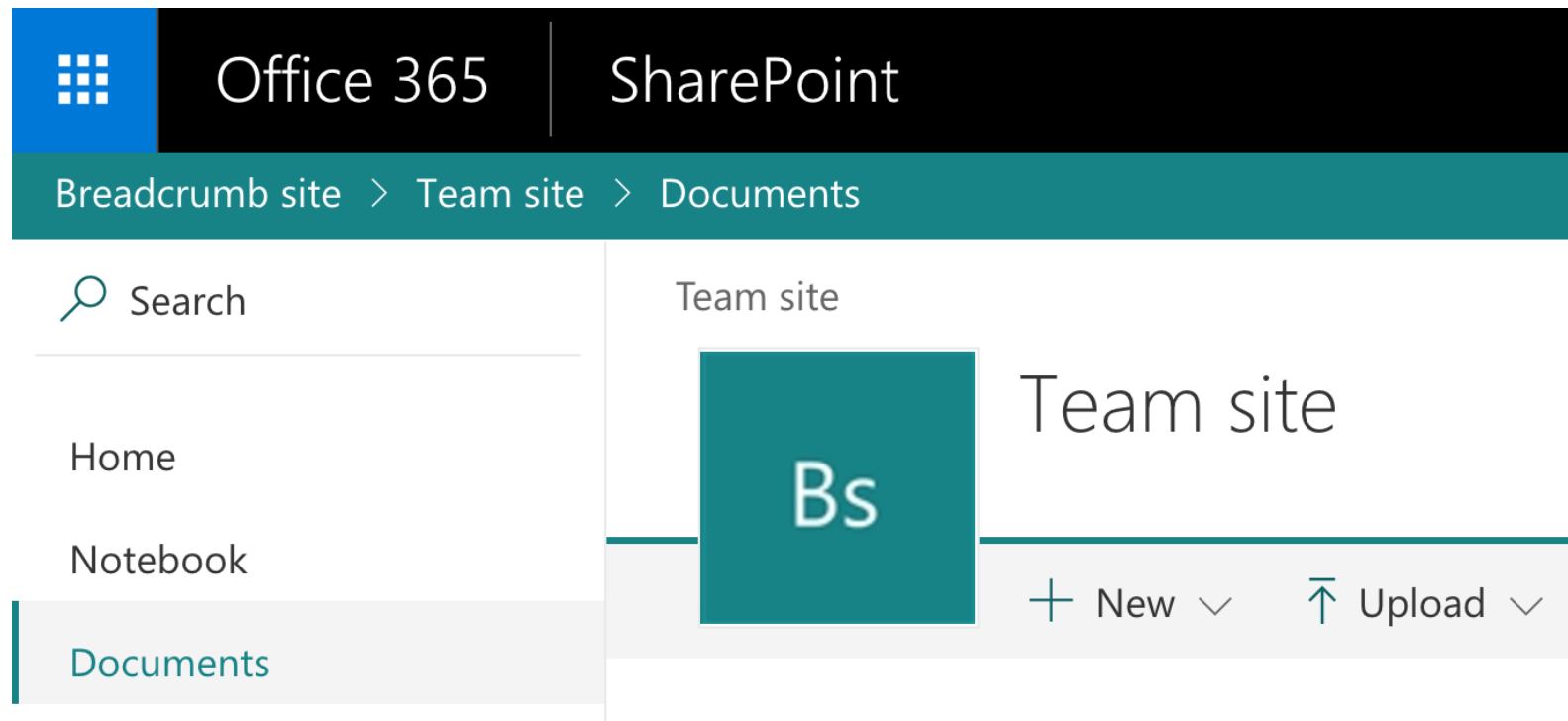
Title

Layout Option


Grid


Compact

Extensions: Header/Footer customizer



Extensions: Command set

Edit in grid view

Open

Share

Copy link

Download

Delete

Pin to top

Rename

Download as PDF

Convert to PDF

...

1 selected

All Documents

Documents

Name

Modified




Modified By

+ Add column

<div><div></div><div></div></div> <div>Document.docx</div> <div><div></div><div></div></div>	33 minutes ago	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>Document.pdf</div> <div><div></div><div></div></div>	A few seconds ago	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>Microsoft Search Desktop Background.png</div> <div><div></div><div></div></div>	October 7, 2020	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>mustang.jpg</div> <div><div></div><div></div></div>	October 7, 2020	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>parker-bg-teal.png</div> <div><div></div><div></div></div>	October 7, 2020	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>parker-search.png</div> <div><div></div><div></div></div>	October 7, 2020	Mikael Svenson (nerd)	
<div><div></div><div></div></div> <div>wall-green-white.jpg</div> <div><div></div><div></div></div>	October 7, 2020	Mikael Svenson (nerd)	

Extensions: Field customizer

Slider Test

Title ▾	Percent ▾	+
First	 30	
Second	 74	
Third	 70	
Fourth		

Recap: Webparts & Extensions

- Similar deployment cycle
 - Versioning
 - Webparts have to be added to a page
 - Extensions run on all pages in a site collection / tenant
-
- Get inspired!
 - <https://github.com/pnp/sp-dev-fx-webparts>
 - <https://github.com/pnp/sp-dev-fx-extensions>



Enter Teams...

March 2017



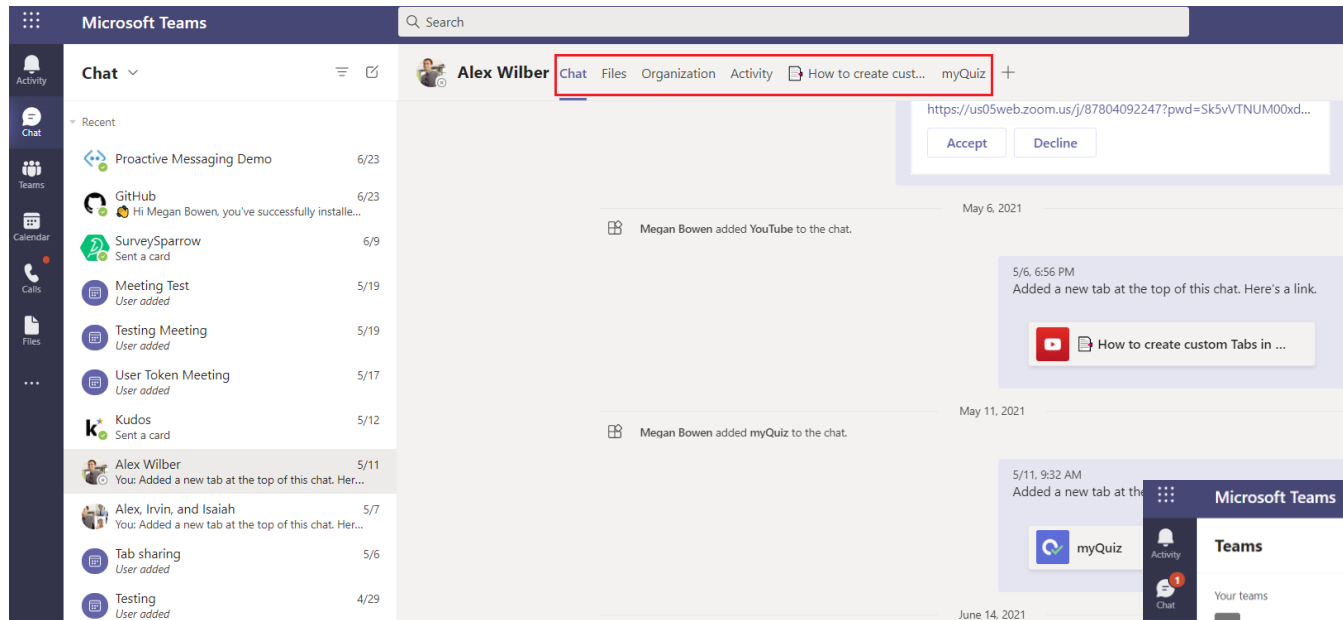
Then Teams came along...

- Tabs
- Message extensions
 - Action commands
 - Search commands
 - Link unfurling
- Bots
- Cards
- Connectors

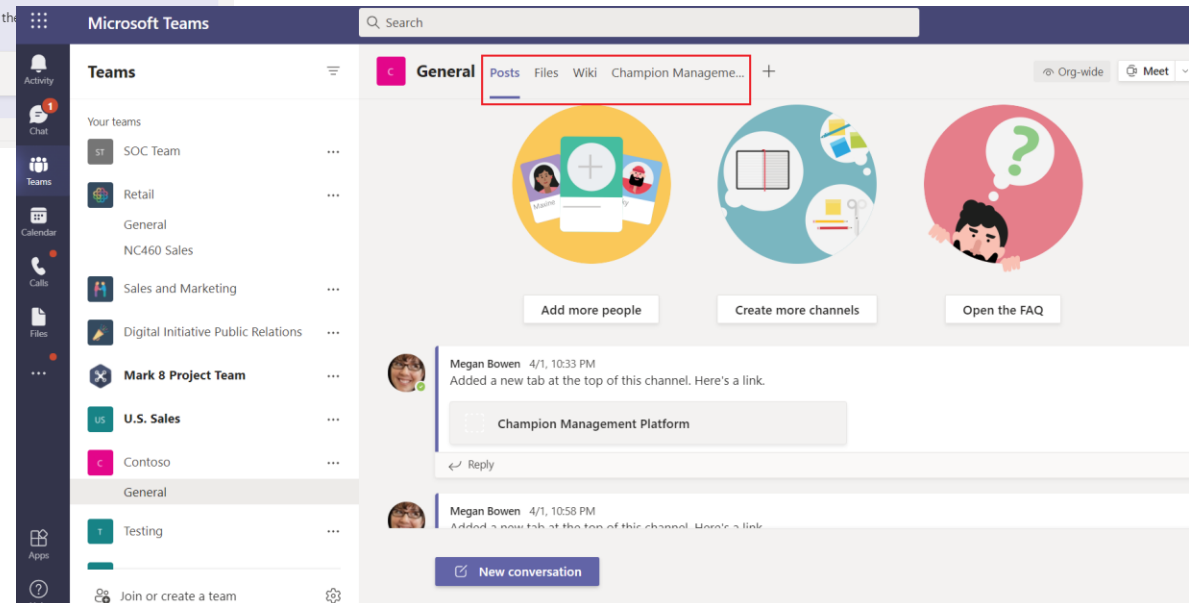


Tabs

Personal tabs

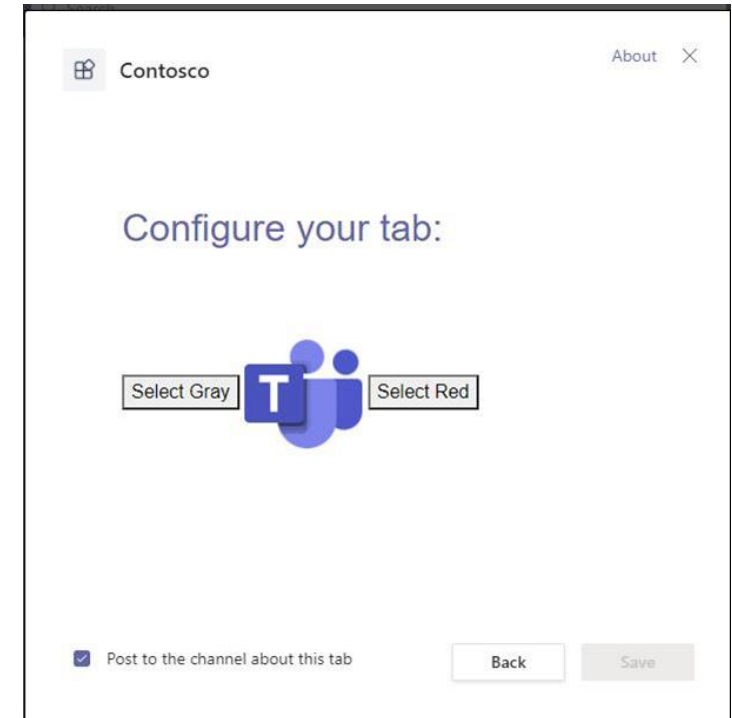


Channel tabs



Tabs in detail

- IFRAME to a content page
 - Specific security settings
- Can interact with Teams context
- Configuration and removal page




Interlude: Adaptive Cards

- JSON format for UI content

Adaptive Card [Try it Yourself >](#)

Publish Adaptive Card Schema

 **Matt Hiding**
Created Tue, Feb 14, 2017

Now that we have defined the main rules and features of the format, we need to produce a schema and publish it to GitHub. The schema will be the starting point of our reference documentation.

Board: Adaptive Cards
List: Backlog
Assigned to: Matt Hiding
Due date: Not set

[Set due date ▾](#) [View](#)

Adaptive Card [Try it Yourself >](#)

Microsoft Corporation
Nasdaq Global Select: MSFT

Fri, May 3, 2019 10:00 PM

128.90
▲ 2.69 USD (2.13%)

Open 127.42
High 129.43
Low 127.25

Adaptive Card [Try it Yourself >](#)

EXPENSE APPROVAL ⚠ Pending

Trip to UAE [EXPORT AS PDF](#)
ER-13052

Submitted By Matt Hiding
matt@contoso.com

Duration 2019-06-19 - 2019-06-21

Submitted On 2019-04-14

Reimbursable Amount \$400.00

Awaiting approval from Thomas thomas@contoso.com

Submitted to David david@contoso.com

DATE	CATEGORY	AMOUNT
06-19	Air Travel Expense	\$300.00 ▾
06-19	Auto Mobile Expense	\$100.00 ▾
06-21	Excess Baggage Cost	\$50.38 ▾

Total Expense Amount \$450.38

Non-reimbursable Amount (-) \$50.38

Advance Amount (-) 0.00

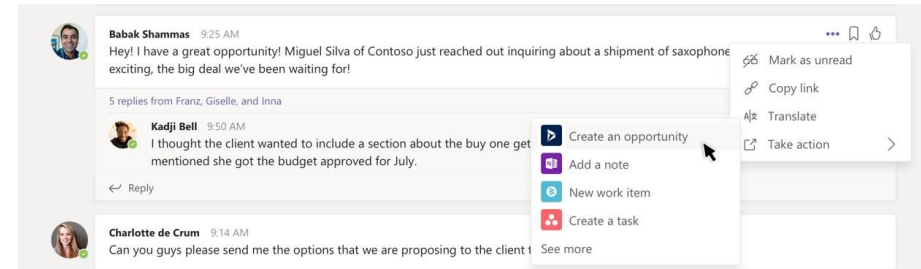
Amount to be Reimbursed \$400.00

[Show history](#)

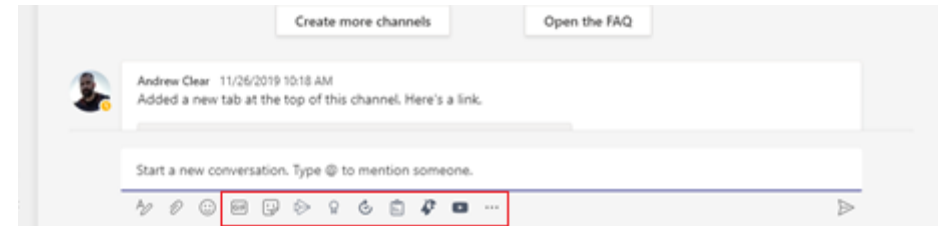
[Approve](#) [Reject ▾](#)

Messaging extensions

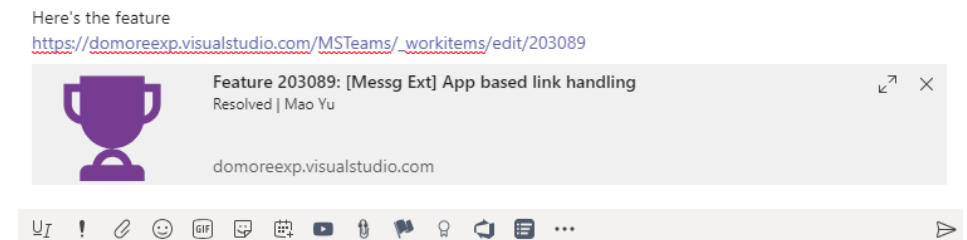
- **Action** commands



- **Search** commands

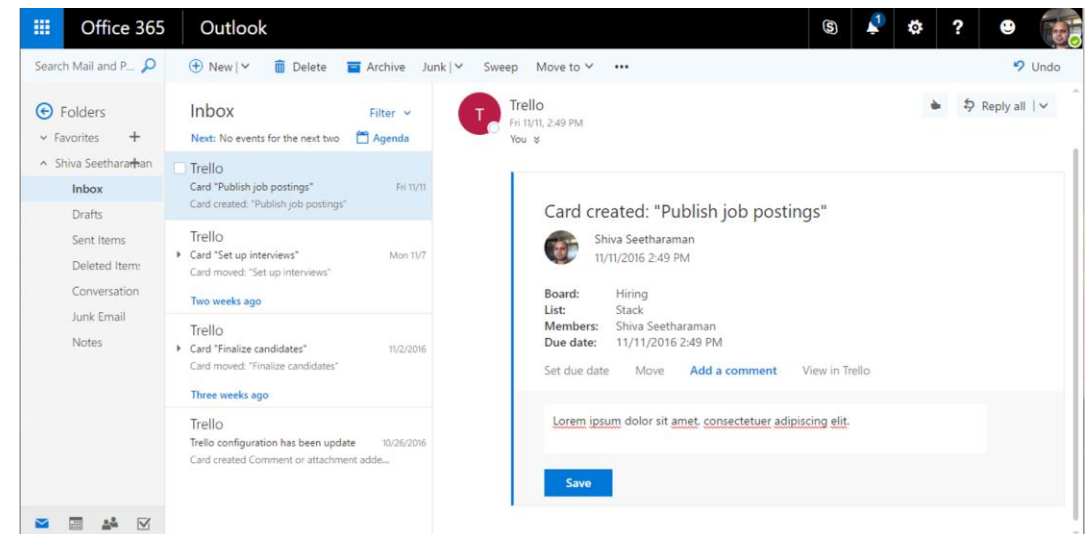
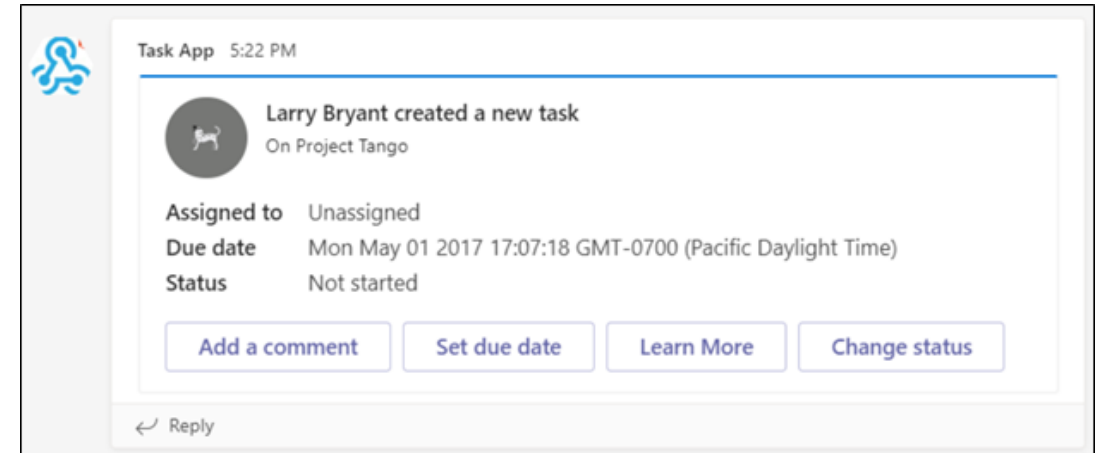


- **Link unfurling**



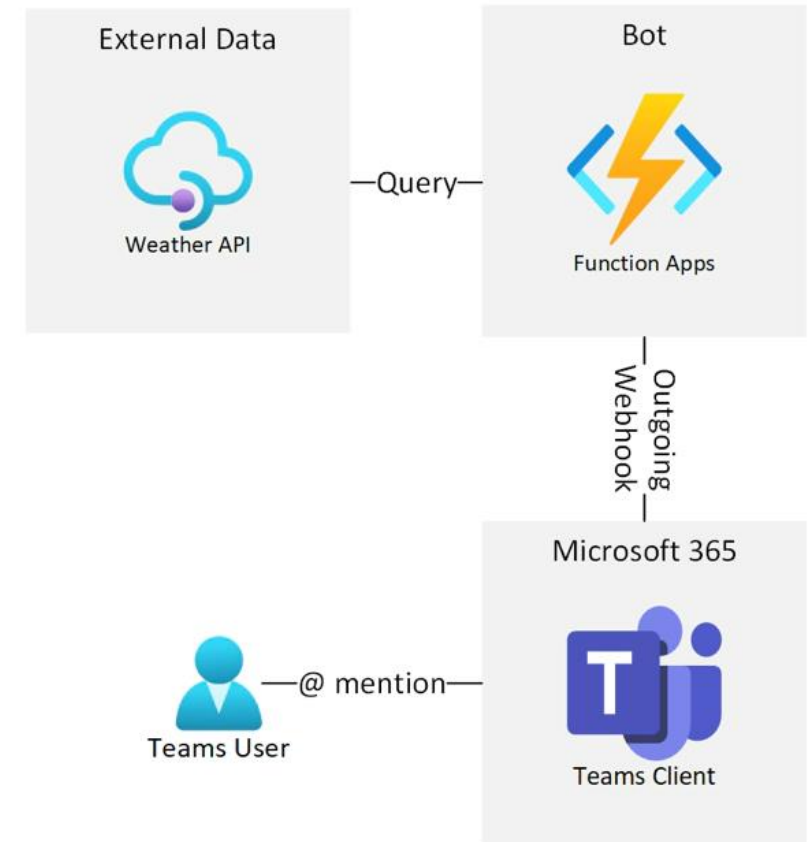
Teams Webhooks and Connectors

- **Teams Webhooks**
 - Incoming (from app to Teams)
 - Outgoing (from Teams to app)
- **Office Connectors**
- Alternative: **Notification Bot**



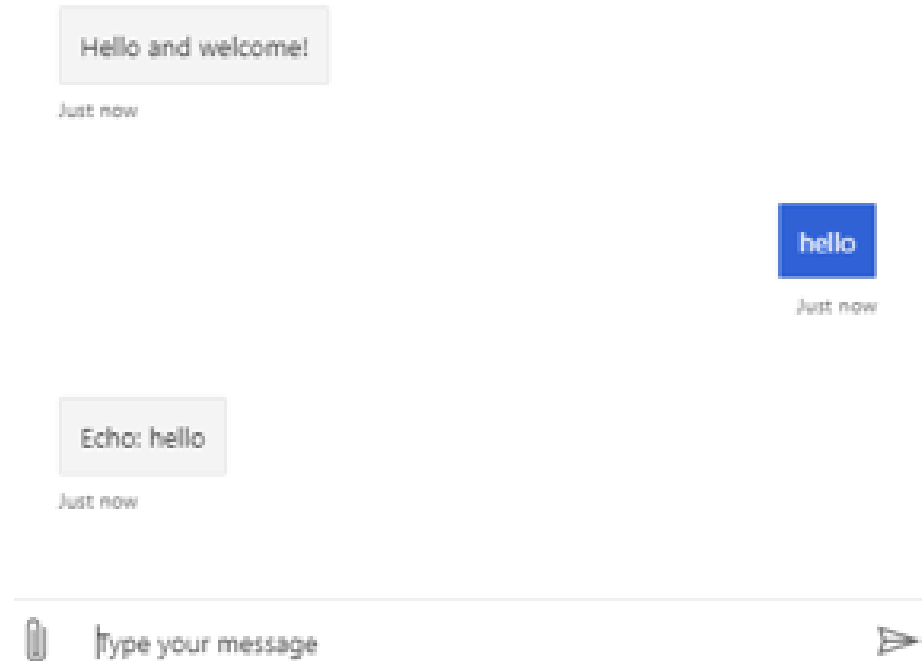
Webhooks / Connectors Azure resources

- Azure Function apps
 - For simple serverless deployment
 - Can be chained using Durable Functions
- For full API control
 - Azure Web apps
 - API apps
- To offload requests
 - Azure Storage queues
 - Azure Service Bus



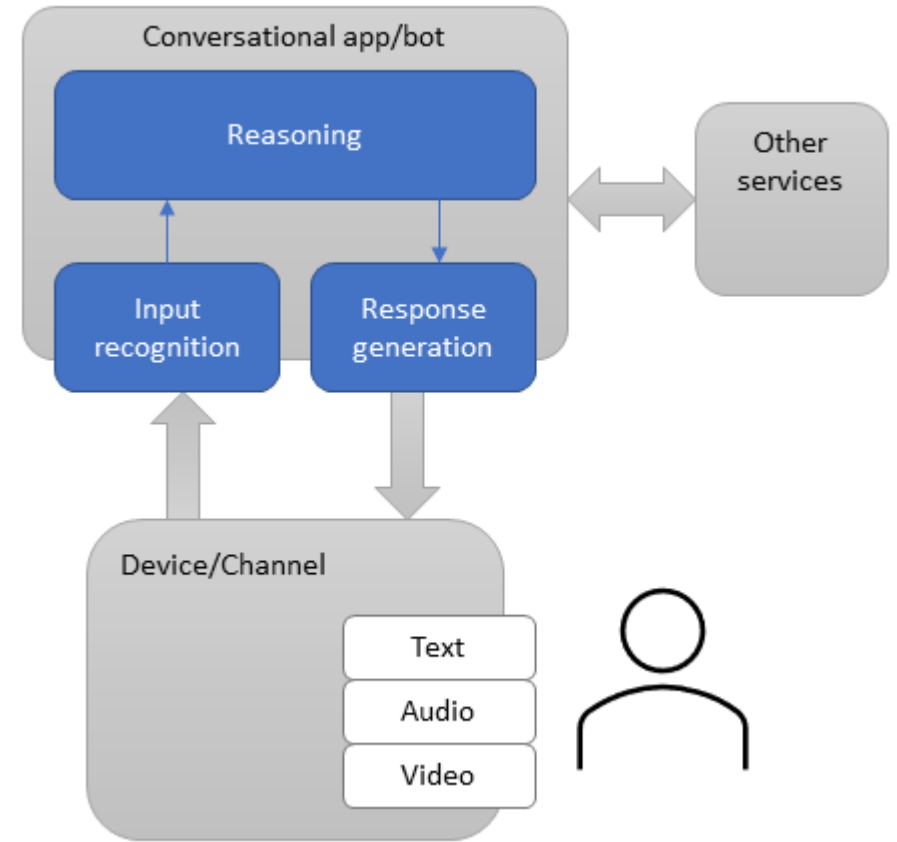
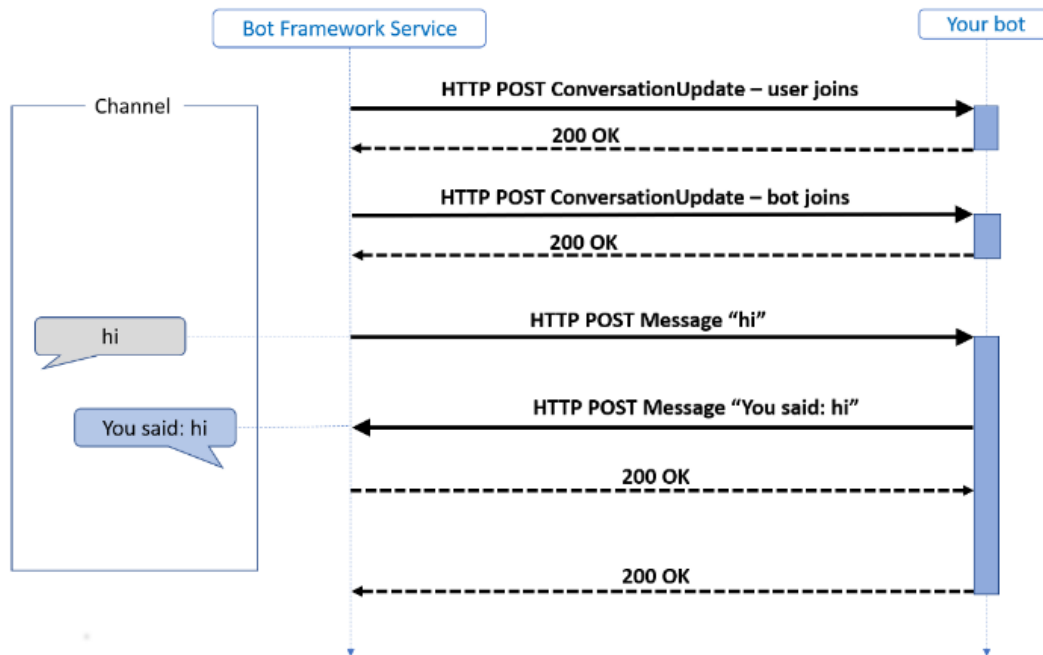
Bots

- **Power Virtual Agents**
- **Bot Composer**
- **Bot Framework**



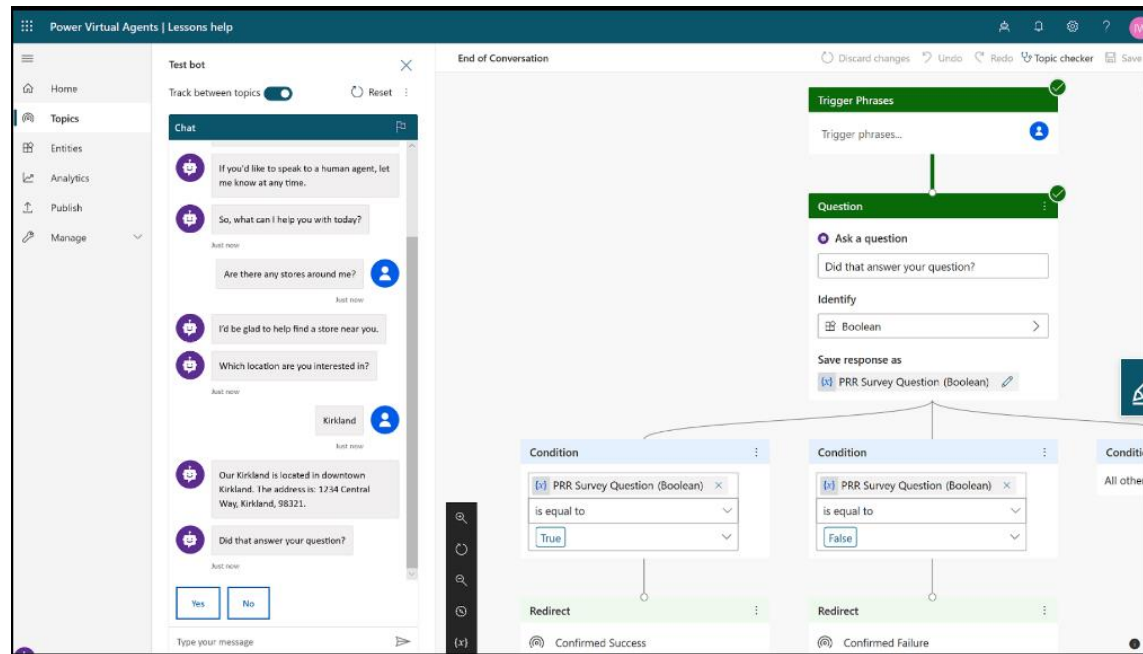
Bot architecture

- State machine with transitions

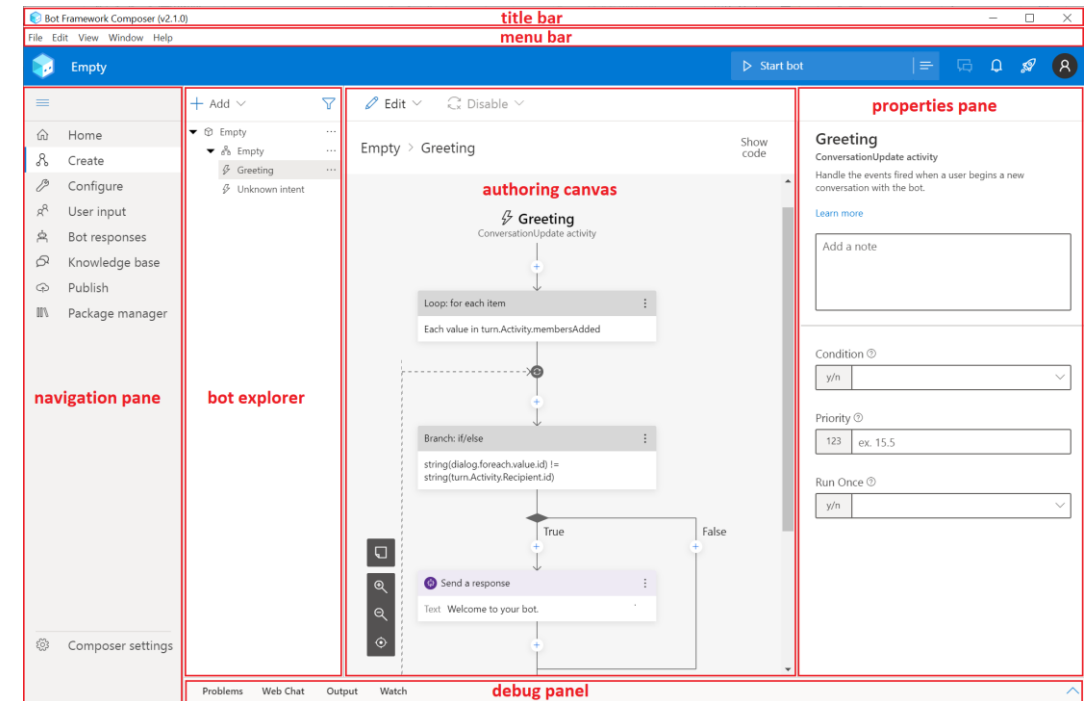


Bot composers

- Power Virtual Agents editor



- Bot framework composer








Bots Azure resources

- Azure Bot Service
- Azure Storage Service
- Azure App Service
- Azure Functions
- Azure Cognitive Services
 - LUIS

Publish your bots

Publish Publishing Profile

Bot ↓	Publish target	Date	Status	Message
<input checked="" type="checkbox"/> botazure	botazureprofile	04-25-2021	✓	Success

<input type="checkbox"/> Name ↑↓	Type ↑↓	Location ↑↓
<input type="checkbox"/>  luis-bot-02	Azure Bot	Global
<input type="checkbox"/>  luis-bot-02	App Service plan	West US
<input type="checkbox"/>  luis-bot-02	App Service	West US
<input type="checkbox"/>  luis-bot-02-luis	Cognitive Services	West US
<input type="checkbox"/>  luis-bot-02-luis-authoring	Cognitive Services	West US



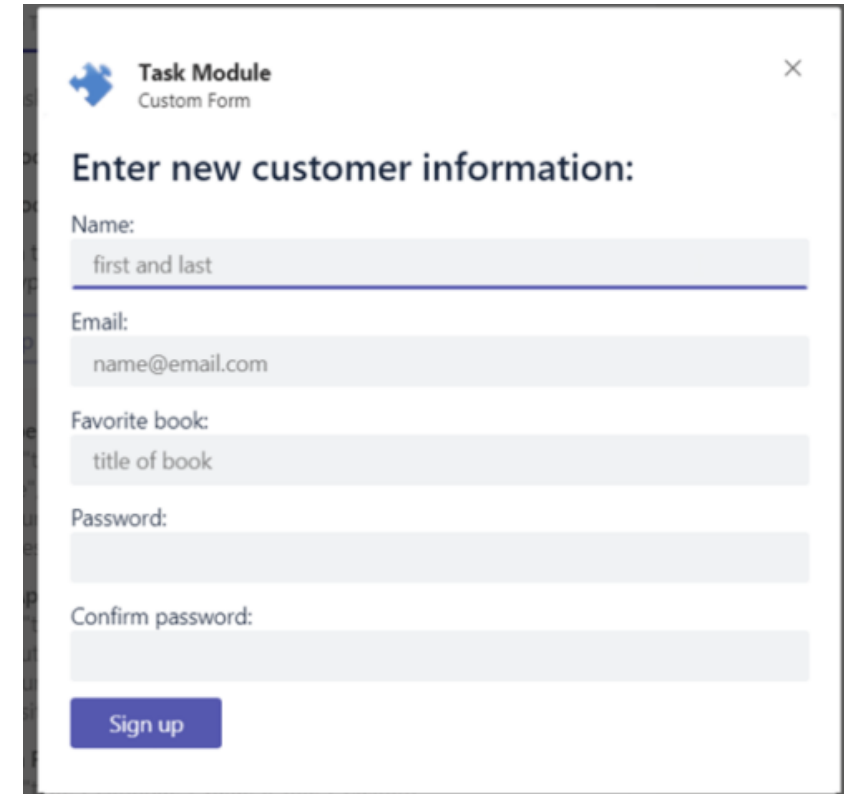
Last but not the least...

Assorted M365 surfaces



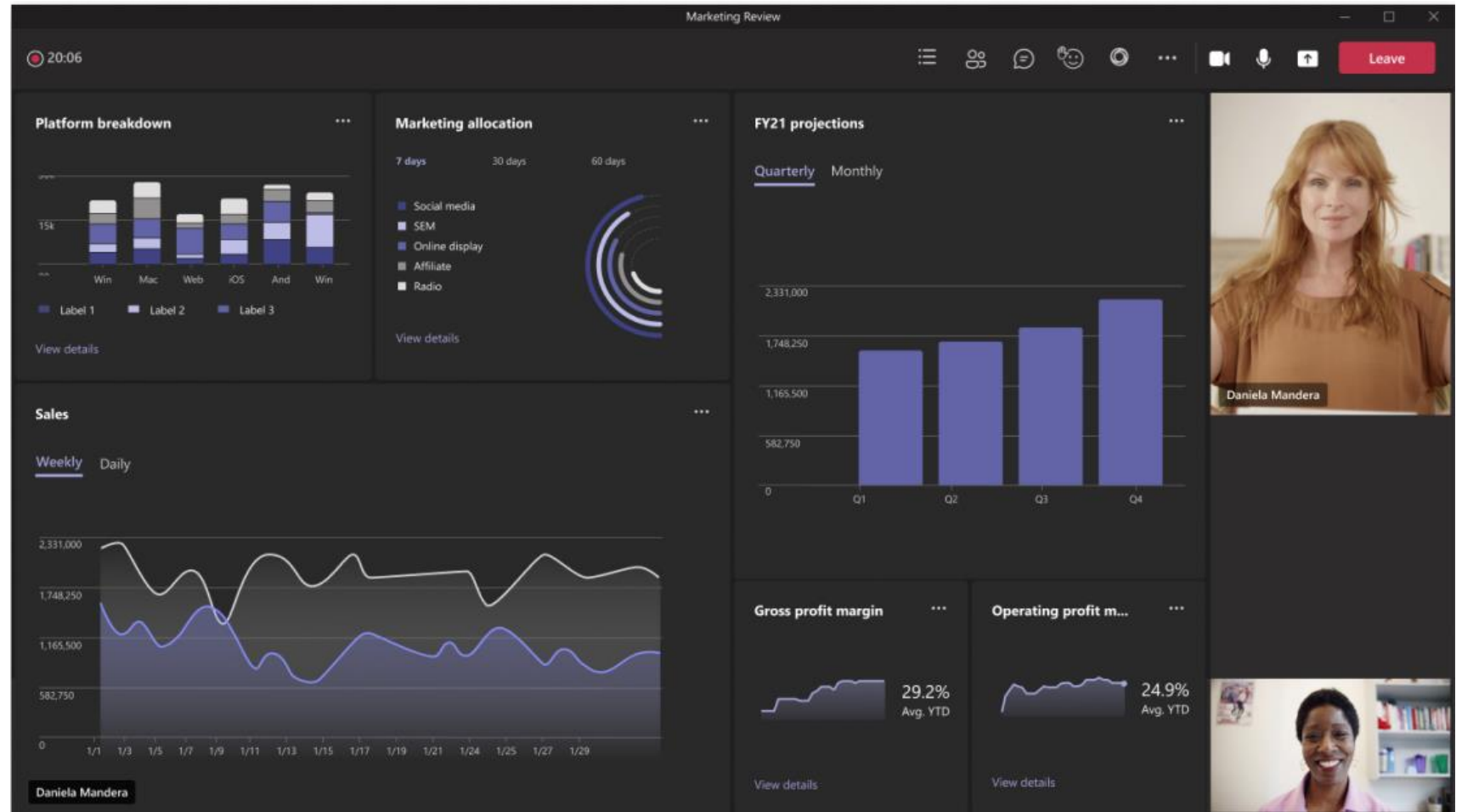
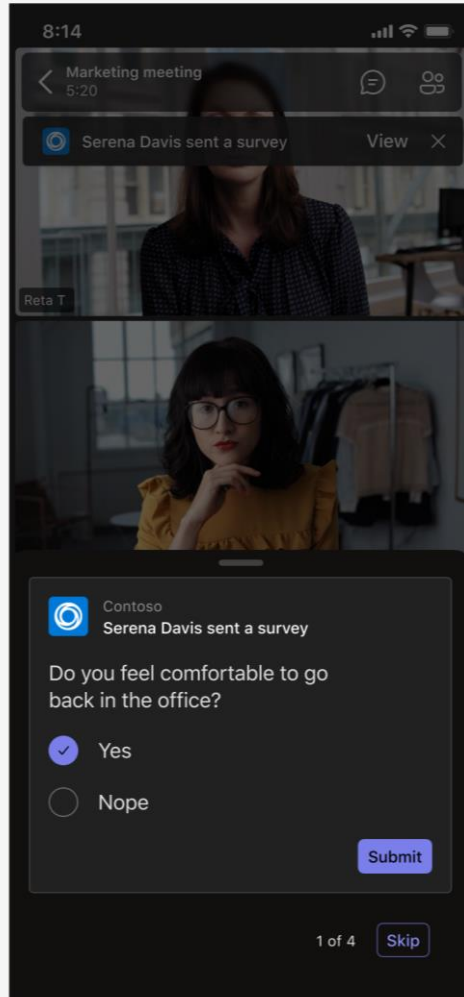
Teams Task Modules

- Dialogs for data input in workflows
- Can contain custom JS code
- Can interact with bots



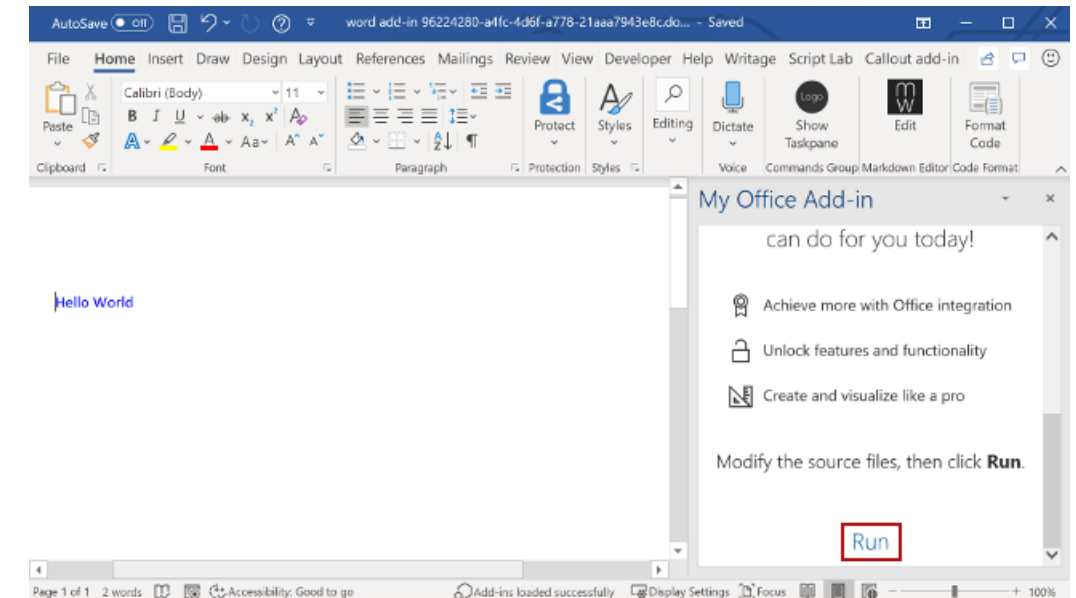
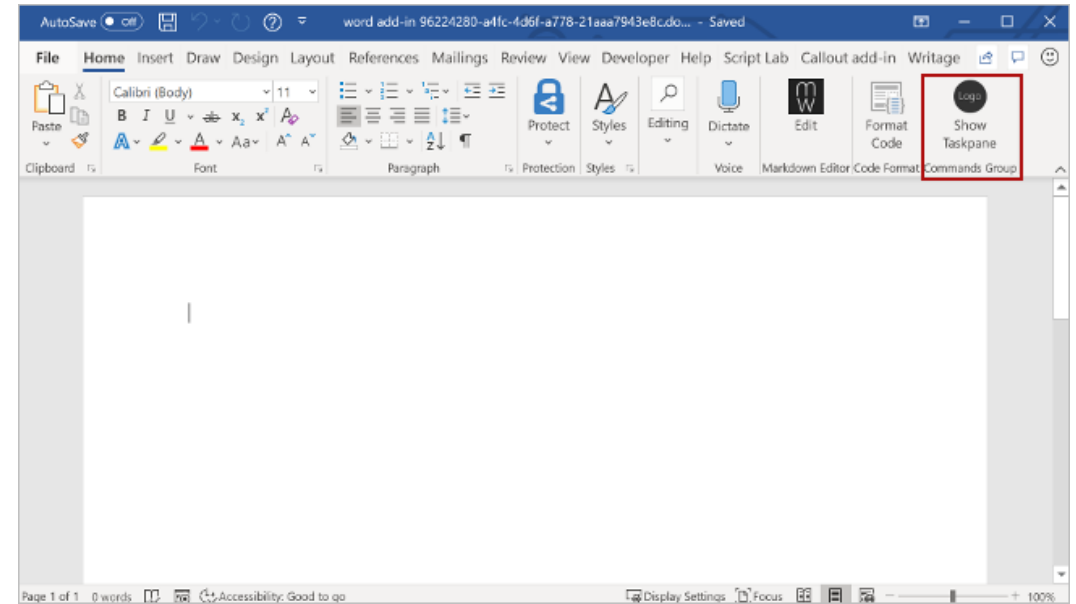
The image shows a screenshot of a Teams Task Module dialog box. The dialog has a title bar with a blue puzzle piece icon, the text 'Task Module', and 'Custom Form'. Below the title bar, the main heading is 'Enter new customer information:'. There are five input fields: 'Name:' with the placeholder 'first and last', 'Email:' with the placeholder 'name@email.com', 'Favorite book:' with the placeholder 'title of book', 'Password:', and 'Confirm password:'. At the bottom, there is a blue 'Sign up' button.

Teams Meeting extensions



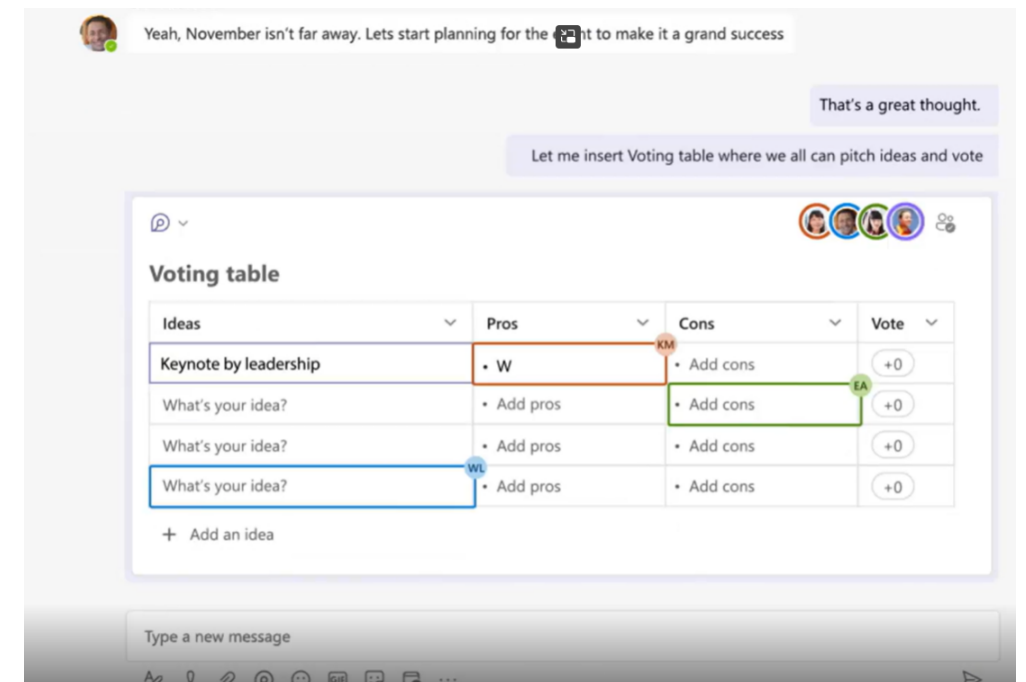
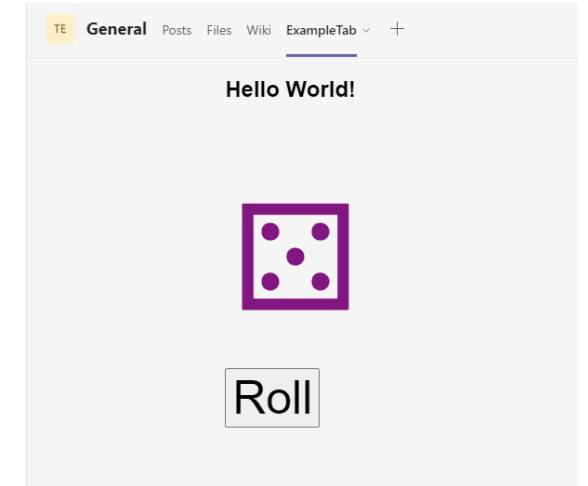
Office Add-ins

- Client-side code
- Can interact with the app “object” via an API
- Supported apps:
 - Word
 - Excel
 - Outlook



Fluid Framework / Loop

- Synchronized UI components
- Shared state of all instances
- Exposed in Teams and Outlook UI via Loop components
- Azure Fluid Relay service



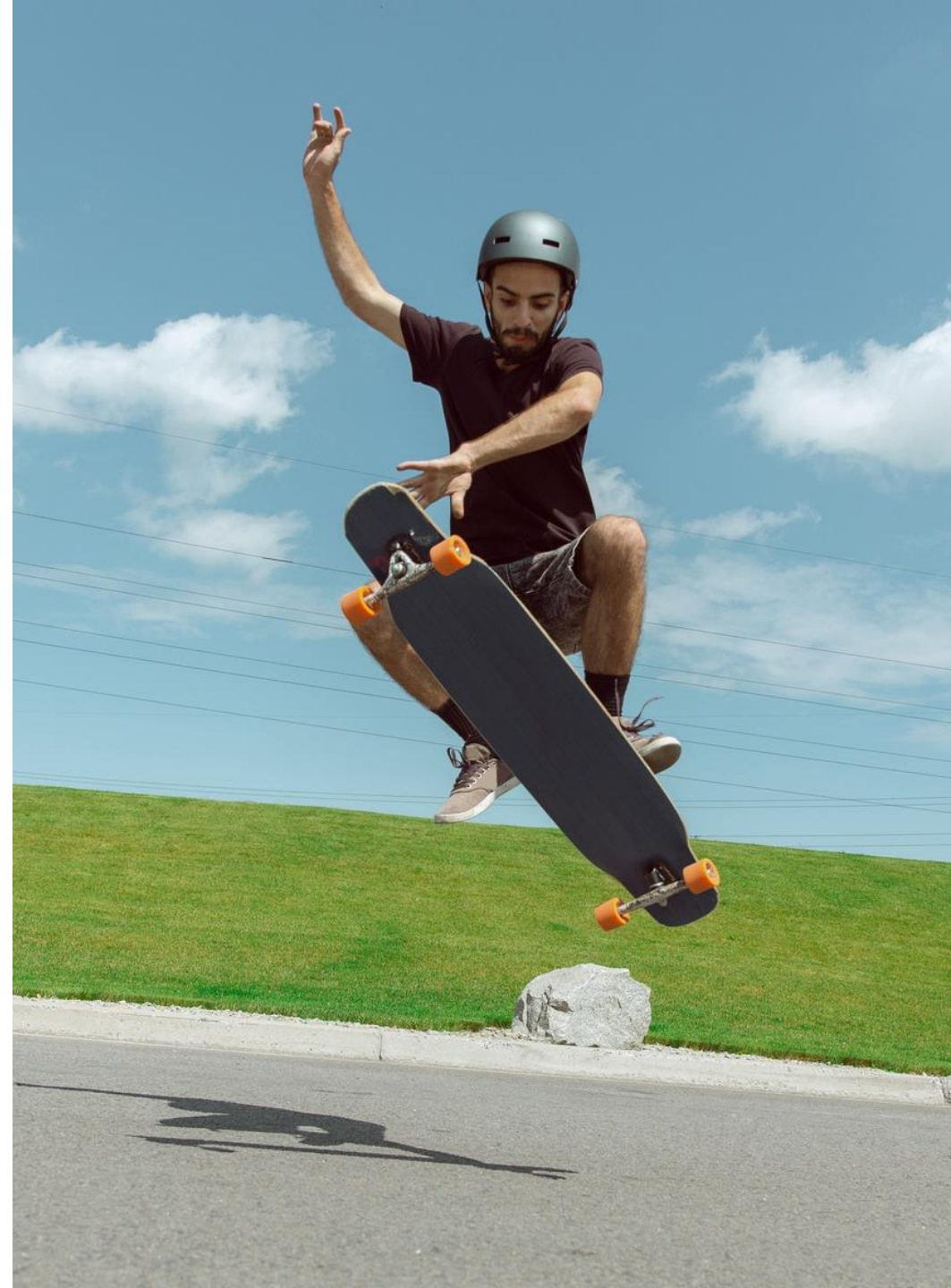


Summary



Best practices for customizing M365

- “Just because you can, doesn’t mean that you should” applies here
- Think value-added scenarios and then find the correct surface for it
- Look for context switches in everyday work and build integrations there



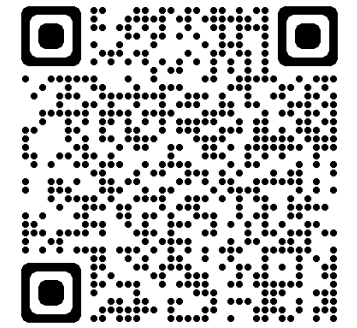
Go build stuff!



COMMUNITY

<https://collabdays.be>

Please rate this session and have a
chance to win an awesome prize



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THANK
YOU

