

# SHAREPOINT AND OFFICE 365 DEVELOPMENT POWERCLASS

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## EUROPEAN COLLABORATION SUMMIT 2019

WIESBADEN/GERMANY, MAY 27-29 2019 [WWW.COLLABSUMMIT.EU](http://WWW.COLLABSUMMIT.EU)

# ♥ DIAMOND AND PLATINUM SPONSORS ♥



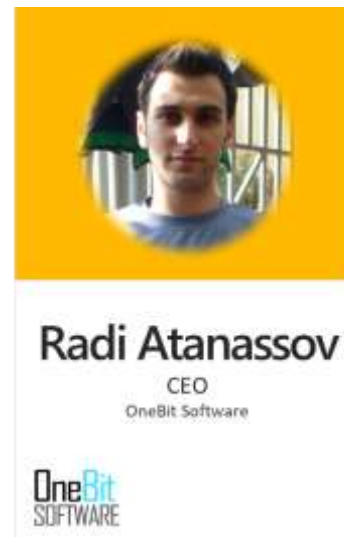
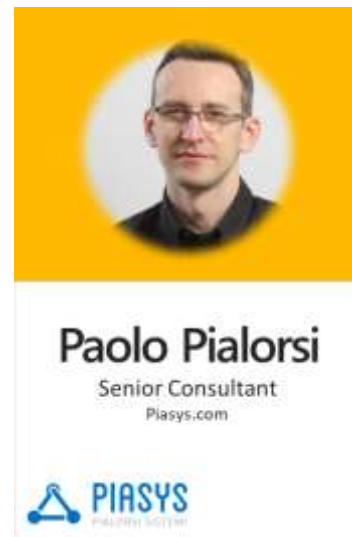
# Agenda for today

- 9:00 – 9:30 – Overview and introductions - Vesa
- 9:30 – 10:30 – SharePoint Framework for solution architects - Vesa
- 10:30 – 11:00 – Break
- 11:00 – 12:00 – Building portals with modern SharePoint experiences - Paolo
- 12:00 – 13:00 – Lunch
- 13:00 – 13:45 – Transforming classic experiences to modern - Bert
- 13:45 – 14:30 – Provisioning SharePoint and Office 365 assets - Erwin
- 14:30 – 15:00 – Break
- 15:00 – 15:30 – Using Azure Functions as your business logic layer - Radi
- 15:30 – 16:15 – View and column formatting - Chris
- 16:15 – 17:00 – Microsoft Graph - Laura

Feel free to ask questions  
during the presentations

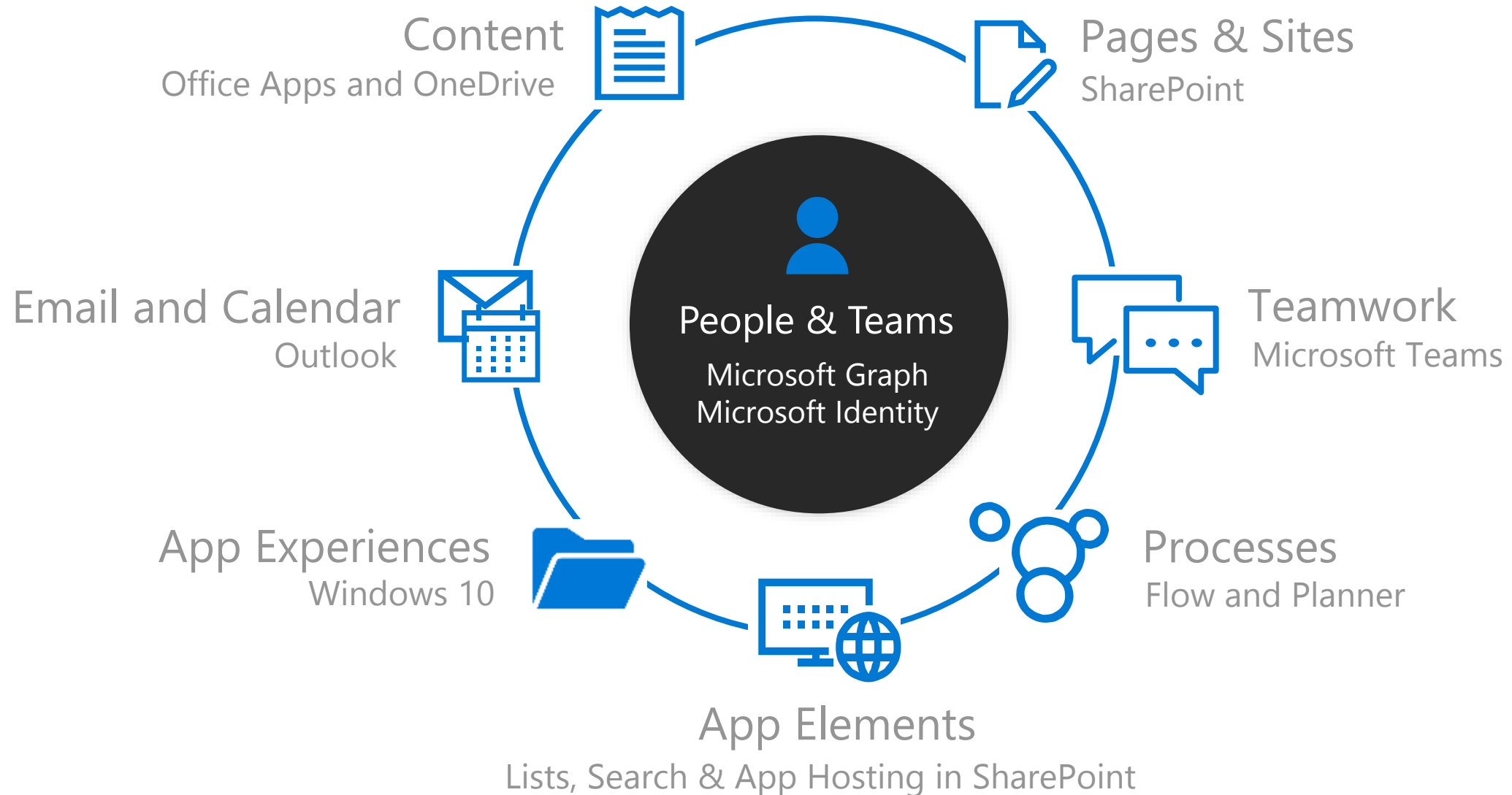


# Your speakers today



**Let's get started...**

# Microsoft 365 App Foundation



# 1 billion

users across work,  
life and edu

# 1 million

monthly active apps  
using Microsoft Identity

# 100 billion

Microsoft Graph  
requests per month



## Microsoft 365



Your tailored  
experiences or  
customizations



# 18 trillion

Microsoft Graph nodes

# 90%

Fortune 500

# 180 million

monthly active users of  
Office 365 commercial

# Microsoft Graph

SPFx  
Extension  
header

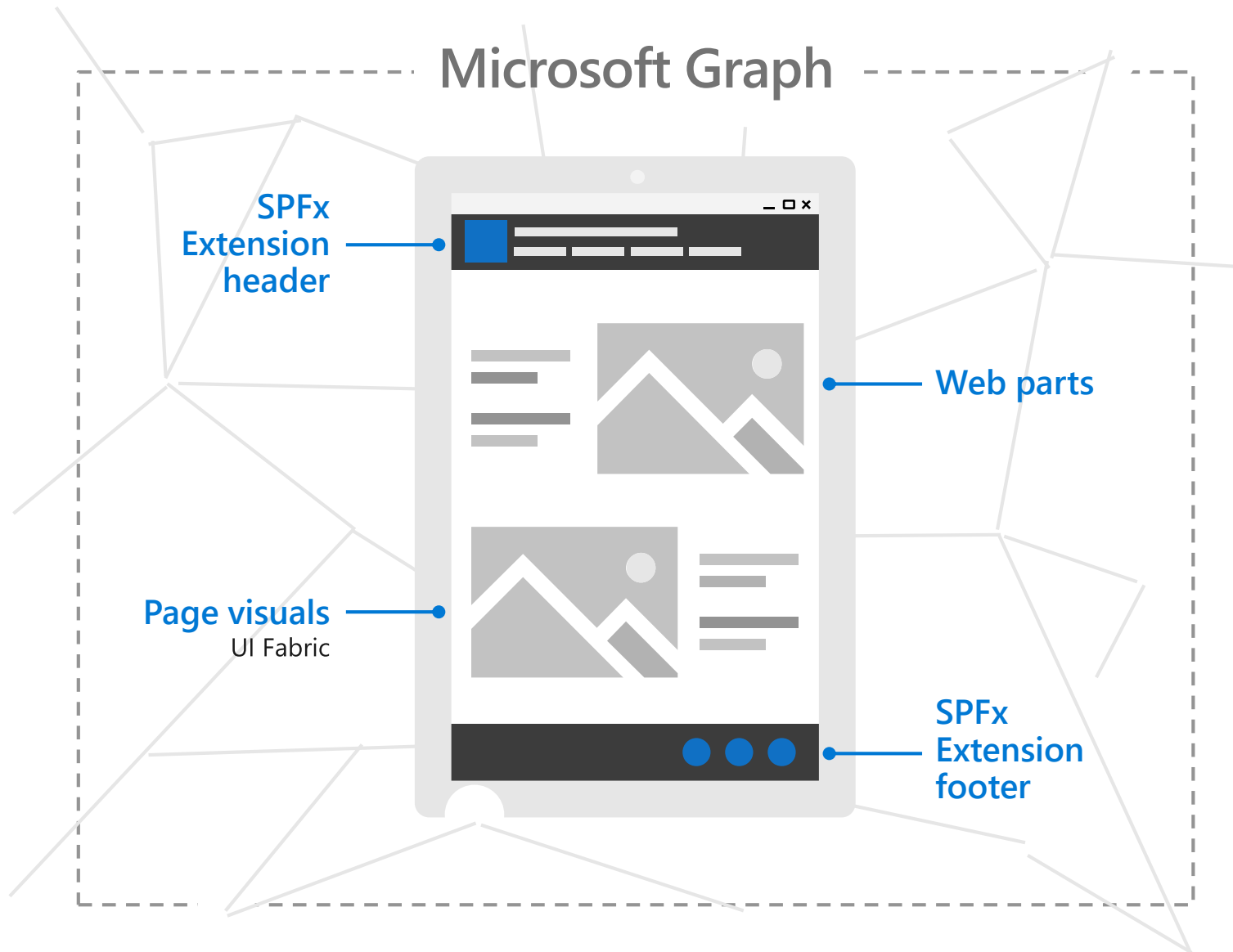
Web parts

Page visuals  
UI Fabric

SPFx  
Extension  
footer





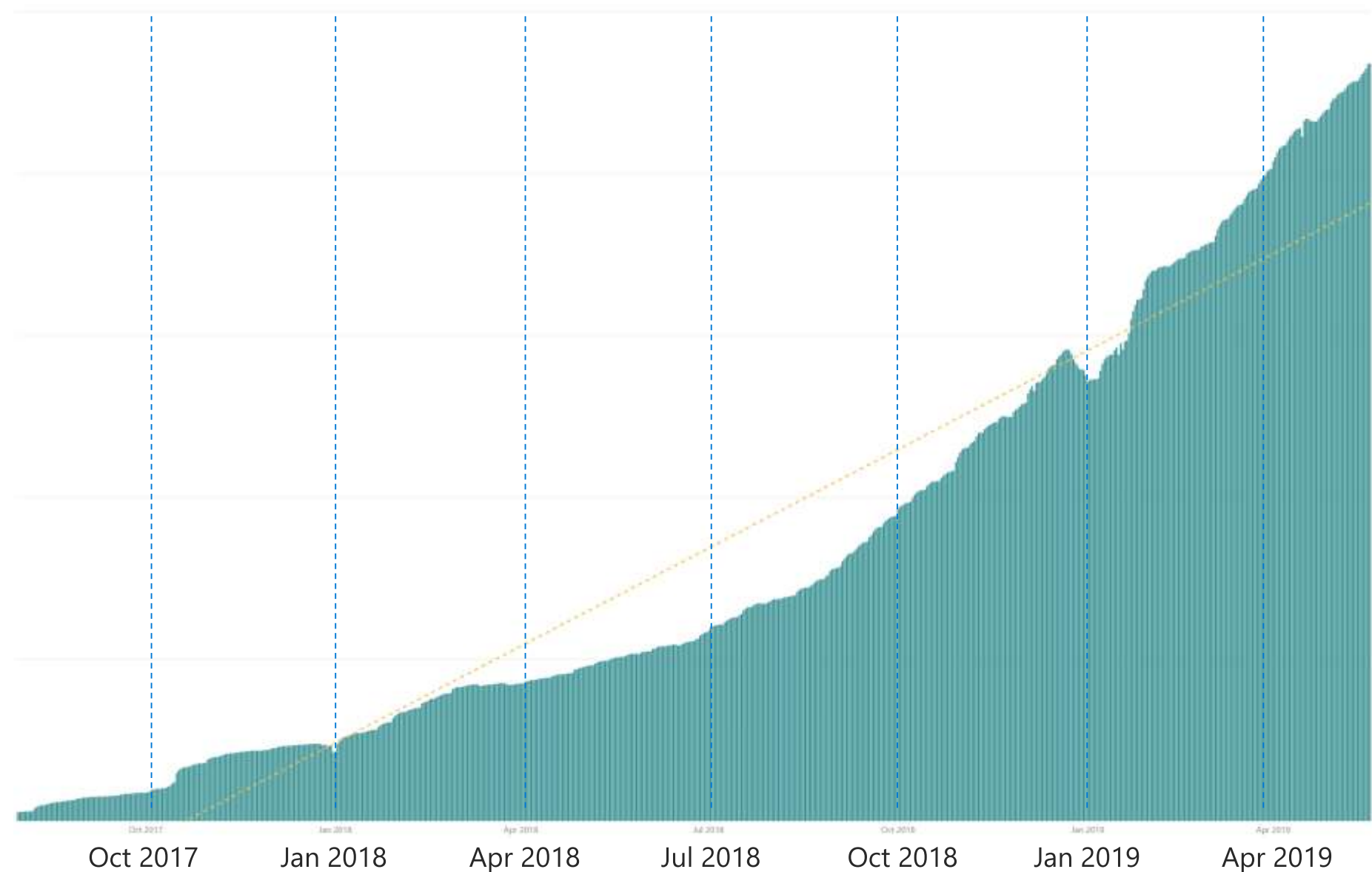


SharePoint  
Framework growth  
**373%**  
usage since last year

---

**10** major SPFx  
updates since GA

# SharePoint Framework usage growth curve



# SharePoint Framework (SPFx)

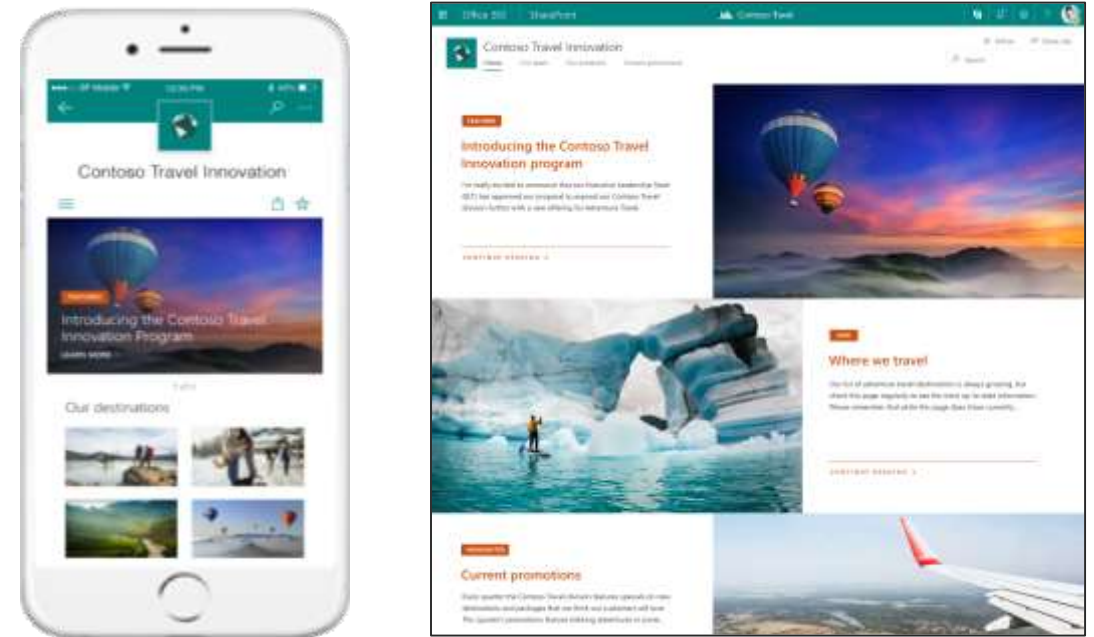
Modern client-side development

Lightweight web and mobile

Powers our own experiences

Backward compatible

Supports open source tools  
and JavaScript web frameworks



SharePoint Framework

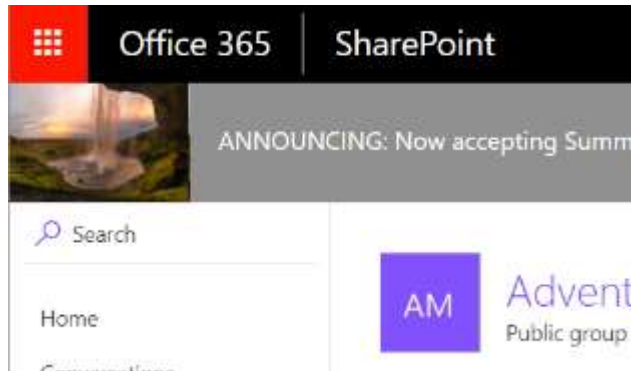
Microsoft Graph

LOB Systems and Cloud Services

# SharePoint Framework (SPFx) Extensions

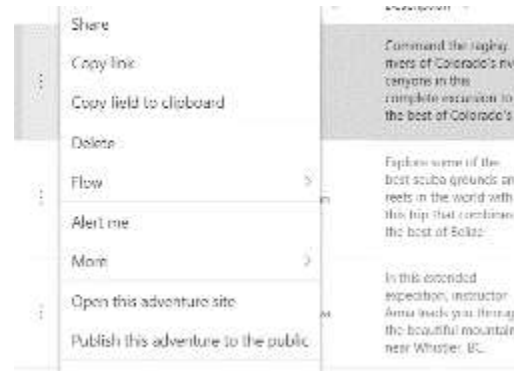
Extend the user experience of SharePoint, leveraging the familiar tools and libraries for client-side development coming from the SharePoint Framework.

## Application customizer



Add script to modern pages  
Adjust top and bottom sections of page with custom renderings

## Command set



Extend the modern list command surface with new actions that run custom code

## Field customizer

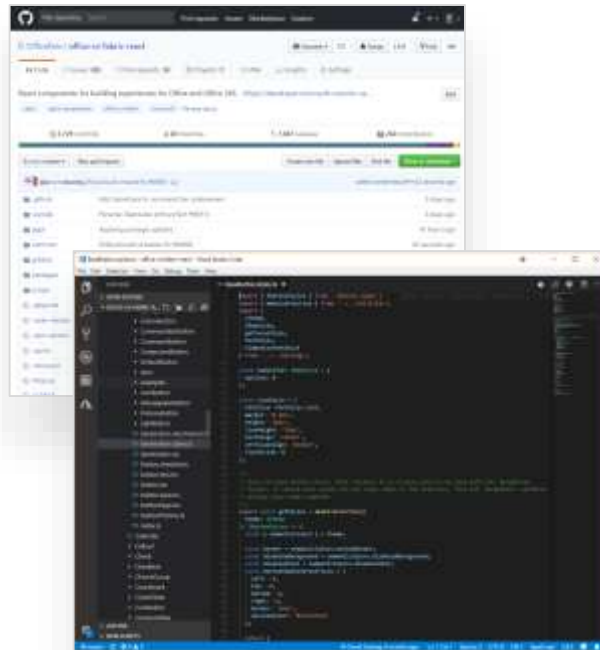


Visualize data inside columns in the list view

# UI Fabric

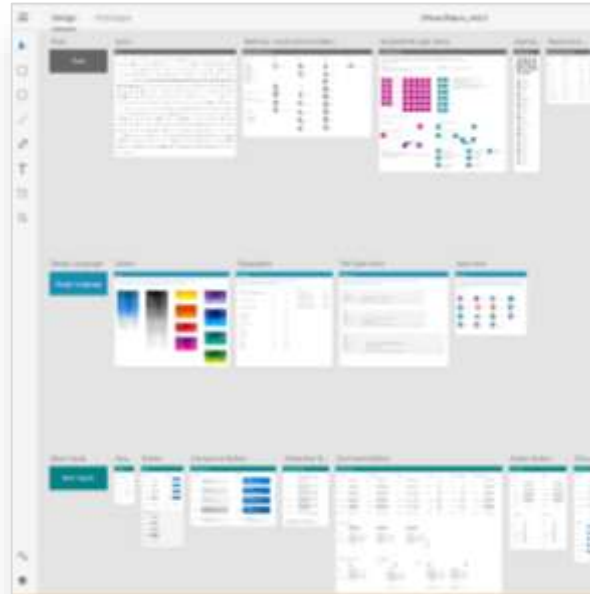
## Code for **Developers**

Fabric Core and Fabric React



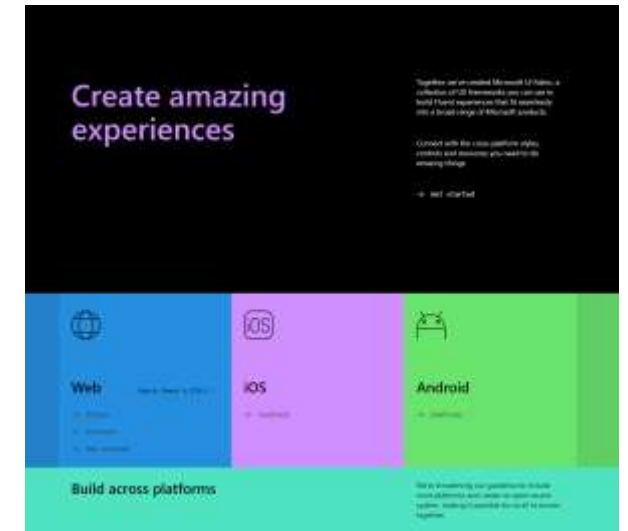
## Toolkits for **Designers**

Sketch/Figma



## Documentation for **Both**

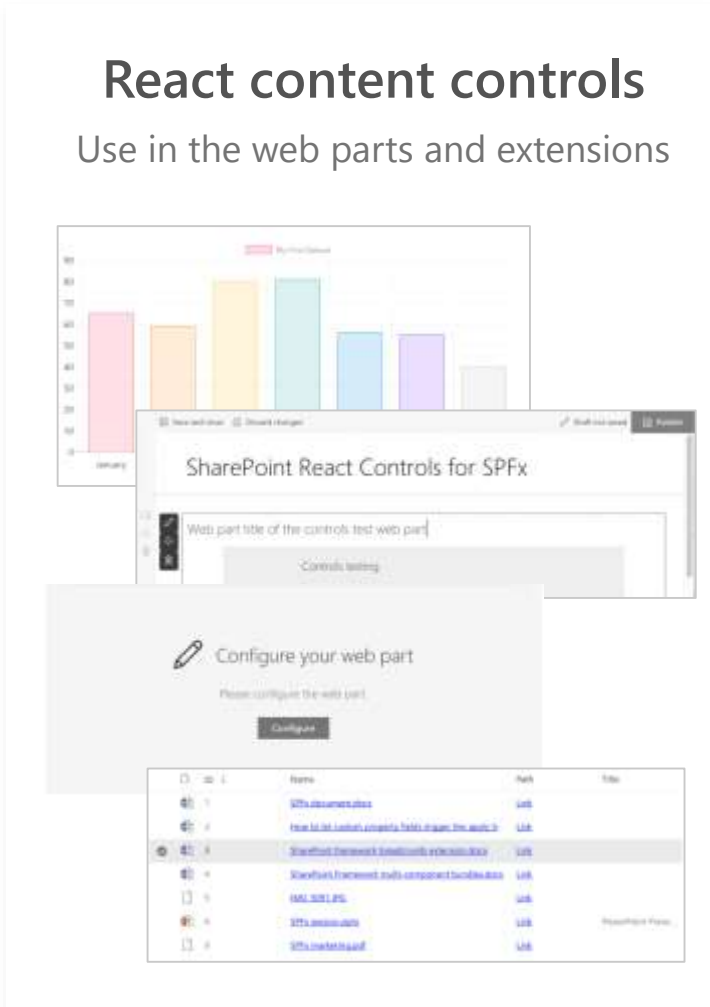
uifabric.io



# PnP SPFx reusable open-source controls

## React content controls

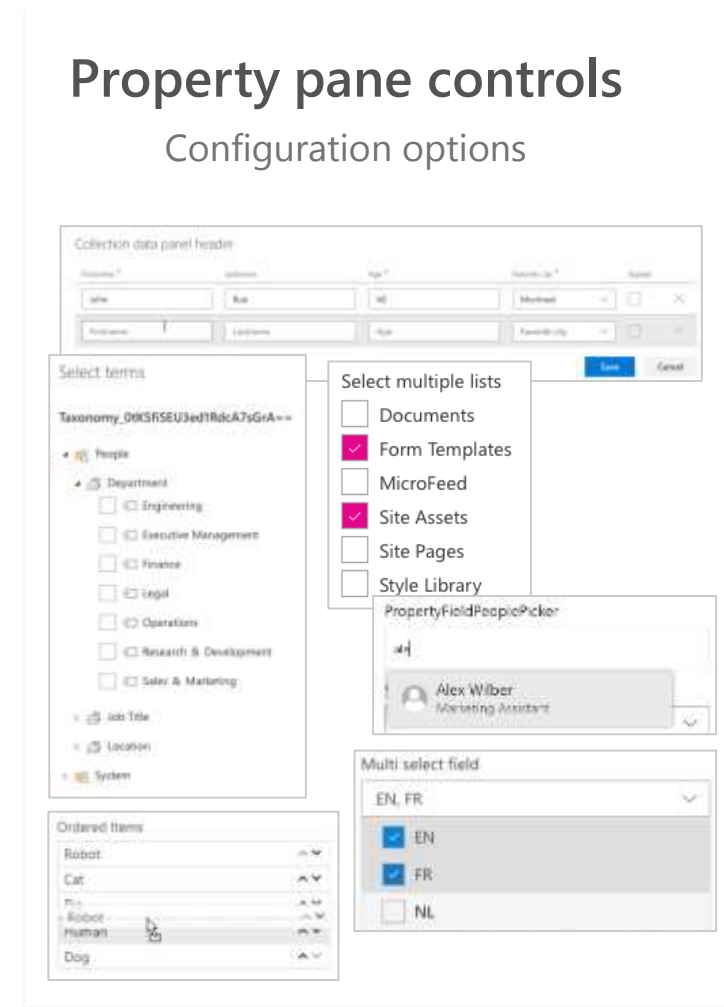
Use in the web parts and extensions



[sharepoint.github.io/sp-dev-fx-controls-react](https://sharepoint.github.io/sp-dev-fx-controls-react)

## Property pane controls

Configuration options



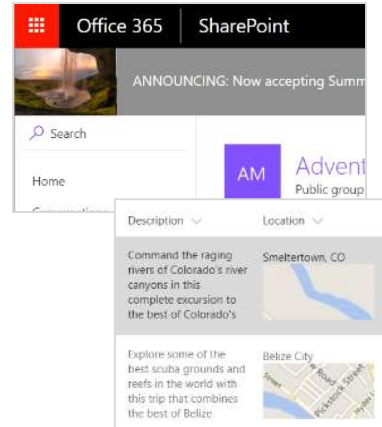
[sharepoint.github.io/sp-dev-fx-property-controls](https://sharepoint.github.io/sp-dev-fx-property-controls)

# SharePoint Framework platform

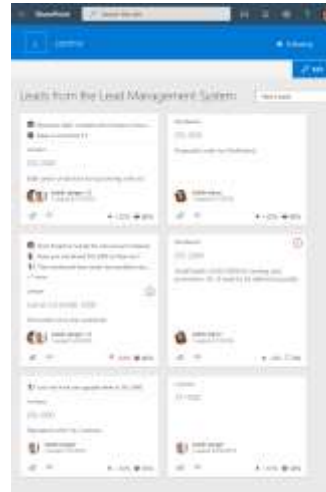
## Web Parts



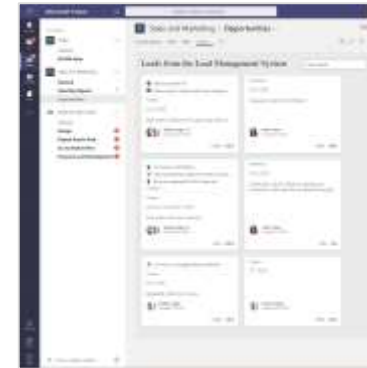
## Extensions



## App pages



## Teams Tabs



## Office add-ins\*



\* Coming to preview with upcoming releases



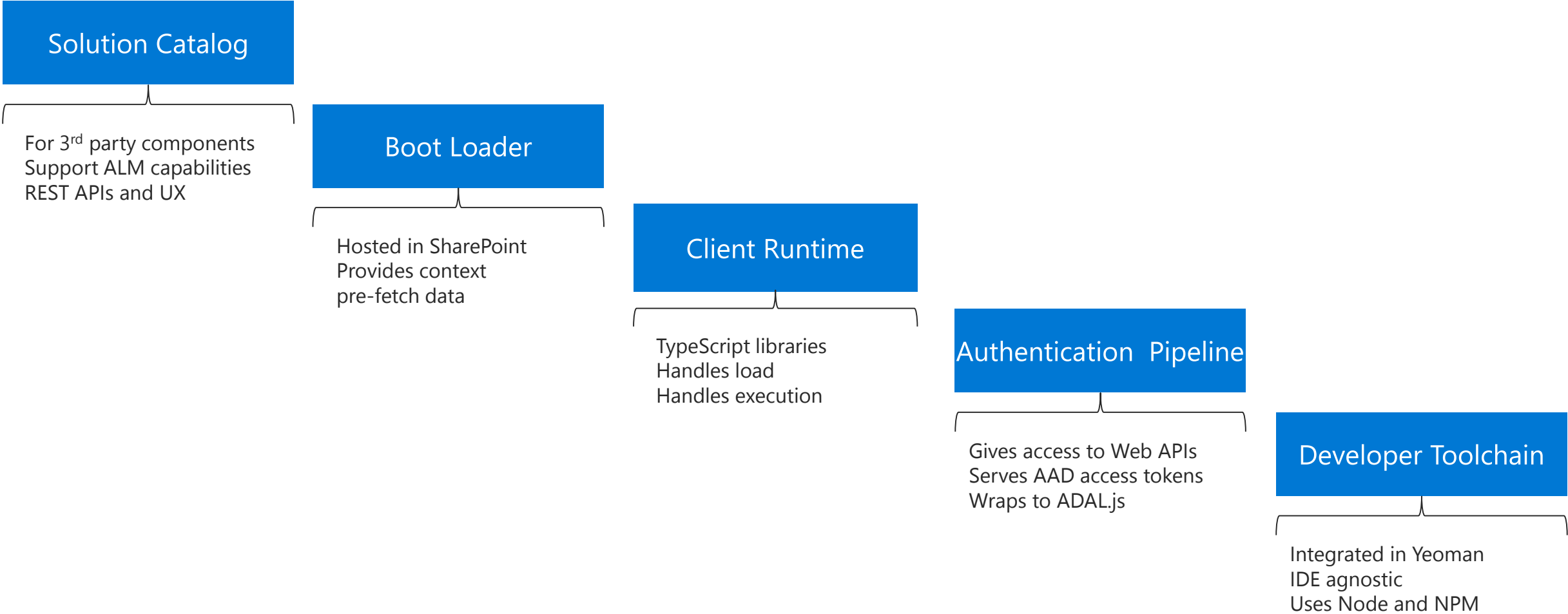
# DEMO

SharePoint Framework in different services





# SharePoint Framework Architecture



# SharePoint Framework Evolves Constantly

## General Availability

Web Parts	Extensions	Dynamic Data
Dialog Framework	Tenant scope deployment	SharePoint 2019 support
ALM APIs	Site collection app catalog	
Office 365 CDN and automatic hosting	Tenant Wide Deployment of extensions	
Security call 3 <sup>rd</sup> party APIs secured with Azure AD	Native Graph API support	

## SPFx v1.8

SPFx for Teams Tabs	Support for Teams Provider Hosted Solutions
Support for Section background styling	<i>Developer preview</i>
Full Page Single Web-part Apps	Library components
Domain Isolated Web Parts	
Support for TypeScript 2.7, 2.9 and 3.x	

# DEMO

Tenant wide deployment of SPFx extensions



# Develop Teams Tabs using SPFx

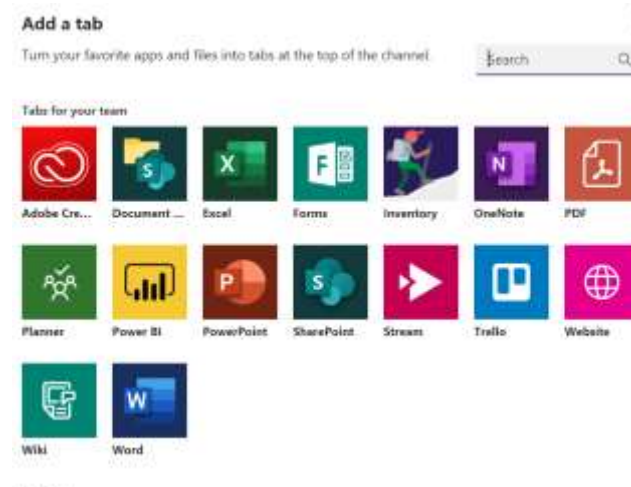
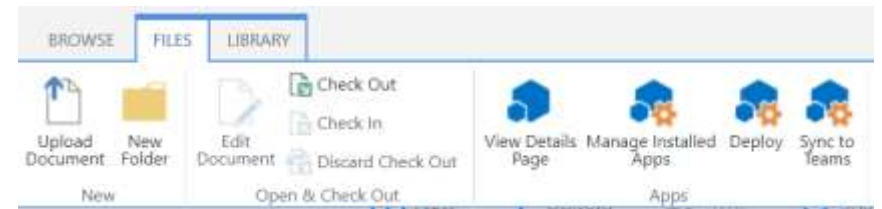
Enable developers to build SPFx based Tabs solutions

Full Teams context and SDK available at development and run time

Hosting, authentication, and API access handled by SharePoint directly

Full support for rich clients

```
"requiresCustomScript": false,  
"supportedHosts": [{}],  
"preconfiguredEntries": [  
  {  
    "groupId": "Sc8311",  
    "group": { "default": "Other" },  
    "title": { "default": "VanillaProject" },  
    "description": { "default": "A Vanilla 1.8 Project" },  
    "officeFabricIconFontName": "Page",  
    "properties": {  
      "description": "VanillaProject"  
    }  
  }  
]
```



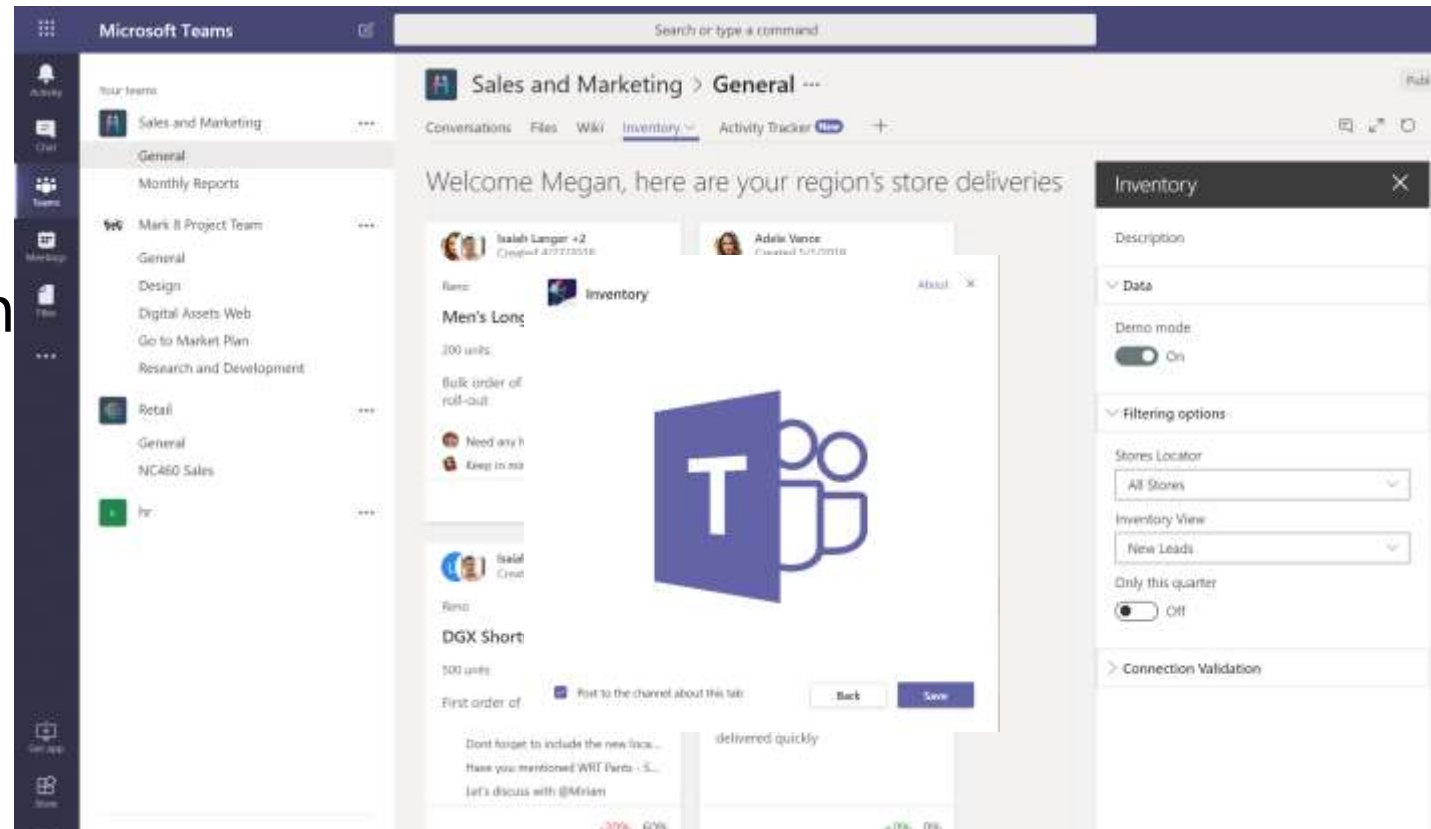
# Develop Teams Tabs using SPFx

Enable developers to build SPFx based Tabs solutions

Full Teams context and SDK available at development and run time

Hosting, authentication, and API access handled by SharePoint directly

Full support for rich clients



# Building Tabs using SPFx Development Model

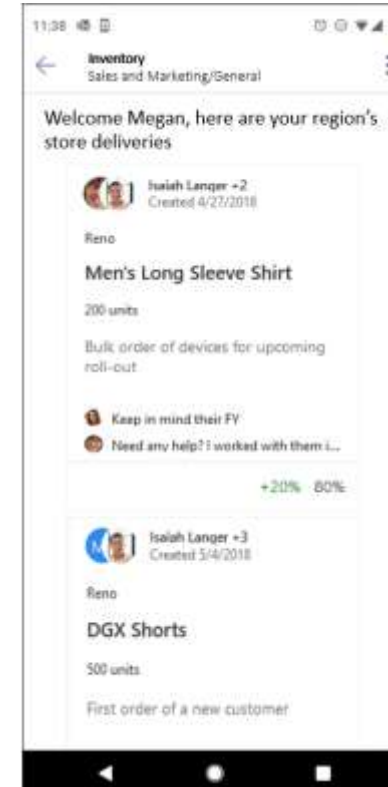


Enable developers to build SPFx based Tabs solutions

Full Teams context and SDK available at development and run time

Hosting, authentication, and API access handled by SharePoint directly

Full support for rich clients





Thank you!

# Microsoft Teams tabs with SharePoint Framework partners

Partners who were involved in the preview program and contributed on the design



# "Teams" Provider Hosted Solutions in SharePoint

Uses the same infrastructure / package as Microsoft Teams

Supported both as Web Part and App Page

Provides the SharePoint Page Context as part of the SDK

Requires minimal or no changes to existing solutions

Supports both js/client solutions as well as traditional server-side solutions (.Net / C# or even Python)

```
"configurableTabs": [  
  {  
    "configurationUrl": "https://contoso.com/teamstab/configure",  
    "canUpdateConfiguration": true,  
    "sharePointPreviewImage": "./SolutionIcon.png",  
    "supportedSharePointHosts": ["sharePointFullPage", "sharePointWebPart"],  
    "scopes": [ "team", "groupchat" ]  
  }  
]
```





# Sales and Marketing

Public group

★ Following ↩ Next steps

24 members

Notebook

+ New ⌵ ⚙

Home

Documents

Product List

Pages

Site contents

Inventory

Trello

Dynamic Events

Recycle bin

Edit

- List
- Document library
- Page
- Space (Preview)
- News post
- News link
- Plan
- App



SharePoint De

SharePoint deve  
solutions, apps, i



Megan Bowe  
Wednesday

5 views

## Pages

Templates Apps

### Featured



Inventory



Trello



Jira Cloud

## Trello

Collaborate and get more done



[Learn more about app pages](#)

Create page

Cancel

Stream videos

[View more in Stream](#)

Documents

[See all](#)

Edit



## Sales and Marketing

Public group

Notebook

Home

Documents

Product List

Pages

Site contents

Inventory

Trello

Dynamic Events

Recycle bin

Edit

### Activity Tracker ☆

#### My First Activity

test activity

do stuff

test

test2

test here

+ Add another card



### Trello

Trello lets your team work more collaboratively and get more done. Trello's boards, lists, and cards enable you to organize and prioritize your projects in a fun, flexible and rewarding way.

Login

Logged in as Graham McMynn (grahammcmynn1) [Log out](#)

Select board

Starred boards

Personal boards



Activity Tracker



Test Board

Cancel

Save

App page details



Title

Inventory

Settings

Thank you!

# "Teams" Provider Hosted Solutions in SharePoint

Partners which Solutions work on Teams and SharePoint TODAY



# DEMO

Teams Solutions in SharePoint





# App Pages

A Full Modern Page with pre configured application content and no authoring experience – only optional configuration

Created as part of the “new Page” flow, or viewed using a query string driven \_Layouts page.

Uses the same “chrome” as other pages in the site

Supports all the same extensions as authored pages

```
{
  "$schema": "https://developer.microsoft.com/json-schemas/spfx/client-side-web-part-manifest.schema.json",
  "id": "a8eb57cf-e18e-4f82-91c4-11b0ff7703ee",
  "alias": "VanillaProjectWebPart",
  "componentType": "WebPart",

  // The "*" signifies that the version should be taken from the package.json
  "version": "*",
  "manifestVersion": 2,

  // If true, the component can only be installed on sites where Custom Script is allowed.
  // Components that allow authors to embed arbitrary script code should set this to true.
  // https://support.office.com/en-us/article/turn-scripting-capabilities-on-or-off-1?2b313f327e-44de-bf47-87de4d555d4f
  "requiresCustomScript": false,
  "supportedHosts": ["SharePointFullPage"],

  "preconfiguredEntries": [
    {
      "groupId": "5d8119e-3e74-464a-87bb-d8a12811f7f7", // Other
      "group": { "default": "Other" },
      "title": { "default": "VanillaProject" },
      "description": { "default": "A Vanilla 1.8 Project" },
      "appIconImageUri": "/./icon.png",
      "properties": {
        "description": "VanillaProject"
      }
    }
  ]
}
```



# Sales and Marketing

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Recycle bin

Edit

+ New

List

Document lib

Page

Space (Preview)

News post

News link

Plan

App

SharePoint

SharePoint solutions, app

Megan Wedne

5 views

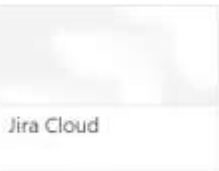
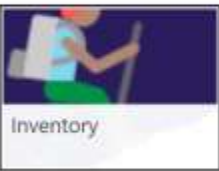
Stream

## Pages

Templates

Apps

### Featured



## Inventory

The Inventory application allows you to manage and constantly monitor the status of your supply across multiple stores and countries.

Welcome Megan, here are your region's store deliveries

<p><b>Men's Long Sleeve Shirt</b></p> <p>200 units</p> <p>Bulk order of devices for upcoming roll-out</p> <p>Keep in mind their IT need any help I worked with them...</p> <p>+20% 80%</p>	<p><b>Women's Winter Jacket</b></p> <p>10 units</p> <p>Repeated order by Reno's location</p> <p>+20% 80%</p>	<p><b>DGX Shorts</b></p> <p>100 units</p> <p>First order of a new customer</p> <p>Let's discuss with @Marian. Have you mentioned WRT Pants - S... Don't forget to include the new look...</p> <p>-20% 60%</p>
<p><b>Summer's DGX Bath Sandals</b></p> <p>7 units</p> <p>Small batch of Responsibillity® for testing and promotion. Will need to be delivered quickly</p> <p>+0% 0%</p>	<p><b>Anniversary Edition Socks</b></p> <p>1000 units</p> <p>Repeated order by Sacramento store</p> <p>Let's see if that pairs well with MGX...</p> <p>+10% 50%</p>	<p><b>Summer2020 Duffle Bag</b></p> <p>1500 units</p> <p>Brand new for 2019. Make sure it shows in the front line of the store</p> <p>Do we think we have sufficient quant...</p> <p>-10% 80%</p>
<p><b>Lightweight Pack</b></p> <p>100 units</p> <p>100%</p>	<p><b>DGX Leather Wallet</b></p> <p>100 units</p> <p>100%</p>	

Published

Edit

Learn more about app pages

Create page

Cancel

See all



Sales and Marketing  
Public group

★ Following Next steps  
24 members

- Notebook
- Home
- Documents
- Product List
- Pages
- Site contents
- Inventory
- Trello
- Dynamic Events
- Recycle bin
- Edit

Save

Welcome Megan, here are your region's store deliveries

**Isaiah Langer +2**  
Created 4/27/2018

Reno

**Men's Long Sleeve Shirt**

200 units

Bulk order of devices for upcoming roll-out

Need any help? I worked with them ...  
 Keep in mind their FY

+20% 80%

**Adele Vance**  
Created 5/1/2018

Tahoe

**Women's Winter Jacket**

50 units

Repeated order by Reno's location

+20% 80%

**Isaiah Langer +3**  
Created 5/4/2018

Reno

**DGX Shorts**

500 units

First order of a new customer

Dont forget to include the new loca...  
Have you mentioned WRT Pants - S...  
Let's discuss with @Miriam

-20% 60%

**Adele Vance**  
Created 5/1/2018

Sacramento

**Summer's DGX Bath Sandals**

7 units

Small batch of Responsibili-Tee® for testing and pr...ll need to be delivered quickly

+20% 80%

**Isaiah Langer**  
Created 5/7/2018

Tahoe

**Anniversary Edition Socks**

5000 units

Repeated order by Sacramento store

+20% 80%

**Isaiah Langer +1**  
Created 5/4/2018

Reno

**Summer2020 Duffle Bag**

1500 units

Brand new for 2019. Make sure it shows in the front line of the store

-20% 60%

App page details

Title  
Sales and Marketing

Description

Data

Demo mode  
On

Filtering options

Stores Locator  
All Stores

Inventory View  
New Leads

Only this quarter  
Off

Connection Validation

# DEMO

App Pages in SharePoint Online





# Domain Isolated Web Parts

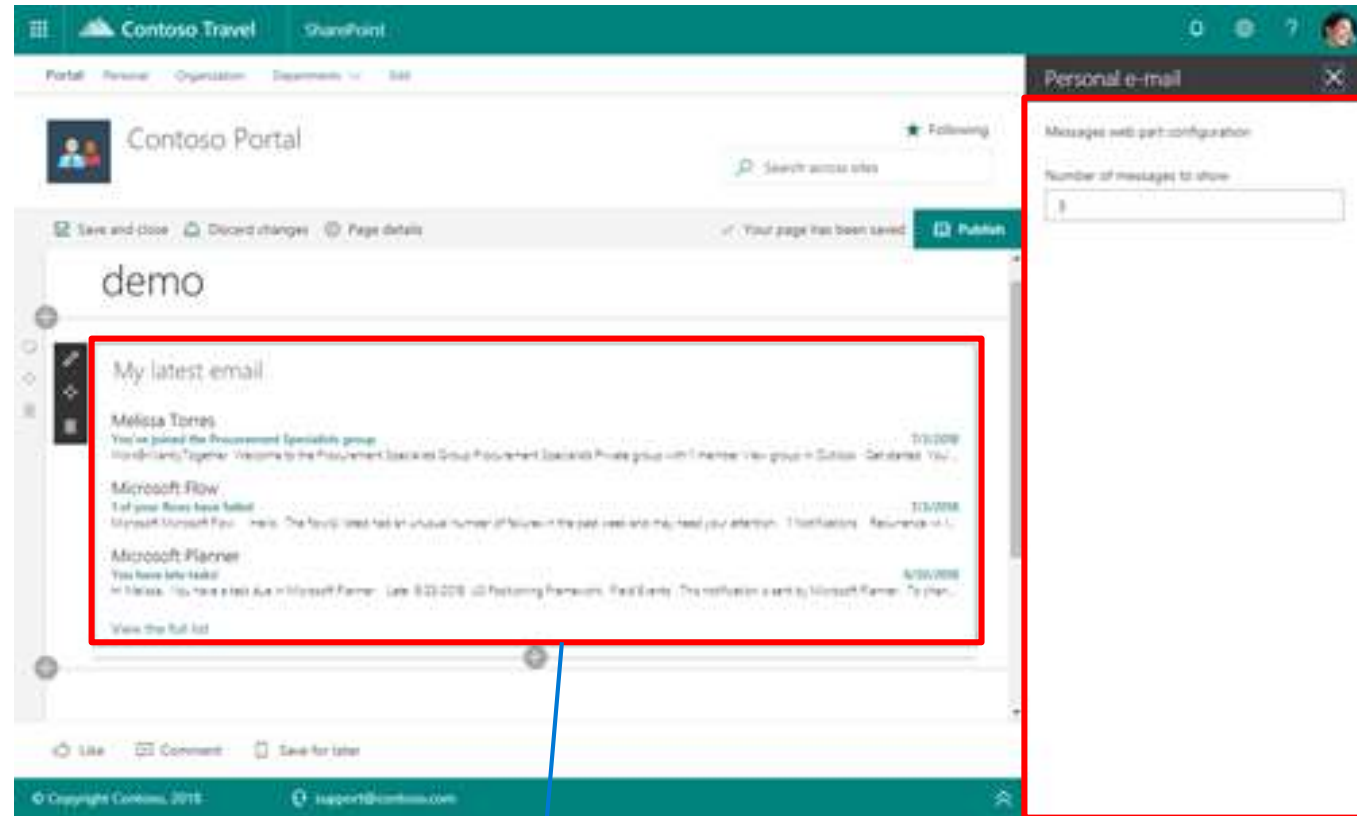
Code runs in an auto-generated domain w/  
different API permissions than the main  
tenant, and is iFramed into the main page

Same context as the hosting page

Framework handles AAD App registration and  
permission scopes and authentication

Support for Web Parts, App Pages and Teams  
tabs

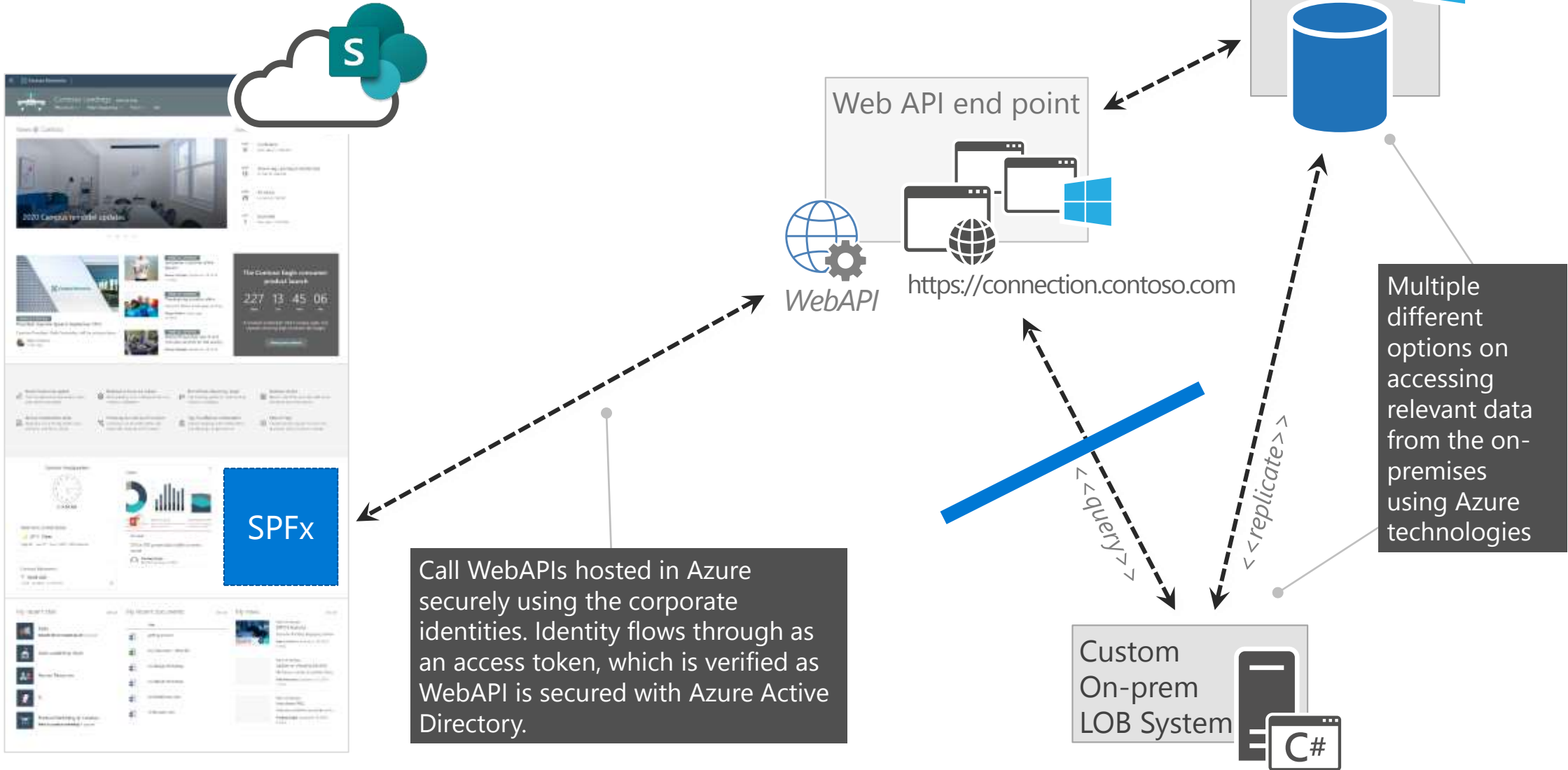
Useful for a Web Part that needs extra  
permissions (mail.read) or a Web Part that  
wants extra protection (other parts can't  
access your back end data)



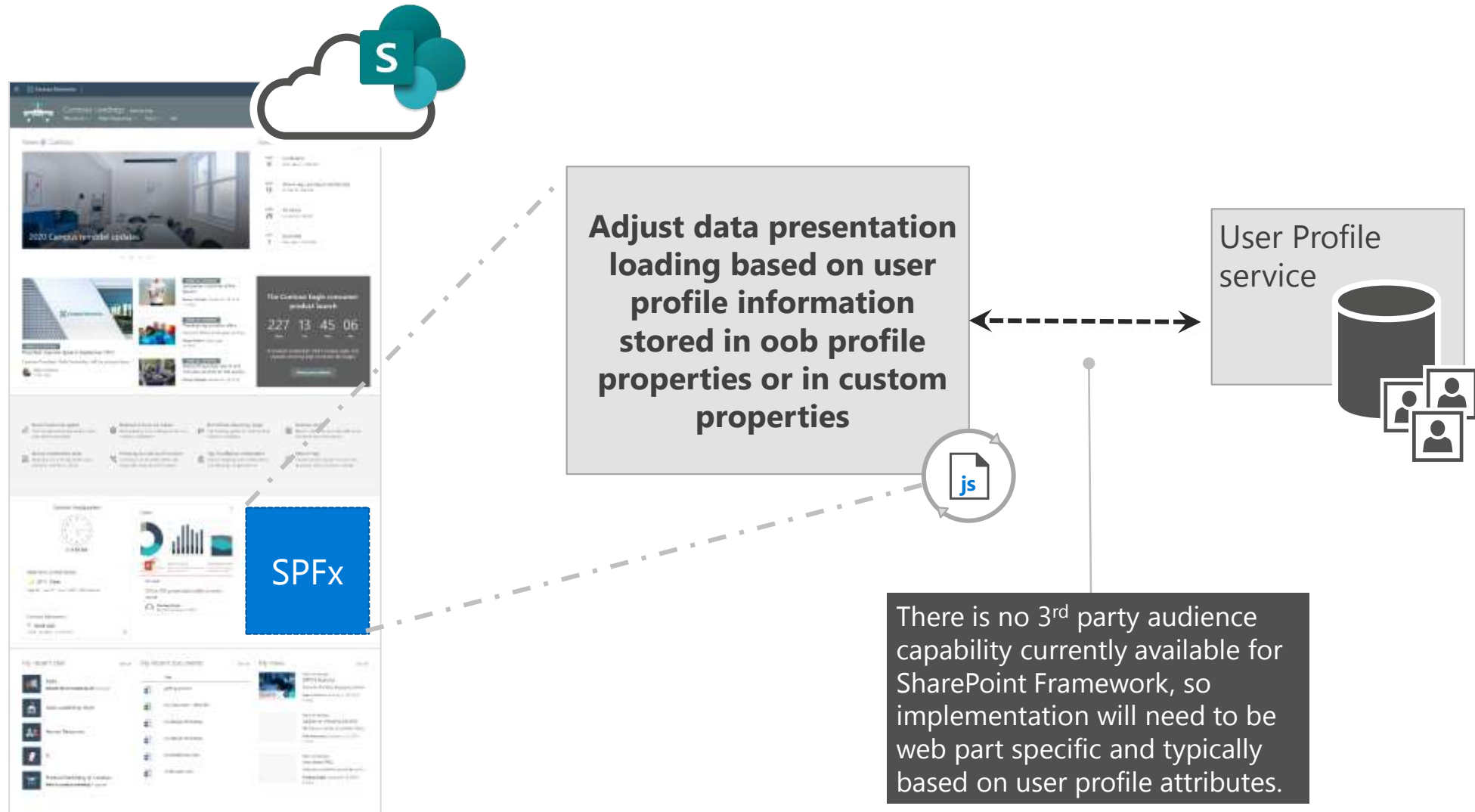
<https://contoso-12345.sharepoint.com>

Few architectural discussion  
points on common  
discussion topics...

# Surfacing business information in SharePoint Online



# Personalization with the SharePoint Framework solutions



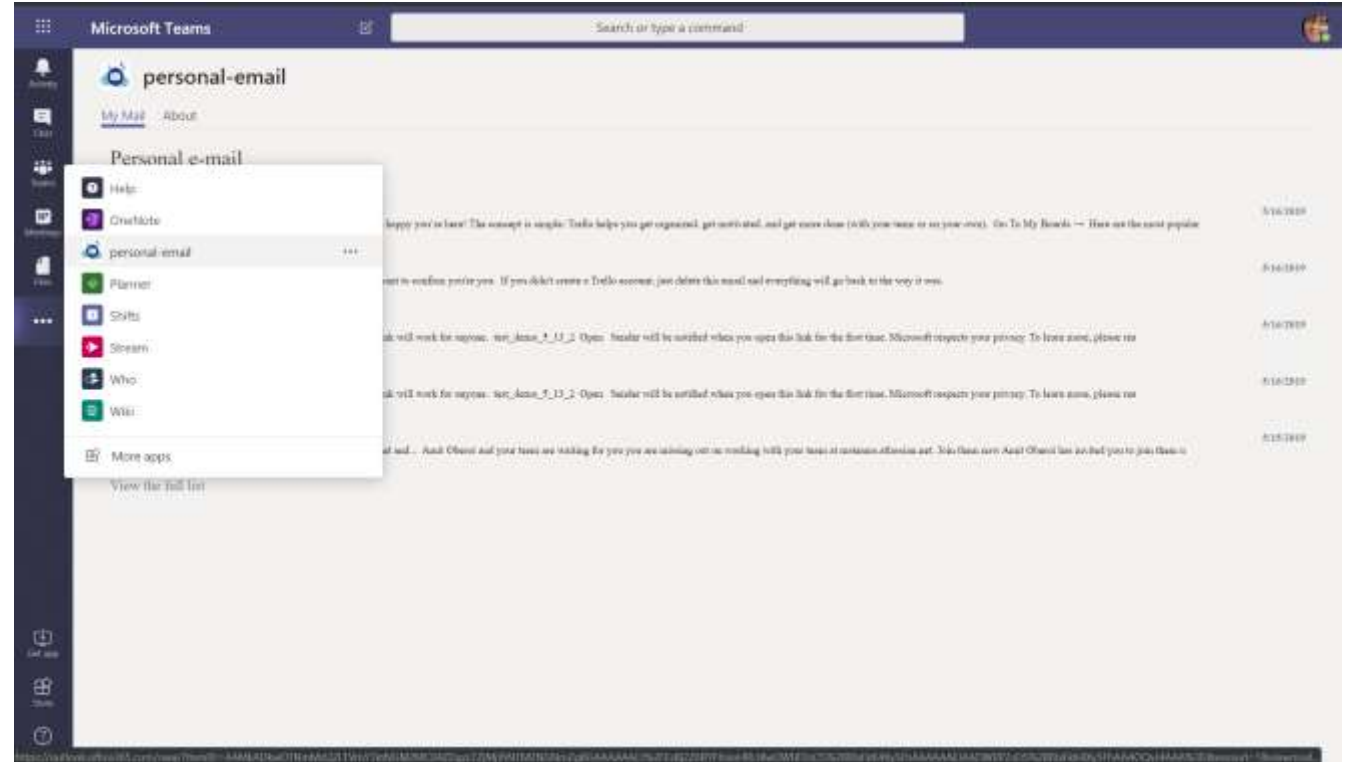
Currently in development /  
planning – Coming soon...

# Using SPFx for building Personal tabs

Like group chat tabs, developers target Personal tabs using *supportedHost* property in the manifest

Manifest in Teams gets generated automatically from SharePoint App Catalog

In Teams, all personal tabs surface as static tabs: no configuration capability is provided



# Library Components – General Availability

Allow independently versioned and deployed code, to be served automatically for the SharePoint Framework components

Libraries are deployed in the app catalog then they can be referenced across other components

Things to be aware of:

- All components in the tenant get the same instance of the library
- A solution cannot contain webparts/extensions and libraries. It's one or the other.
- You have to reference library components at development time from a package manager or using npm link

```
1  {
2    "id": "30a9cdd5-914d-48b5-aa75-91fa57ee9a9b",
3    "alias": "SpFxCommonTestLibraryLibrary",
4    "componentType": "Library",
5
6    // The "*" signifies that the version should be taken from the package.json
7    "version": "*",
8    "manifestVersion": 2
9  }
10
```

# Using SPFx for building Office Add-ins

Developers will target Office client using *supportedHost* property in the manifest

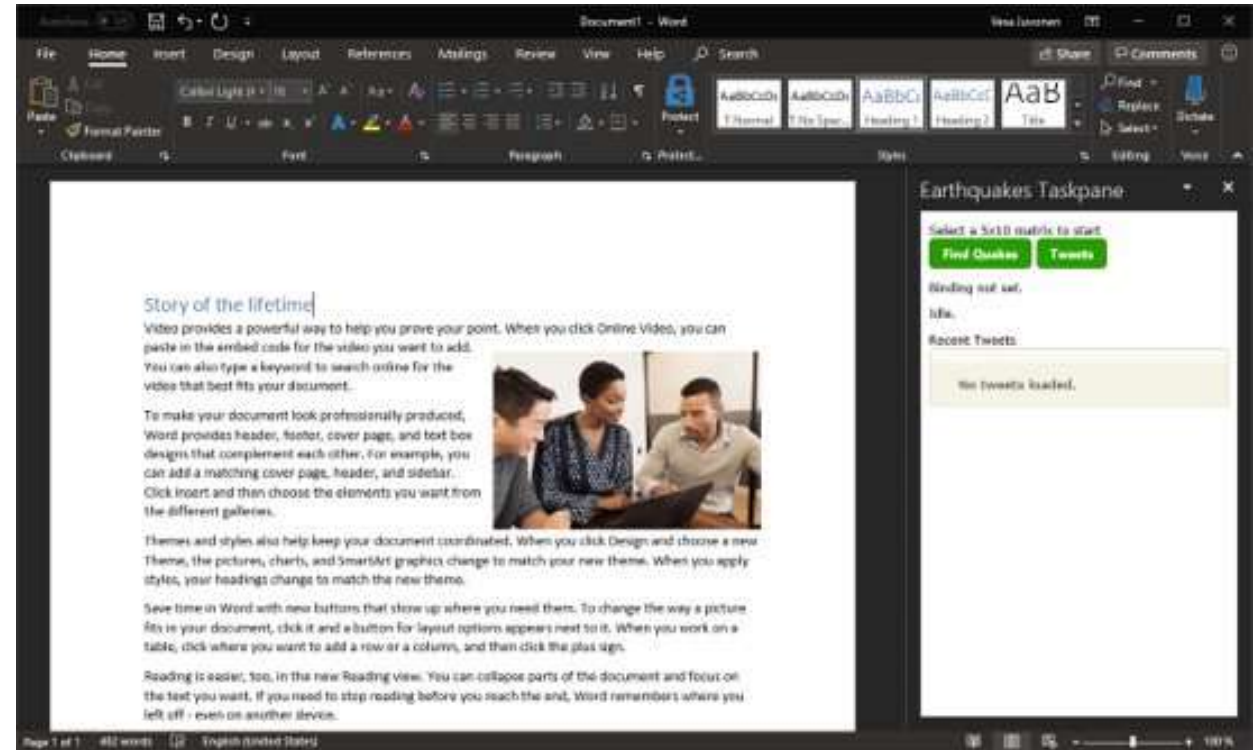
Available to enterprises through Tenant Centralized Deployment

Full Office SDK available at development and run times

Hosting, Authentication and API access handled by SharePoint directly

Some questions still to be decided:

- Do we want to target different clients (Outlook / Word / WAC) as *supportedHost* or leave that to the developer?
- How do we work with the enterprise office add-in catalog?
- Office Manifests are complex. We'll need a way to make it easy to incorporate them into the solution.





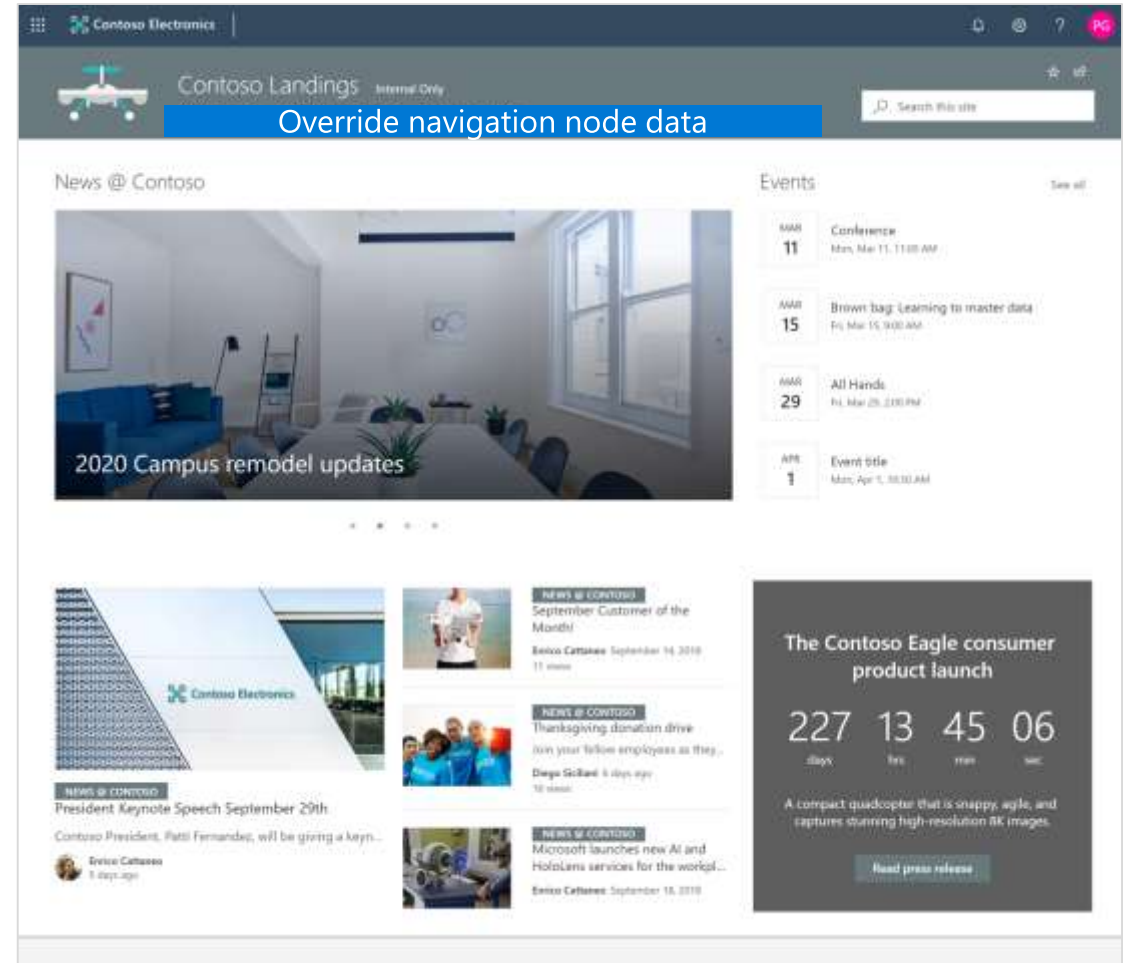
# Strongly Typed Extensions for Modern Portals

## Navigation Data Extension

Developer get the default navigation data from the site

They can change that data in any way they wish

The page is responsible for rendering the new nodes using the normal rendering



# Strongly Typed Extensions for Modern Portals

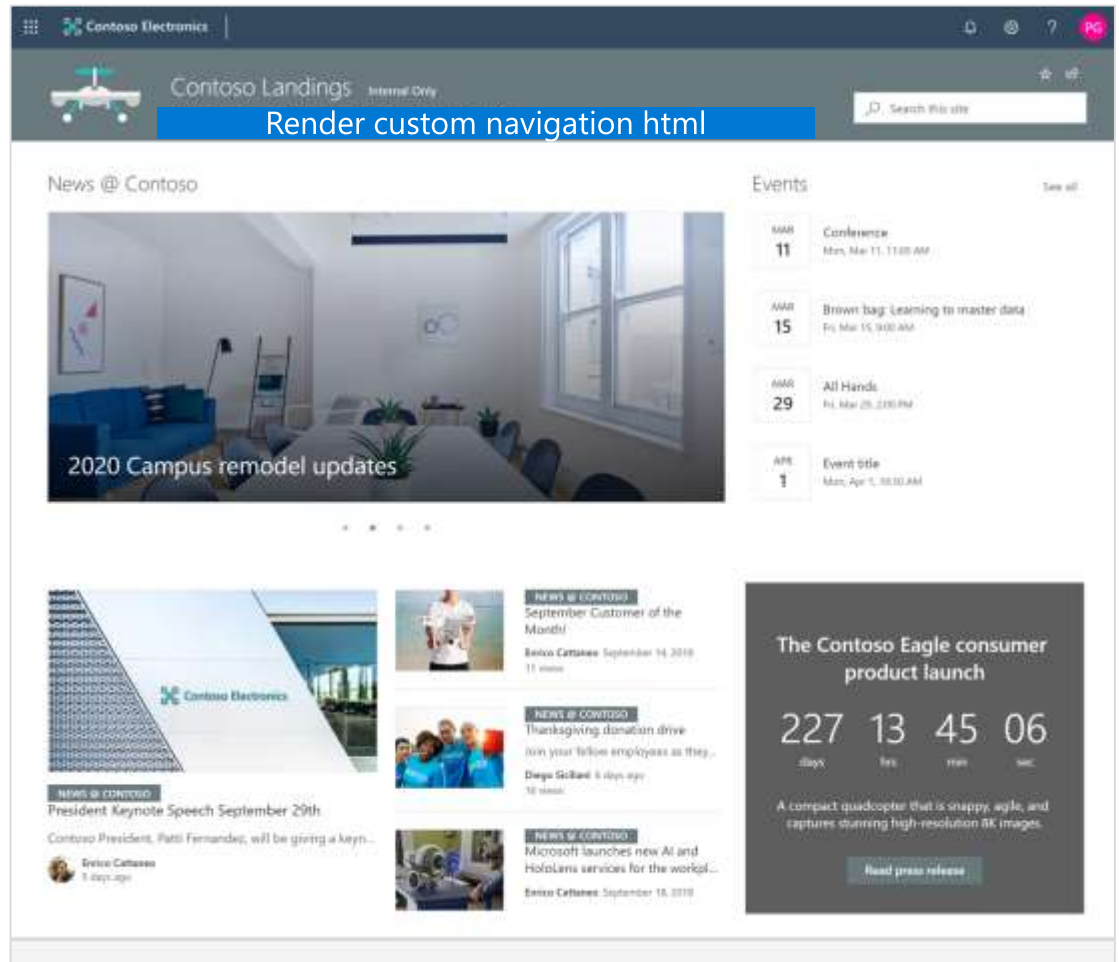
## Navigation Rendering Extension

Developer get the navigation data and a pre-created DIV.

They are responsible for rendering the new nodes in the DIV

Doesn't allow for changing the size or location of navigation.

Doesn't allow removal or customization of Hub nav for hub connected sites



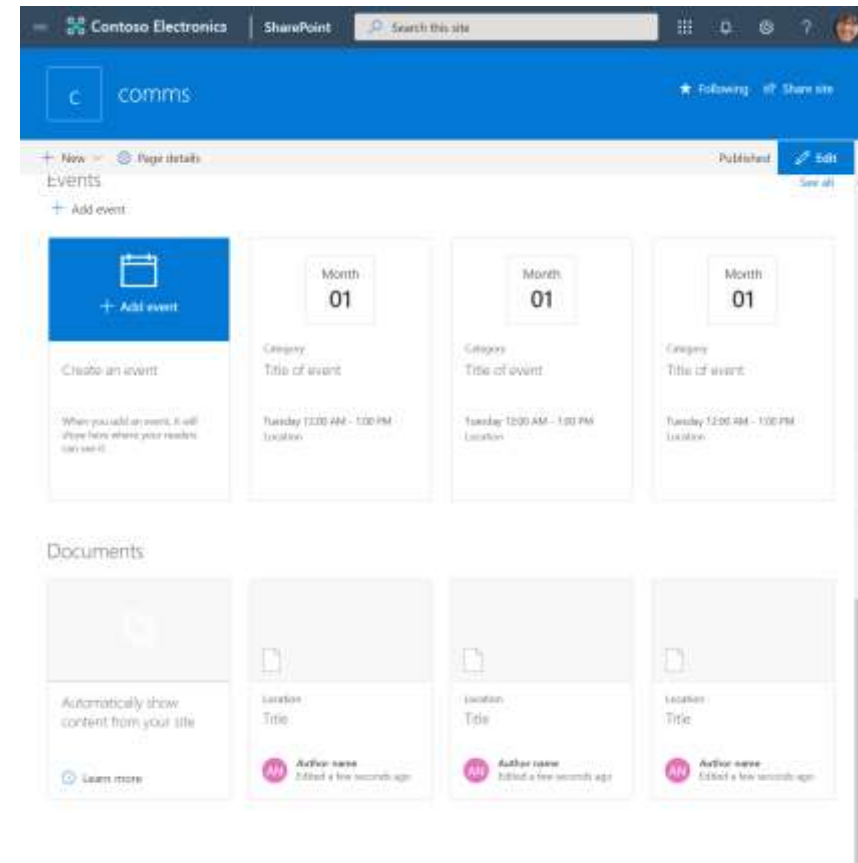
# Strongly Typed Extensions for Modern Portals

## Footer Extension

A way to replace our existing footer with custom code

In pages where footer doesn't exist this extension will not run

Loading extension code will happen after the OOB components load



Override oob footer

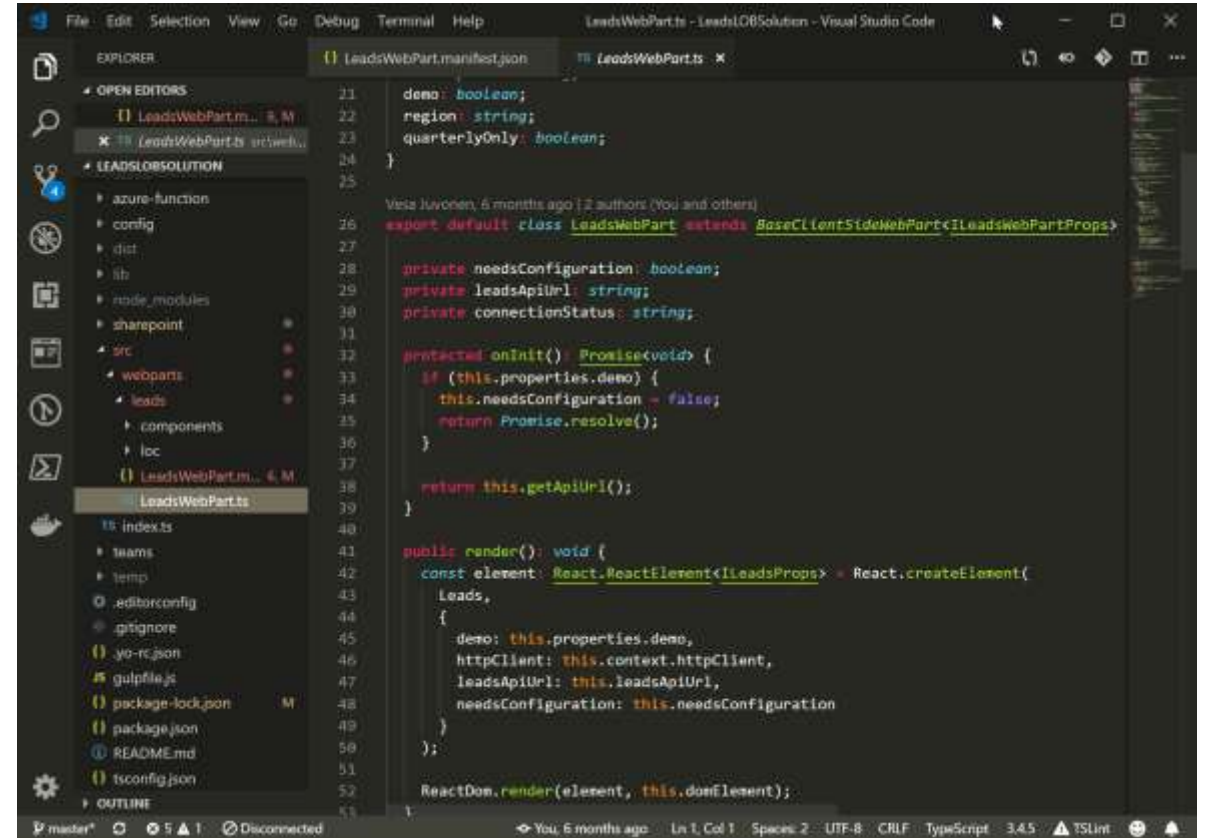
# Developer Tools Improvements

Support for WebPack 4

Smaller packages / node\_modules

Faster inner loop

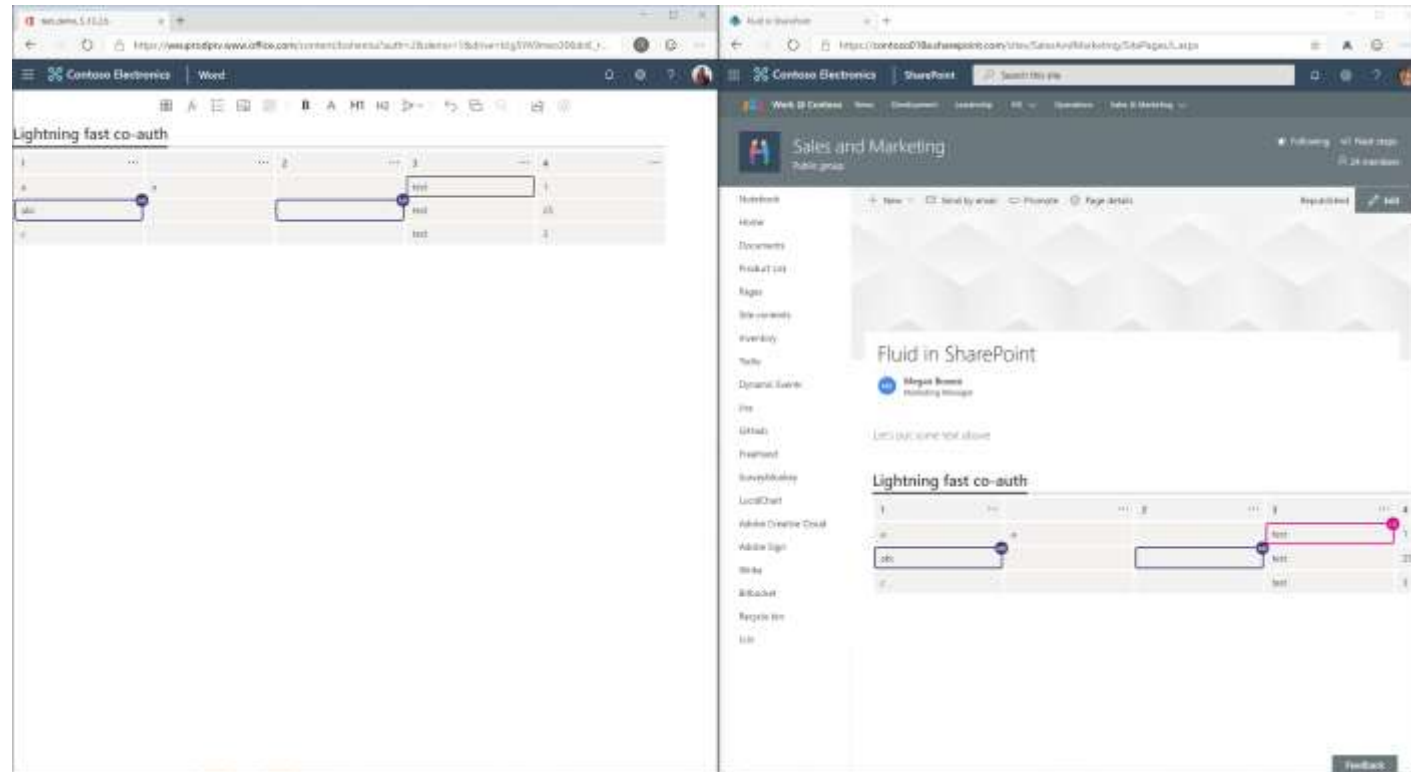
Reduce Logging in debug console



# Fluid Framework

A developer technology for building a new class of shared, interactive experiences on the web:

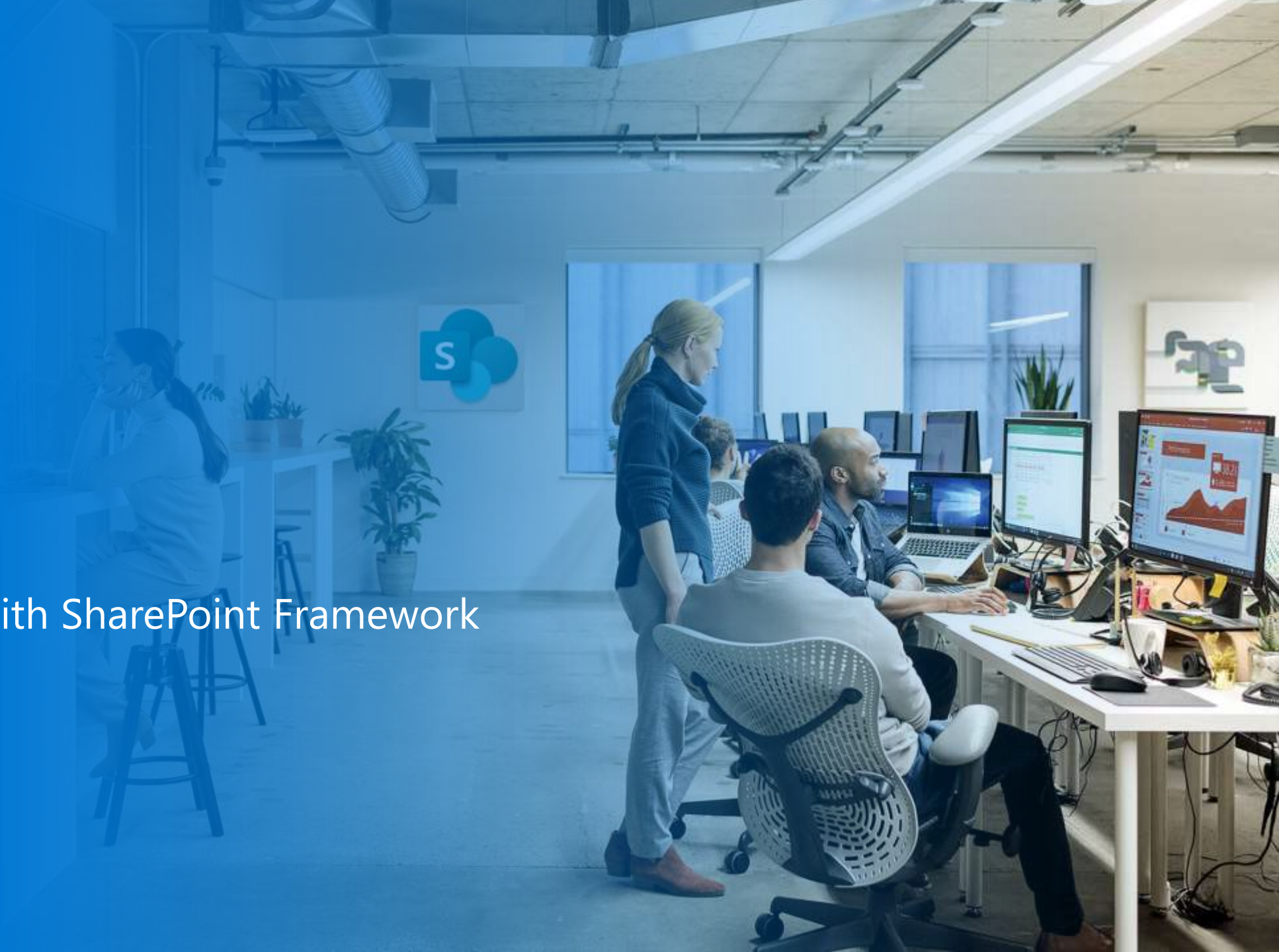
- support multi-person coauthoring on web and document content
- provides a componentized document model that allows authors to deconstruct content into collaborative building blocks, use them across applications, and combine them in a new, more flexible kind of document
- makes room for intelligent agents to work alongside humans to translate text, fetch content, suggest edits, perform compliance checks, and more





# DEMO

Fluid Framework with SharePoint Framework



subject to change

# SharePoint Dev Roadmap

## SharePoint Dev next steps – current plans

- Smaller, more rapid SharePoint Framework releases
- Teams Integration Improvements
- General availability of Library components
- Office add-ins with SharePoint Framework
- CSP – Content Security Policy
- CSOM .NET Standard
- Open-sourcing Yeoman generator
- and more...

## Top of mind

- Additional content extensions for modern pages
- Fluid Framework
- Throttling updates – Guidance
- Developer tools improvements in SPFx
- Store story for SPFx solutions







# SharePoint

## Patterns & Practices

## SharePoint Dev Community Monthly Metrics – April 2019

High level statistics SharePoint Developer Ecosystem – Usage and community behavior across SharePoint Online, YouTube and GitHub.

Thank you for being part of this!



<http://aka.ms/sppnp>

# Sharing is caring!

Watch time in YouTube  
232,251 minutes

Views in YouTube  
42,242

Unique visitors in GitHub  
55,353 (avg 2 weeks)

Views in GitHub  
271,219 (avg 2 weeks)

Views in docs.microsoft.com –  
SharePoint Dev  
1,170,325



## PnP Reusable Component usage (past month)

Unique tenants #  
22,417

Http Requests #  
15,2 Billion

Most used capability  
– Provisioning Engine (2972 tenants)

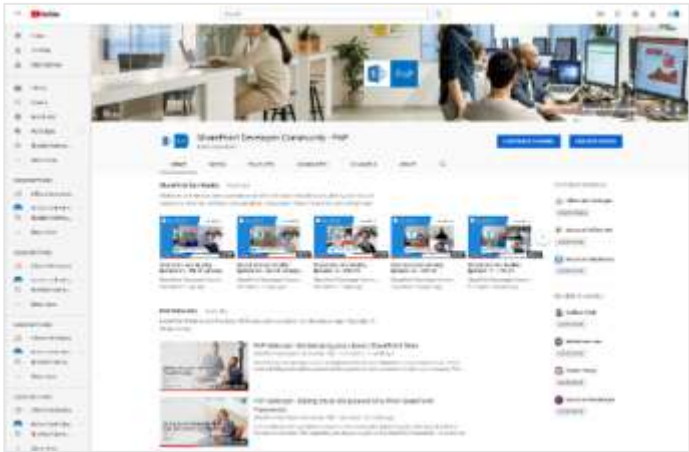


# SharePoint Dev docs



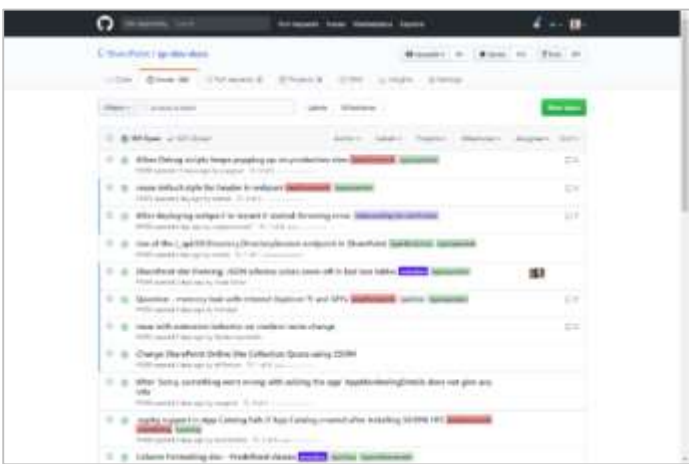
[aka.ms/spdev-docs](https://aka.ms/spdev-docs)

# SharePoint Dev videos



[aka.ms/spdev-videos](https://aka.ms/spdev-videos)

# SharePoint Dev issues



[aka.ms/spdev-issues](https://aka.ms/spdev-issues)



Learn



Reuse



Share

[aka.ms/sppnp](https://aka.ms/sppnp)



## Getting started

**1**

Build SharePoint Framework extensibility

**2**

Explore Patterns and Practices open-source assets

**3**

Extend and integrate with Microsoft ecosystem

Sign up for the Office 365 Dev Program - <https://aka.ms/offdp>



thank you



questions?



TWITTER HANDLE



BLOG URL



1. INSTALL THE  
COLLABSUMMIT APP



2. RATE THE SESSIONS  
THAT YOU HAVE  
ATTENDED

3. WIN ONE OF THE 4  
C64-MINIS



[www.collabsummit.eu/app](http://www.collabsummit.eu/app)