

Empowering Your Modern Development Journey with SharePoint Framework

Don Kirkham, Microsoft MVP, MCT

@DonKirkham

Microsoft MVP, M365 Development

DMI  Enterprise Architect



<https://donkirkham.com>



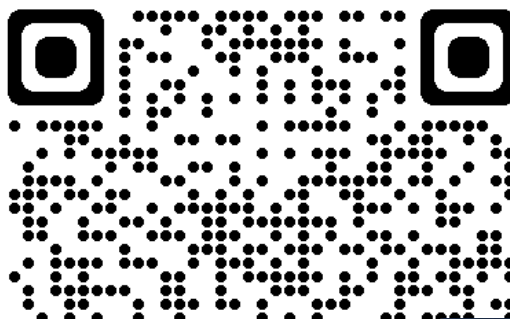
@DonKirkham



/in/DonKirkham



DonKirkham



Picture time!!!



SharePoint UX – Evolving cross versions



SharePoint
Portal Server 2001

2001



SharePoint
Portal Server 2003

2003



Office SharePoint
Server 2007

2006



SharePoint
Server 2010

2009



SharePoint
Server 2013

2012



SharePoint
Server 2016, SPO

2016 ...



ASP
Early Server
Widget Tech
Single Box

ASP.NET
Web Parts
CAML

SharePoint
Publishing

FAST acquisition
Shared Services
(e.g. taxonomy)
First Client-Side
Rendering Using
XSL

Search driven
publishing sites
Client-Side
Rendering
sprinkled in, e.g.
CBS, MDS, etc.

Hybrid
Modern standalone cloud
apps, e.g. Office 365
Video, Delve, etc.
...
SPFx and Office Fabric
Modern SharePoint pages

SharePoint Framework

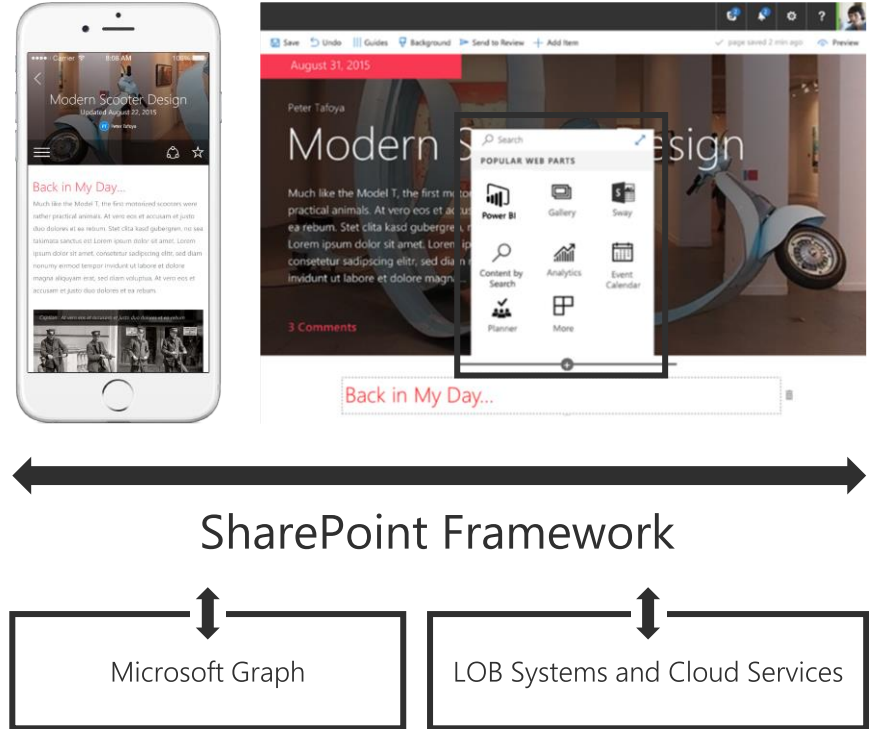
Modern client-side development

Lightweight web and mobile

Powers our own experiences

Backward compatible

Supports open source tools
& JavaScript web frameworks



Building SPFx experiences in Microsoft 365

The easiest way to build your enterprise solutions for Microsoft Teams, Microsoft Viva, Outlook, Microsoft 365 app and SharePoint

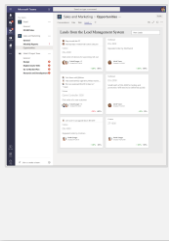


Microsoft Teams

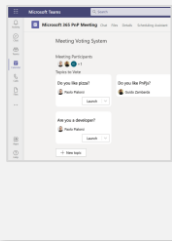
Personal Apps



Teams tabs



Meeting apps

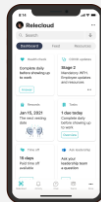


Messaging extensions



Microsoft Viva

Cards

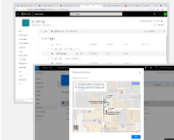


SharePoint

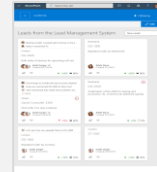
Web Parts



Extensions



App pages




Outlook and Microsoft 365 app (Office)

Content driven applications | SSO | Automatic code hosting | Industry standard tooling

Sign up for an Office 365 Developer Tenant

- Sign up for the Office Developer Program - <https://aka.ms/offdp>
- You will receive welcome mail with link to sign up for Office 365 tenant


 Microsoft | Microsoft 365 Dev Center [Explore](#) [Learn](#) [Docs](#) [Community](#) [Developer Program](#) [Support](#) [All Microsoft](#) [Search](#) [Sign in](#)


[Developer](#) / [Microsoft 365](#) / Microsoft 365 Developer Program

Join the Microsoft 365 Developer Program today!

Get an instant sandbox preconfigured with sample data, including Teams Developer Portal, and start developing on the Microsoft 365 platform.

[Join now >](#) [Join with Visual Studio >](#)






Free developer instant sandbox

Get a free, renewable 90-day Microsoft 365 E5 developer subscription pre-provisioned with Microsoft 365 apps.


[Learn more >](#)



Sample data packs including Teams

Your sandbox is preconfigured with sample data to help you prototype solutions fast.


[Learn more >](#)



Access to experts

Access community events to learn from Microsoft 365 experts.

[Learn more >](#)



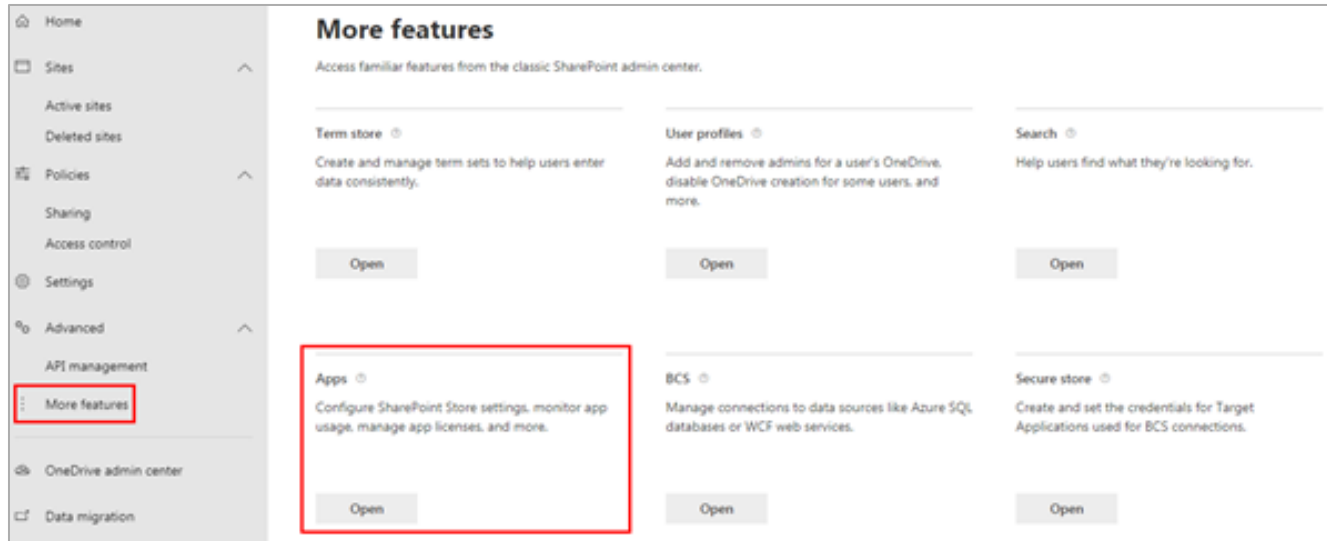
Personalized recommendations

Find developer resources quickly from your personalized dashboard.

[Learn more >](#)

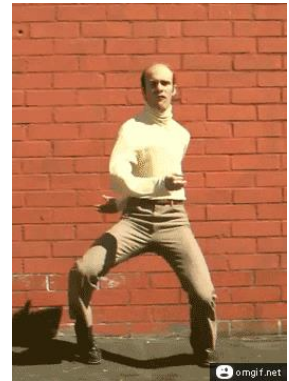
Create App Catalog Site

- [https://\[tenant\]-admin.sharepoint.com](https://[tenant]-admin.sharepoint.com)
- SharePoint Framework solutions are deployed to an app catalog when they are ready for distribution



DEMO TIME!

Put on your dancing shoes and let's have some fun!



Open source tooling

SharePoint Framework leverages an open source, Node.js based toolchain and embraces all web frameworks + code editors

Build Process & Tooling

- Yeoman Templates
- Gulp (task runner)
- Node.js
- NPM (package manager)
- SystemJS
- Webpack
- SASS
- TypeScript



Web Frameworks

- React
- Angular
- Knockout
- jQuery
- ... and more... your choice!

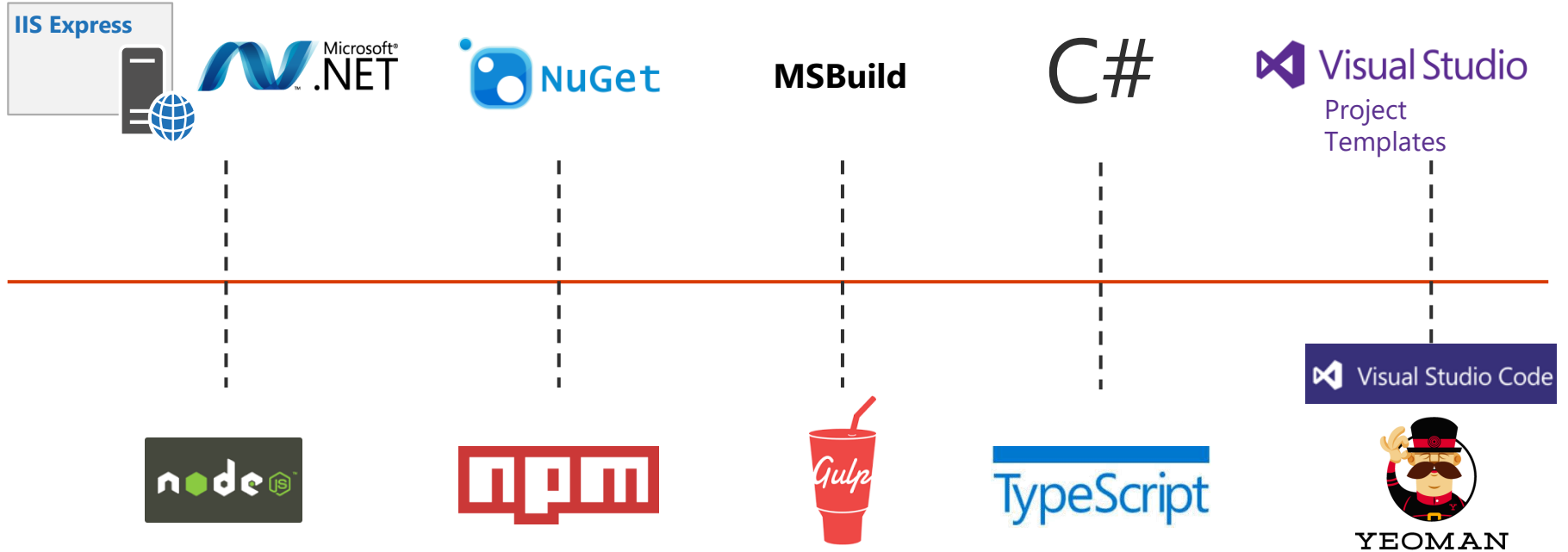


Code Editors

- Visual Studio Code
- Atom
- Sublime
- Webstorm
- ... and more... your choice!



Server-side tool comparison



Node.js - Runtime

- **Cross platform JavaScript runtime**
 - Similar to .NET Framework is a runtime for C# based projects
 - Used to execute JavaScript on the desktop / server / devices
 - API wrapper to Chromes V8 JavaScript engine
 - Also works in Edge
- **SPFx's open source tooling is built on Node.js**
- **SPFx supports Node.js LTS v6.*, v8.*, v10.*, v12.*, v14.*, v16.*, v18.***
 - LTS: Long term support
 - SharePoint Server 2016 only supports v8.*
- **Node Version Manager (nvm)**
 - Solves problems of multiple version of Node.js on same device
 - Separate versions for Windows and MacOS/Linux



<https://nodejs.org/>

NPM – Node Package Manager

- NPM is a package manager for Node.js based projects
 - Similar to NuGet that is the .NET Framework package manager
- Client tool used to acquire packages from the NPM registry: <https://www.npmjs.com>
 - Similar to NuGet that's the client tool for the NuGet registry: <https://www.nuget.org>
- Included with the default Node.js install
- Alternate package managers
 - Why? SPFx HelloWorld: 28 files, 156 **KB** → **68,875** files, 745 **MB**
 - Yarn
 - Pnpm



<https://www.npmjs.com>

Yeoman – Project Scaffolding Generator

- Scaffolding engine that executes generators
- Generators prompt user with questions
- Generates project scaffolding (folders & files) for projects
- Microsoft provides SharePoint Framework generator
- Installed on your dev environment with NPM

```
npm install -g yo  
npm install -g @microsoft/generator-sharepoint
```



YEOMAN

<http://yeoman.io>

Gulp – Task Runner

- **Gulp is a task runner for projects**
 - Similar to MSBuild that is the .NET Framework task runner
- **Tasks are defined with JavaScript**
 - Similar to MSBuild tasks defined in XML
- **Performs common tasks: compile, package, start test process, etc.**
- **Microsoft has created all required tasks**

```
npm install -g gulp-cli
```



<http://gulpjs.com>

TypeScript – Typed JavaScript

- Typed superset of JavaScript
- Compiles to plain JavaScript
- Development language for the base templates in SharePoint Framework projects
- You can also integrate native JavaScript to SharePoint Framework customizations *
 - No need to rewrite everything
- Version of TypeScript supported by SPFx included in each SPFx project



<https://www.typescriptlang.org>

Validate local SPFx development configuration

- **Install required runtimes & tools:**
 - Node.js & NPM (included with Node.js)
 - Yeoman, SPFx Yeoman generator
 - Gulp
- **Create first project with Yeoman & SPFx generator**

```
yo @microsoft/sharepoint
```

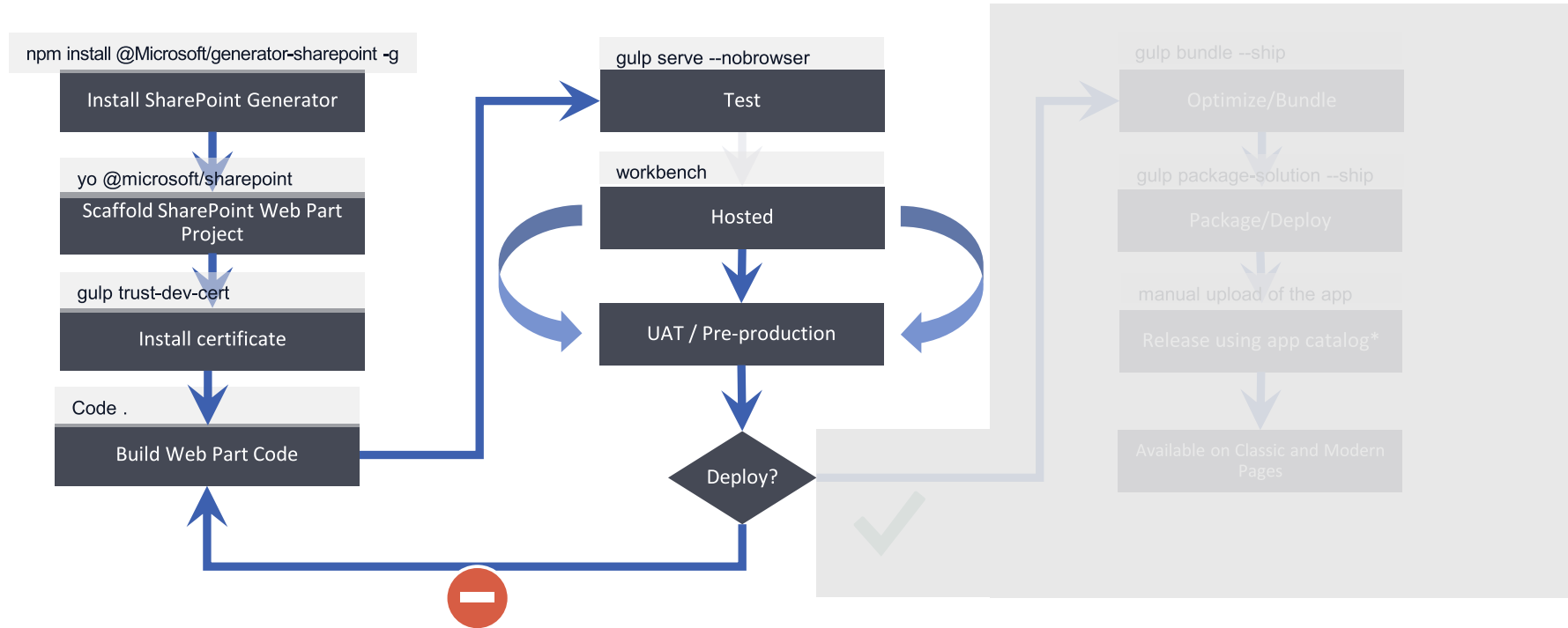
- **ONE TIME ONLY – Trust Developer certificate**

```
gulp trust-dev-cert
```

- **Build & run web part in the workbench**

```
gulp serve --nobrowser
```

Client-side Web Part Build Flow

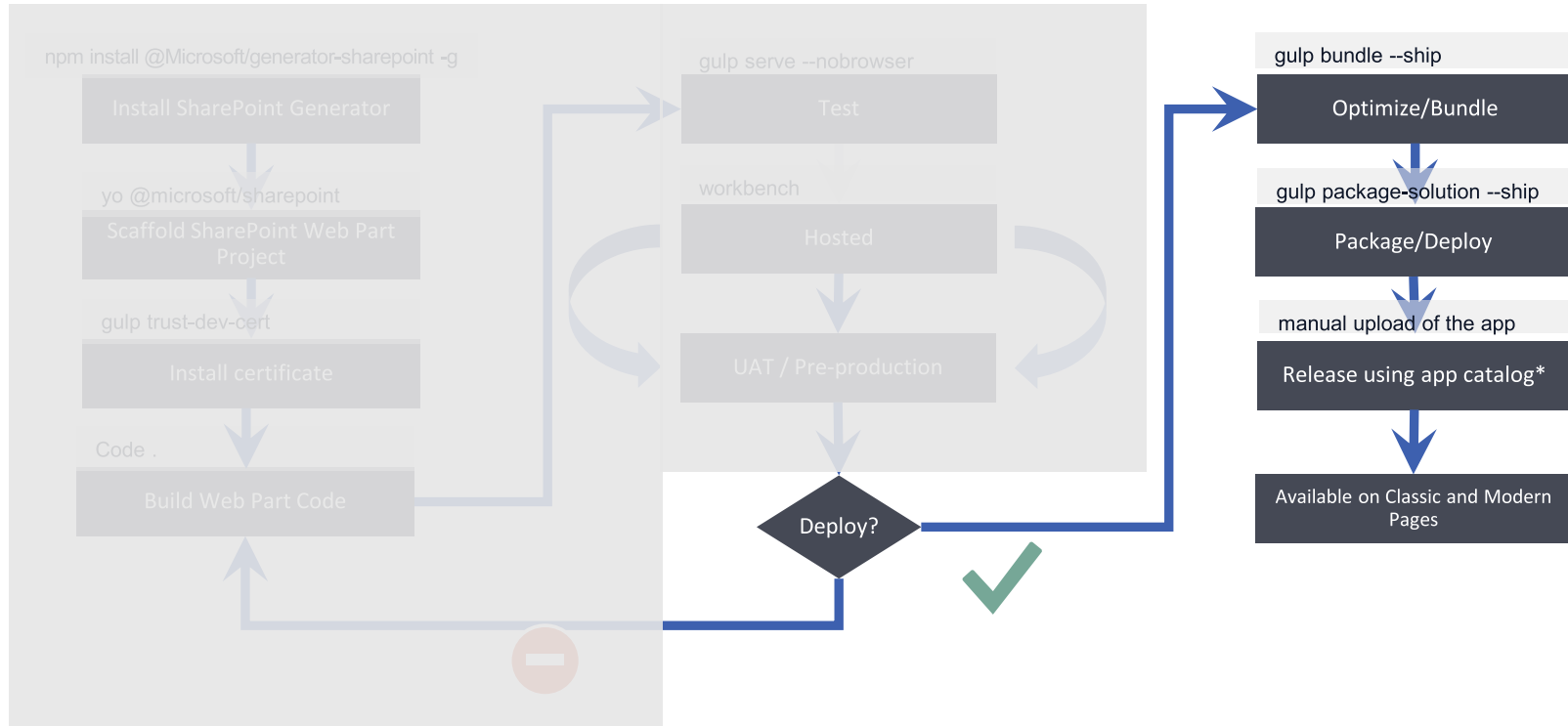


DEMO TIME!

Put on your dancing shoes and let's have some fun!

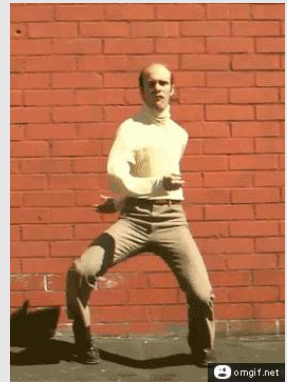


Client-side Web Part Build Flow



DEMO TIME!

Put on your dancing shoes and let's have some fun!



MICROSOFT 365 & POWER PLATFORM COMMUNITY

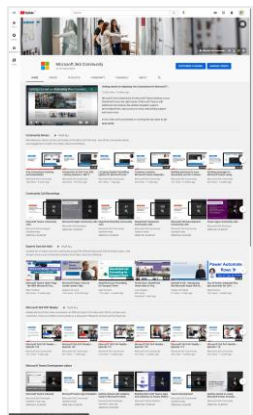
Learn from others how to build apps on Microsoft 365 & Power Platform. Don't reinvent the wheel. Focus on what truly matters for your organization.

Sharing is Caring!

aka.ms/m365/community

aka.ms/m365/community

Microsoft 365 & Power Platform community videos



aka.ms/community/videos

Subscribe today!

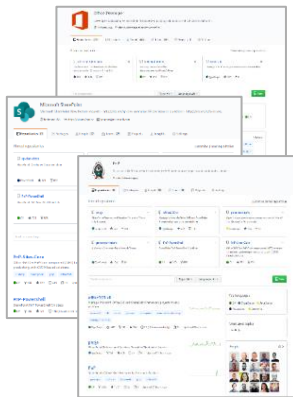
LinkedIn group for discussions



aka.ms/community/Li

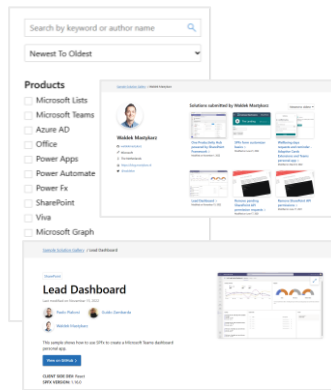
Join today!

Open-source



github.com/pnp
github.com/officedev
github.com/sharepoint
github.com/microsoftgraph

Sample galleries



aka.ms/community/samples

aka.ms/teams-samples
aka.ms/spfx-webparts
aka.ms/spfx-extensions
aka.ms/powerplatform-samples
aka.ms/list-formatting

Open-source initiatives and samples



aka.ms/community/home

Thank you

We greatly value your input. Please take a moment to complete our survey, accessible either through the Run.events app or by the link below:

<https://bit.ly/Thrive24Survey>



Thanks!

Do you have any questions?



<https://donkirkham.com>



@DonKirkham



/in/DonKirkham



DonKirkham

