



**SharePoint**  
**CONFERENCE**  
**NORTH AMERICA**

# Modern “site templates” in SharePoint Online using site scripts & site designs

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# Session objectives & takeaways

## objectives

Context: quick recap on modern self-service site provisioning

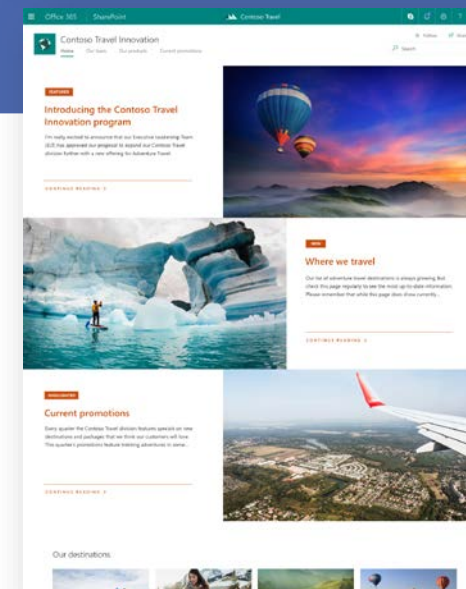
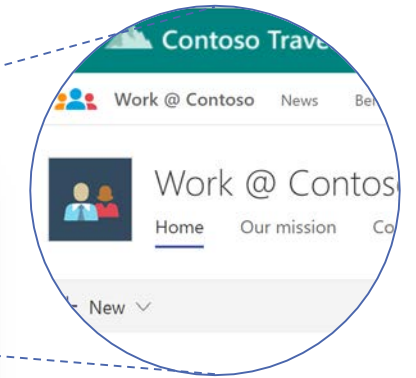
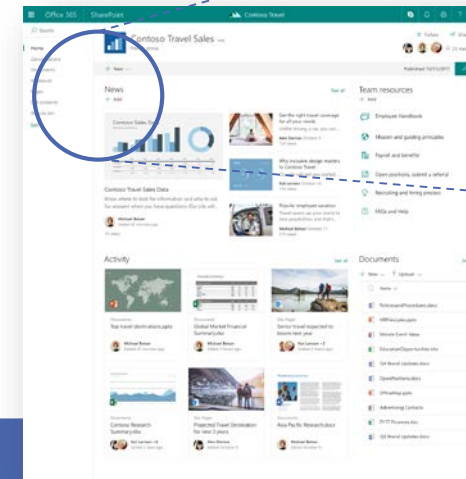
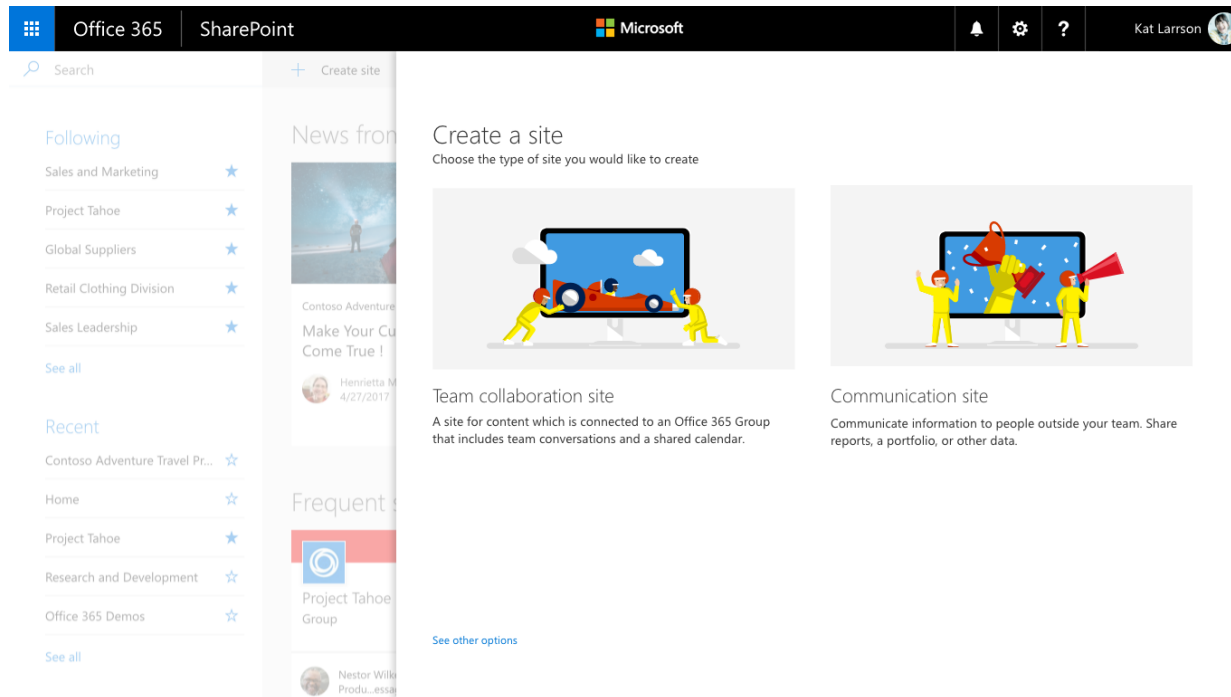
Introduce **site designs** – a modern approach to extending our site templates with custom script configurations

Illustrate how to build and use with available **site script** actions (Demos!)

## takeaways

Have a clear understanding of how we're approaching the curation and automation of SharePoint site creation/extensibility – to help integrate your requirements and business processes - while not compromising on benefit of future product updates

# Site creation: fast & modern



A new provisioning flow providing two templates  
The building blocks of a modern intranet  
O365 Group & Teams supported  
Connect w/ new hub site capabilities

# Content collaboration

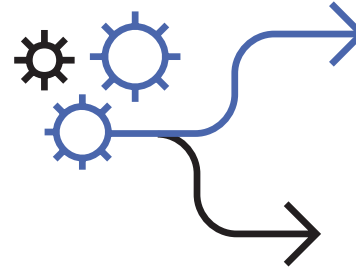
for the modern workplace



Share and work  
together



Inform and  
engage people



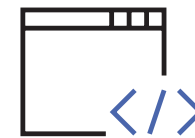
Transform  
business processes



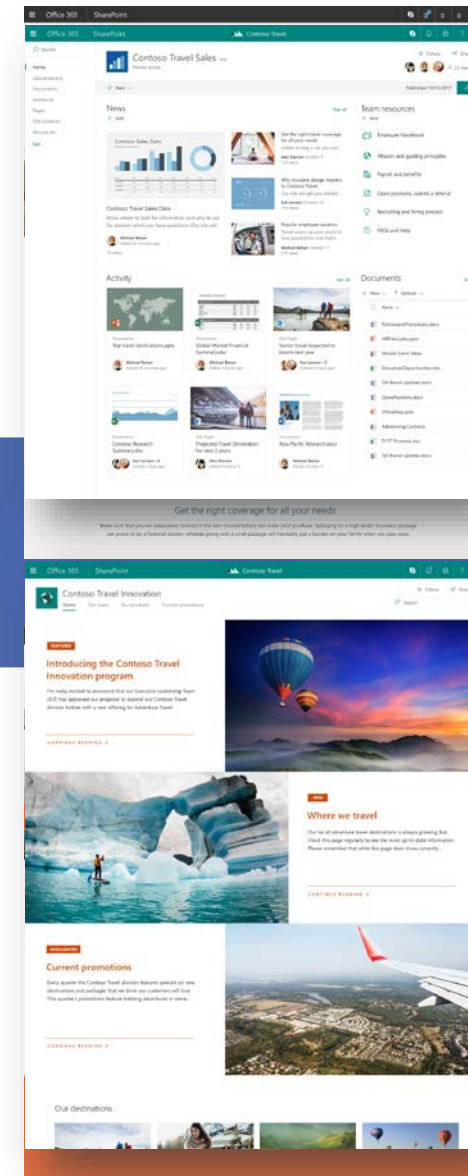
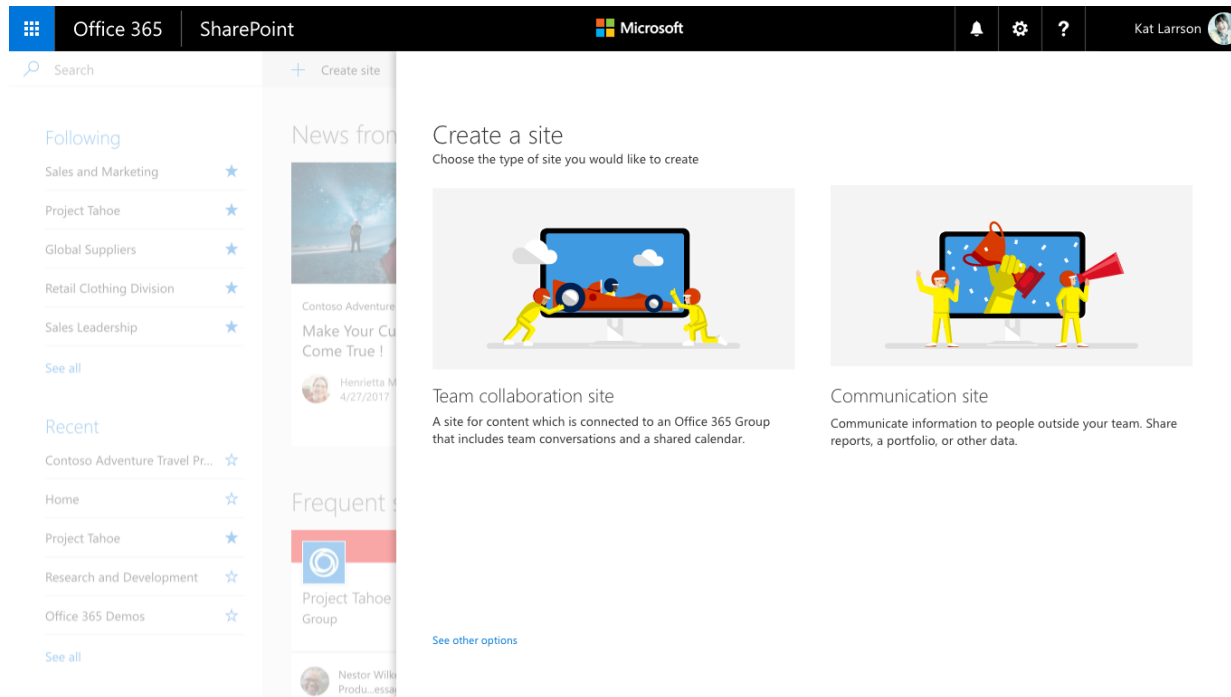
Harness collective  
knowledge



Protect & manage | Extend & develop



# Site creation: fast & modern and extensible



New capabilities to inject custom site configurations and business processes into the product provisioning pipeline

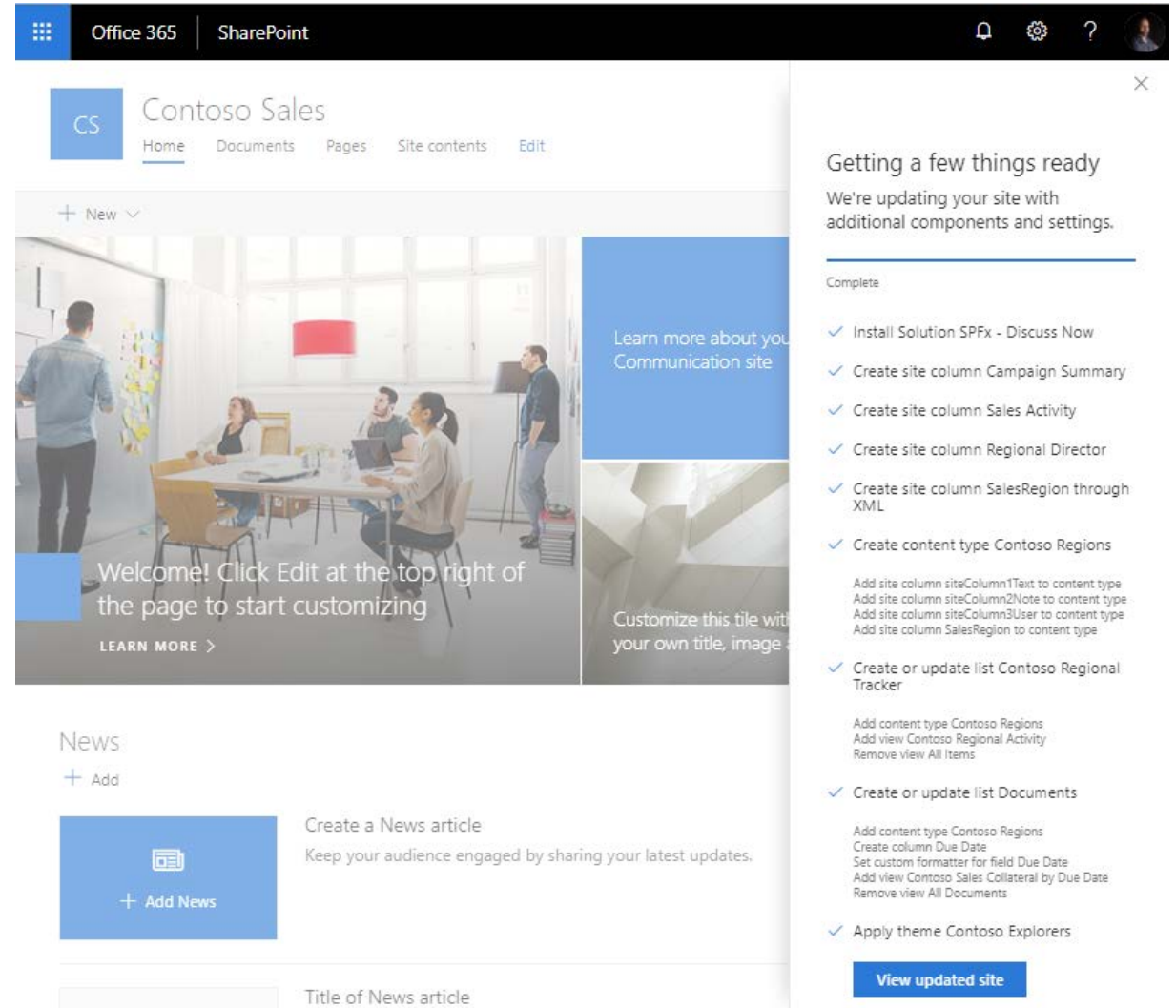
# Site designs: future templating model

A new approach for extending modern templates **post-creation** to automate the custom configuration of sites.

A new script model to apply custom “actions” to a site after creation.

Can be injected into the self-service site provisioning flow or manually applied to existing sites – and soon: when joining a hub!

This approach is inspired by the “remote provisioning” pattern we’ve espoused through PnP



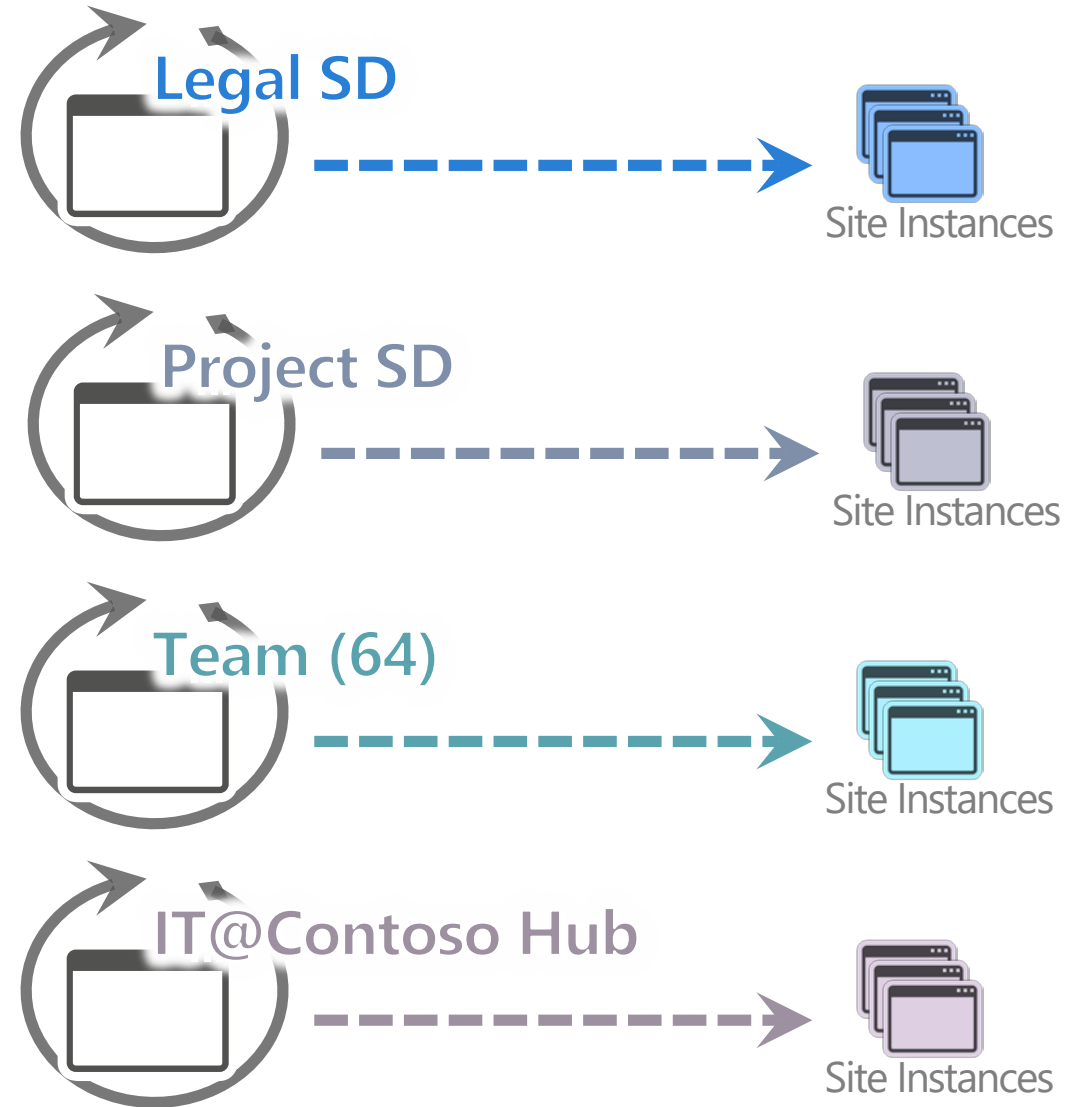
# When to use site designs

Application of specific configurations or business logic *consistently* when new sites are created

Updating existing sites with common site elements

Amending OOB templates w/ select customizations

Configuring sites associated to a hub





# Site Design CRUD

Use PowerShell & REST to create and manage site designs and site scripts

Associating scripts to designs

Scoping visibility in self-service site creation

Applying to a default template

Applying to an existing site

```
PS C:\WINDOWS\system32> Get-SPOSiteDesign

Id                : 9e8f3a4a-e3fb-498a-a5cf-7110df29d4
Title             : Contoso Travel - Focus Project
WebTemplate       : 64
SiteScriptIds     : {88a16cab-9c6a-4ec4-9f59-49ee9992b
Description       : Use this design to collaborate wit
for managing
```

```
PS C:\WINDOWS\system32> Invoke-SPOSiteDesign -Identity e10ac918-bdc9-42cb-98bc-cf
Title                                     OutcomeText Outcome
-----
Create site column Nominate for Travel Award      Success
Create site column Guide Outline                  Success
Create site column Guide                          Success
Create content type Travel Guide                   Success
Add site column siteColumnTravelAward to content type Success
Add site column siteColumnGuideOutline to content type Success
Add site column siteColumnGuide to content type    Success
Create or update list Travel Journals               Success
Add content type Travel Guide                       Success
Create column Trip Date                            Success
Set custom formatter for field Trip Date            Success
Add view Travel Guides by Travel Date               Success
Add Travel Journals to left nav                     Success
```

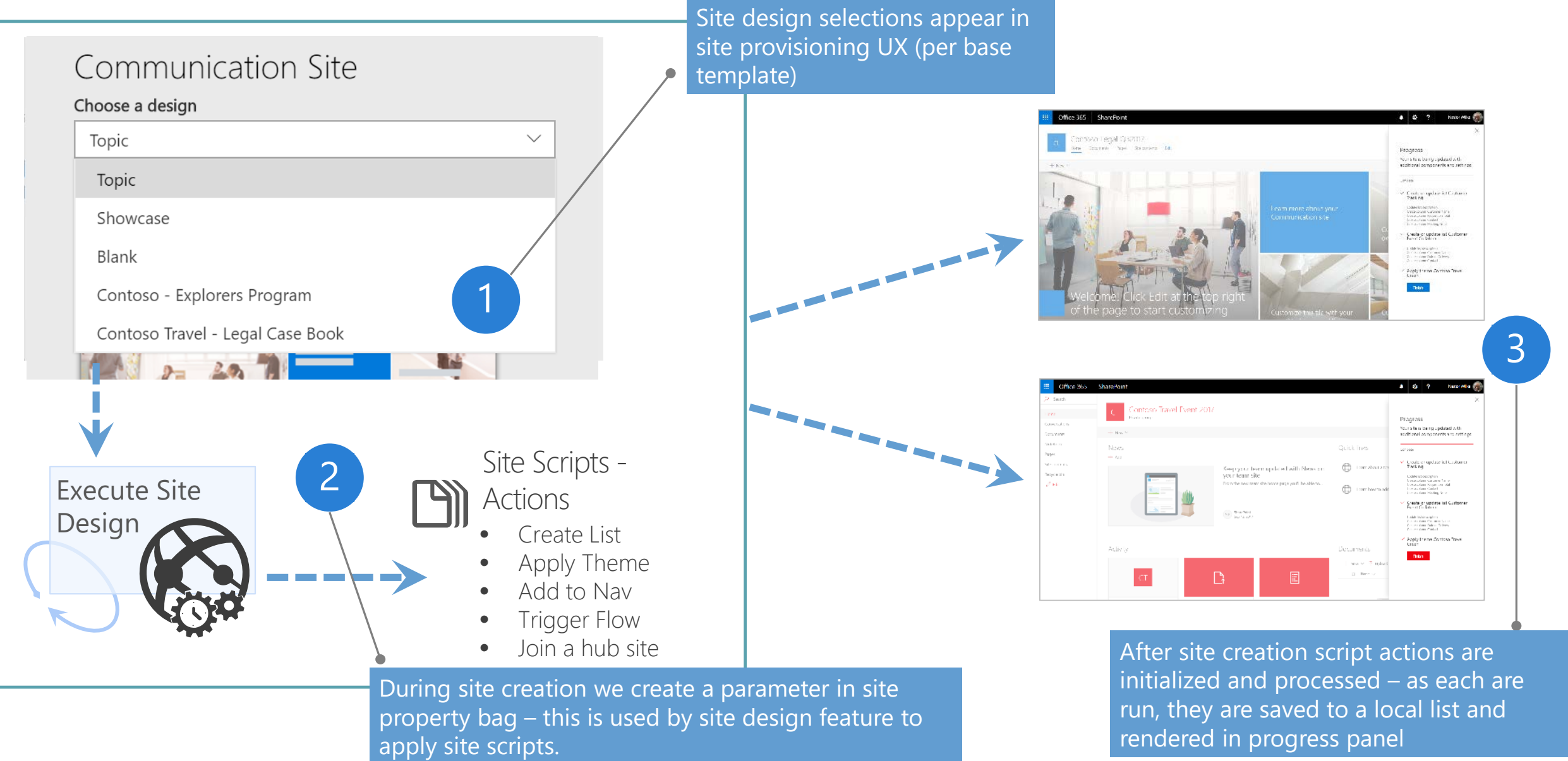
PowerShell: <https://docs.microsoft.com/en-us/sharepoint/dev/declarative-customization/site-design-powershell>

REST: <https://docs.microsoft.com/en-us/sharepoint/dev/declarative-customization/site-design-rest-api>

# Demo – SSSC Configuration Approaches

create site script & associate to a site design  
applying a site design as default  
scoping site designs

# Site designs in site creation flow



# Anatomy of site designs & site scripts

```
"$schema": "schema.json",
actions: [
...
{
  "verb": "createSPList",
  "listName": "Contoso Project Tracker",
  "templateType": 100,
  "subactions": [
    {
      "verb": "SetDescription",
      "description": "Custom list to illustrate
SharePoint site scripting capabilities"
    },
    {
      "verb": "addContentType",
      "name": "Contoso Projects"
    },
    {
      "verb": "addSPFieldXml",
      "schemaXml": "<Field Type=\"Choice\"
DisplayName=\"Project Status\" Required=\"FALSE\"
Format=\"Dropdown\" StaticName=\"ProjectStatus\"
Name=\"ProjectStatus\"><Default>In
progress</Default><CHOICES><CHOICE>In
progress</CHOICE><CHOICE>In review</CHOICE><CHOICE>Has
issues</CHOICE><CHOICE>Done</CHOICE></CHOICES></Field>
"
    },
    {
      "verb": "addSPView",
      "name": "Contoso Projects by Status",
      "viewFields":
...

```

**Site Script:** JSON file of actions to be applied to the site post-creation

## Limits (as of May 2018)

- 100 site scripts and site designs
- 30 cumulative actions and/or 30K character limit / site design

**Actions** can be concatenated in single file or multiple files can be used (and reused)

**Site Design** attributes designate display characteristics and target template

## Add-SPOSiteDesign

```
-Title <string>
-WebTemplate <string>
-SiteScripts <SPOSiteScriptPipeBind[]>
[-Description <string>]
[-PreviewImageUrl <string>]
[-PreviewImageAltText <string>]
[-IsDefault]
```

# Available Site Script Actions *right now*

## Site Settings



- addPrincipalToSPGroup
- addNavLink
- applyTheme
- setSiteLogo
- setRegionalSettings
- setSiteExternalSharingCapability
- triggerFlow
- joinHubSite

## SharePoint Components



- createSPList
- addSPField
- deleteSPField
- addSPFieldXml
- createSiteColumn
- createSiteColumnXml
- addSiteColumn
- addContentType
- createContentType
- removeContentType
- addSPView
- removeSPView
- setSPFieldCustomFormatter

## Apps & Solutions

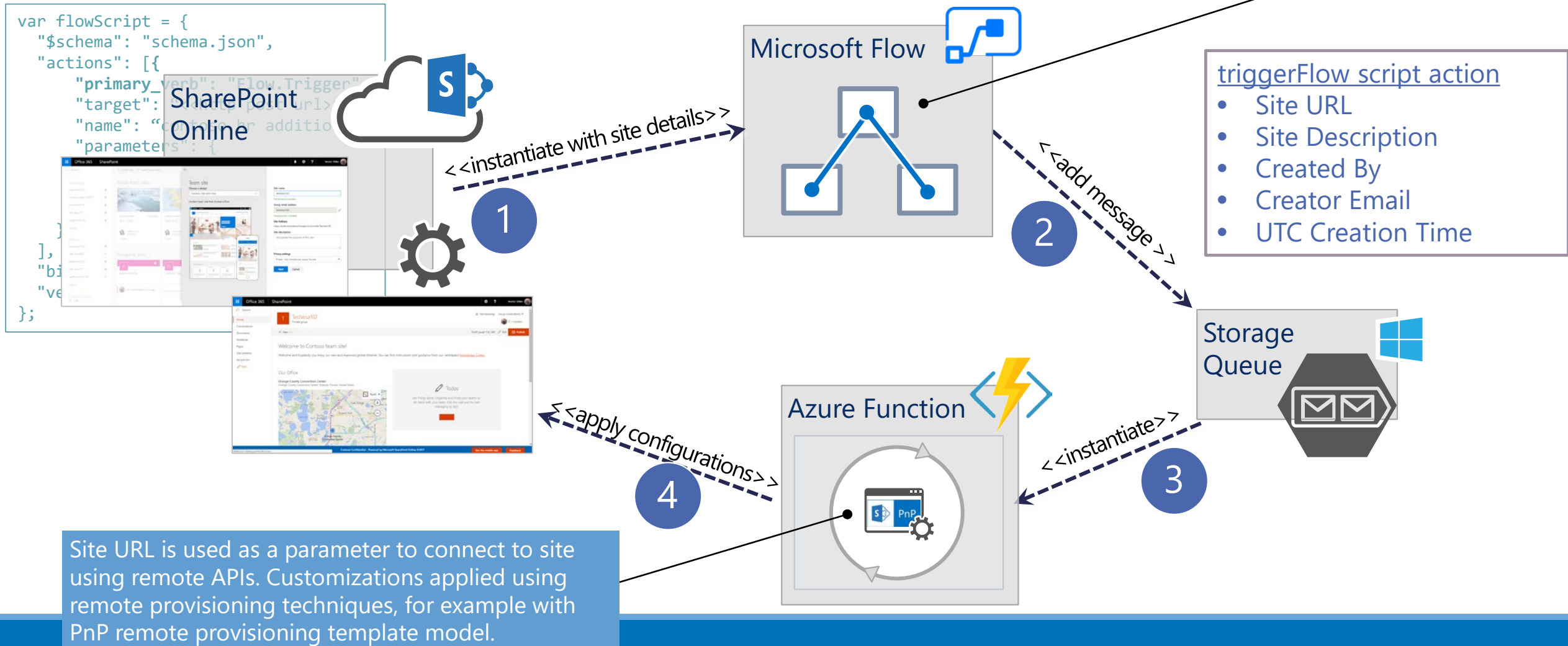


- installSolution
- SPFx Extension support!
  - associateExtension
  - associateListViewCommandSet
  - associateFieldCustomizer

JSON Schema: <https://docs.microsoft.com/en-us/sharepoint/dev/declarative-customization/site-design-json-schema>

# SSSC with app integration

## How to integrate custom logic into out-of-box provisioning flow



# Demo – site scripts deconstructed

modifying settings

create/amend site components

adding solutions



# Site Designs for Hubs!

Site designs will become an optional configuration capability - connected to a hub and then applied to sites on join.

These designs are published globally and can be used on one or more hubs.

The scripts are executed on join; additive so nothing is lost on site moves

Coming Soon

The screenshot displays a SharePoint site interface for 'Work @ Contoso'. The top navigation bar includes 'Contoso Travel' and 'SharePoint'. Below the navigation bar, the site title 'Work @ Contoso' is shown with tabs for 'Home', 'Documents', 'Pages', 'Site contents', and 'Edit'. A '+ New' button is visible. The main content area features a 'News' section with a '+ Add' button and a large image of three people in a meeting. Below the image, a news item titled 'Contoso Travel wins Best Workplace award' is displayed, dated September 16, 2017, by Chris McNulty. To the right of the news feed, a task list titled 'Getting a few things ready' is shown, indicating that the site is being updated with additional components and settings. The task list includes several items with checkboxes, such as 'Install Solution SPFx - Discuss Now', 'Create site column Campaign Summary', and 'Create content type Contoso Regions'. A 'View updated site' button is located at the bottom of the task list.

Work @ Contoso

Home Documents Pages Site contents Edit

+ New

News

+ Add

Contoso Travel wins Best Workplace award

Contoso Travel was recently selected as one of the best places to work by Northwind Press. Factors investigated in this study included compensation and benefits, hiring prac...

Chris McNulty  
September 16, 2017  
6 views

How to get the m...  
Did you know that e...  
for Contoso employe...  
Naomi Money Penny Sep...  
7 views

New Benefits Port...  
It has now been one...  
benefits portal was l...  
Naomi Money Penny Sep...  
4 views

Quarterly HR New...  
Hi Contoso, it's time...  
The HR Newsletter is...  
Chris McNulty Septembe...  
7 views

Getting a few things ready  
We're updating your site with additional components and settings.

Complete

- ✓ Install Solution SPFx - Discuss Now
- ✓ Create site column Campaign Summary
- ✓ Create site column Sales Activity
- ✓ Create site column Regional Director
- ✓ Create site column SalesRegion through XML
- ✓ Create content type Contoso Regions
- ✓ Create or update list Contoso Regional Tracker
- ✓ Create or update list Documents
- ✓ Apply theme Contoso Explorers

View updated site



# Site Designs for Existing Sites!

Site designs can also be applied to existing sites.

PowerShell or REST can be used to apply a published design to a site.

Currently we only support modern site templates, but application to additional site templates coming soon!

```
PS C:\WINDOWS\system32> Invoke-SPOSiteDesign -WebUrl "https://spdfcontosodemo2.sharepoint.com/teams/classicteam022018" -Identity 13ca0e2e-c59f-40c5-a661-a1a112eea818
```

Title	OutcomeText	Outcome
Update site regional settings		Success
Create site column Project Summary		Success
Create site column Effort in Days		Success
Create site column Project Details		Success
Create site column Project Owner		Success
Create site column AdjustedPrice through XML		Success
Create site column ProjectCategory through XML		Success
Create content type Contoso Projects		Success
Add site column siteColumn1Text to content type		Success
Add site column siteColumn2Number to content type		Success
Add site column siteColumn3Note to content type		Success
Add site column siteColumn4User to content type		Success
Add site column AdjustedPrice to content type		Success
Add site column ProjectCategory to content type		Success
Create or update list Contoso Project Tracker		Success
Add content type Contoso Projects		Success
Add column ProjectStatus through XML		Success
Add view Contoso Projects by Status		Success

Home

**CT** Classic Team - Site Design-ified!

Search

+ New Upload Quick edit Sync Export to Excel Flow

Home

Notebook

**Documents**

Pages

Contoso Projects

Documents

ID	Title	Project Owner
----	-------	---------------

# Demo

Apply to existing sites w/ *Invoke-SPOSiteDesign*  
Apply to a site when joining a hub

# Roadmap: Site Scripts & Site Designs

## Shipped since Ignite (September 2017)

- Site Designs with updated JSON schema & extensibility point in S3C (Generally available)
- Full set of REST and PowerShell commands for CRUD and scoping operations
- Core set of site script actions: create lists and key list settings; site columns; declarative content types; site regional and sharing settings; app catalog and SPFx extension registration; apply company themes; trigger Flow (for greater flexibility)
- REST and PowerShell support for applying to existing site collections (modern)

## What's Next!?

- Additional triggers & entry points: on hub join; reusable selector from other workloads
- Application to other site templates
- More site script actions
- Site script auditing; recall applied site design on-demand
- Auto-extraction of select SP objects

# Site Scripts & Site Designs

## Official Documentation

<https://aka.ms/spsitedesigns>

<https://docs.microsoft.com/en-us/sharepoint/dev/declarative-customization/site-design-overview>

## Open-Source Site Script Samples

<http://aka.ms/spsitescriptsamples>

<https://github.com/SharePoint/sp-dev-site-scripts>

## Recent Announcements:

<https://techcommunity.microsoft.com/t5/SharePoint-Blog/SharePoint-Site-Scripts-and-Site-Designs-April-2018-release/ba-p/181254>

# UserVoice – SharePoint Dev

Make yourself heard! Help us prioritize!

<http://aka.ms/spdev-uservoice>

<https://aka.ms/spsitedesignuservoice>

SharePoint Tech Community

<https://techcommunity.microsoft.com>

Thank you!