

# Provisioning Microsoft Teams

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Microsoft Teams



Microsoft Tech Community



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**BIVUG**



Technology Evangelist ☕ ☁ 🖥

#Microsoft365 #Azure #CommunityRocks



**Joanne Klein** @JoanneCKlein · Jul 9

SharePoint Team site/Microsoft Teams provisioning... What is your org \*currently\* doing in Office365?

34% Manually created by IT

35% End-users create them

27% A provisioning solution

4% Other - comment please

155 votes • Final results



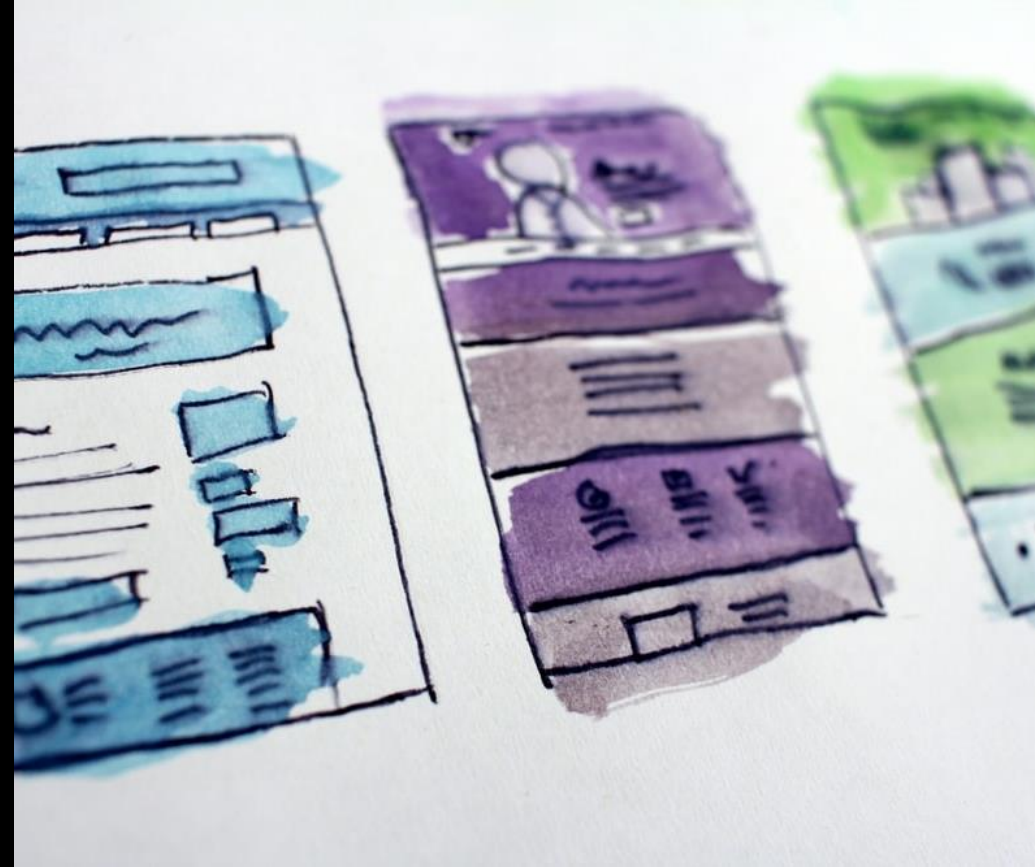
# What are we trying to solve here?

- Avoid Teams/Groups creation sprawl
- Reduce manual intervention
- Less mistakes and errors
- Enforce governance policies
- Consistency supports user adoption



# Built-in templates

- Adopt Office 365
- Manage a project
- Manage an event
- Onboard employees
- Organize help desk
- Collaborate on patient care
- Collaborate on global crisis or event
- Collaborate within a bank branch
- Coordinate incident response
- Hospital
- Organize a store
- Quality and safety
- Retail – manager collaboration



# Example: “Manage an event”

## Channels

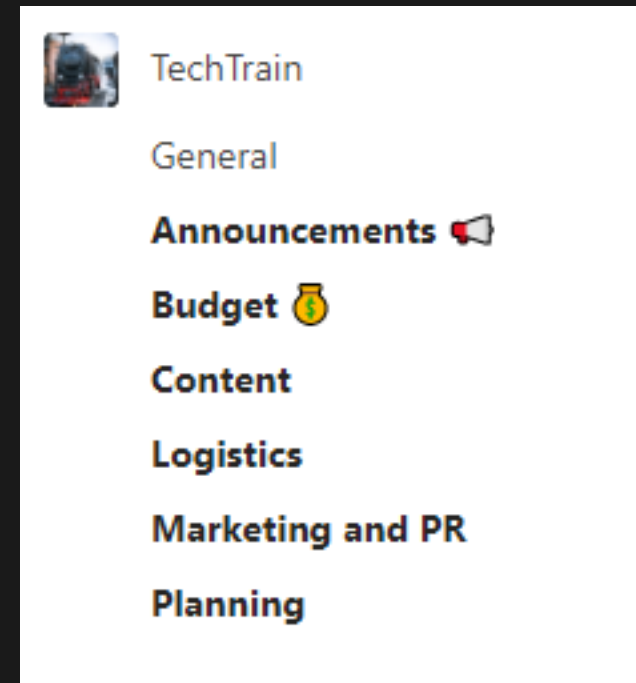
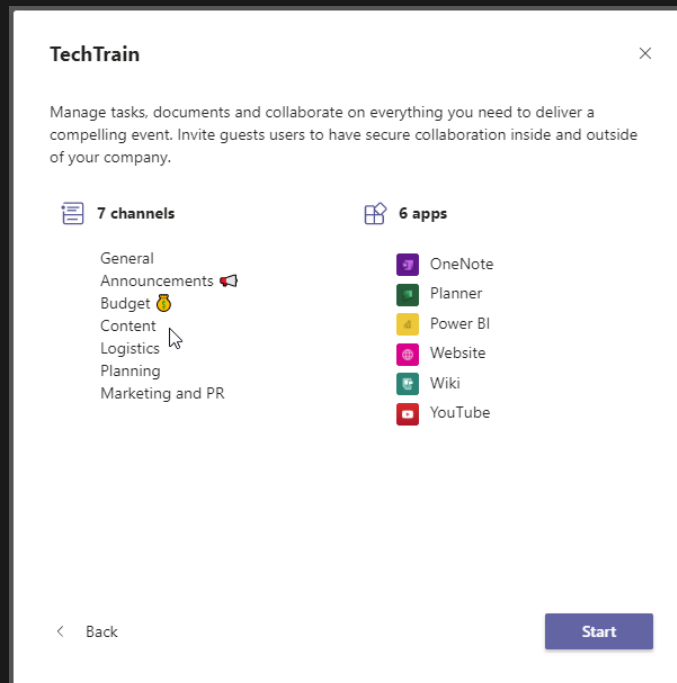
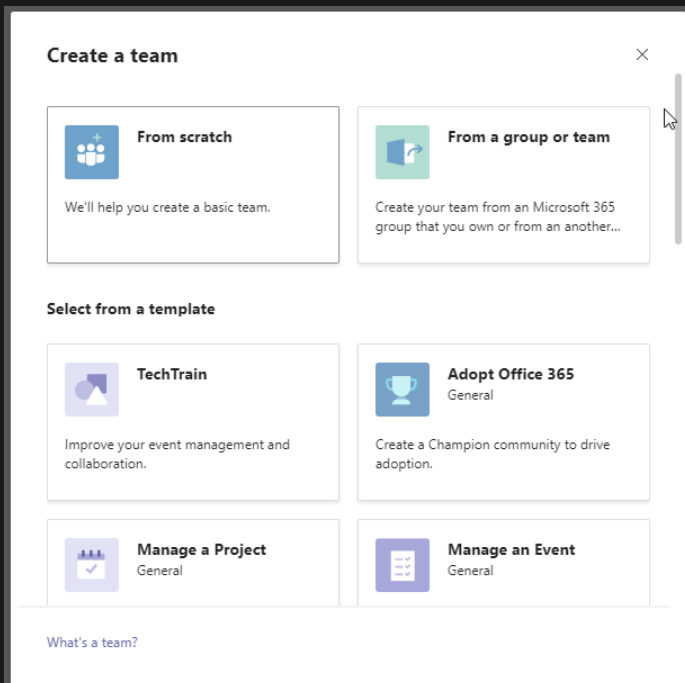
- General
- Announcements
- Budget
- Content
- Logistics
- Planning
- Marketing & PR

## Apps

- Wiki
- Website
- YouTube
- Planner
- OneNote
- Employee Ideas
- Issue Reporter

# If all you need is a template...

## Congratulations, you're done!





# Creating templates

## Easy: Teams Admin Center

- From scratch
- From an existing Team
- Clone an existing template

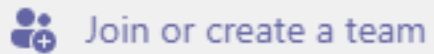
## Manually: Graph

template definition (json)

```
{
  "template@odata.bind": "https://graph.microsoft.com/beta/teamsTemplates('standard')",
  "displayName": "Finance",
  "description": "Finance Team",
  "channels": [
    {
      "displayName": "Private",
      "isFavoriteByDefault": true,
      "description": "Invite a more select audience for specific topics.",
      "tabs": [
        {
          "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('0d820ecd-def2-4297-a",
          "name": "OneNote"
        },
        {
          "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('com.microsoft.teams",
          "name": "Planner"
        }
      ]
    }
  ],
  "memberSettings": {
    "allowCreateUpdateChannels": true,
    "allowDeleteChannels": true,
    "allowAddRemoveApps": true,
    "allowCreateUpdateRemoveTabs": true,
    "allowCreateUpdateRemoveConnectors": true
  },
  "guestSettings": {
    "allowCreateUpdateChannels": false,
    "allowDeleteChannels": false
  },
  "funSettings": {
    "allowGiphy": true,
    "giphyContentRating": "Moderate",
    "allowStickersAndMemes": true,
    "allowCustomMemes": true
  },
  "messagingSettings": {
    "allowUserEditMessages": true,
    "allowUserDeleteMessages": true,
    "allowOwnerDeleteMessages": true,
    "allowTeamMentions": true,
    "allowChannelMentions": true
  },
  "discoverySettings": {
    "showInTeamsSearchAndSuggestions": true
  },
  "installedApps": [
    {
      "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('0d820ecd-def2-4297-adad-7805",
    },
    {
      "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('com.microsoft.teamspace.tab.",
    }
  ]
}
```



# Disable group / team creation



- Create a group for users that should still be able to create groups
- Run some PowerShell to set the following property:

GroupCreationAllowedGroupId

<https://docs.microsoft.com/en-us/microsoft-365/solutions/manage-creation-of-groups>



## Choices...

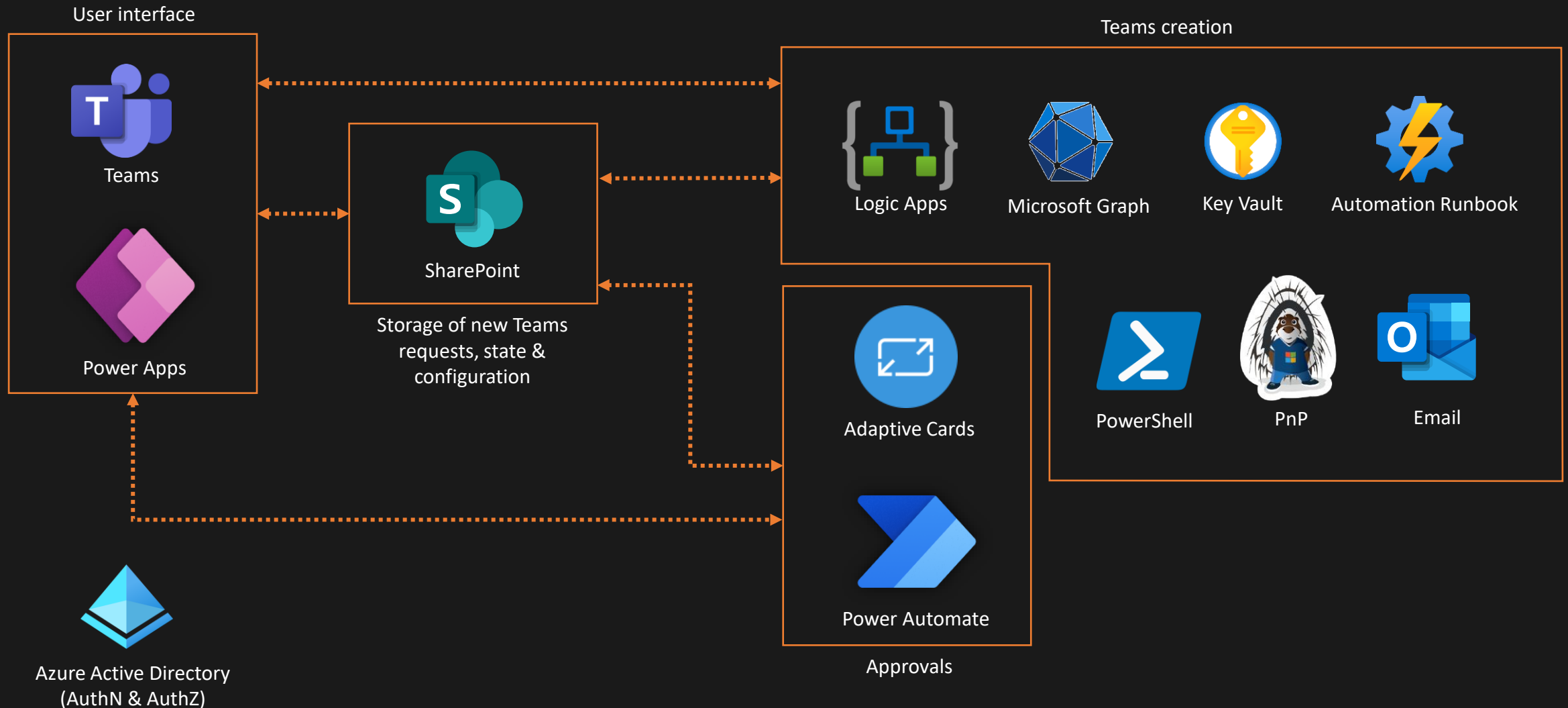
- Custom web app
- Power Automate
- Power Apps
- Azure Automation
- Azure Functions
- Teams apps, tabs, bots,...
- Azure Logic Apps
- PowerShell
- SharePoint
- PnP Provisioning Engine

# When to use what?

flexibility • cost • complexity •  
resilience • orchestration •  
security • triggers • scaling •  
maturity level • ...

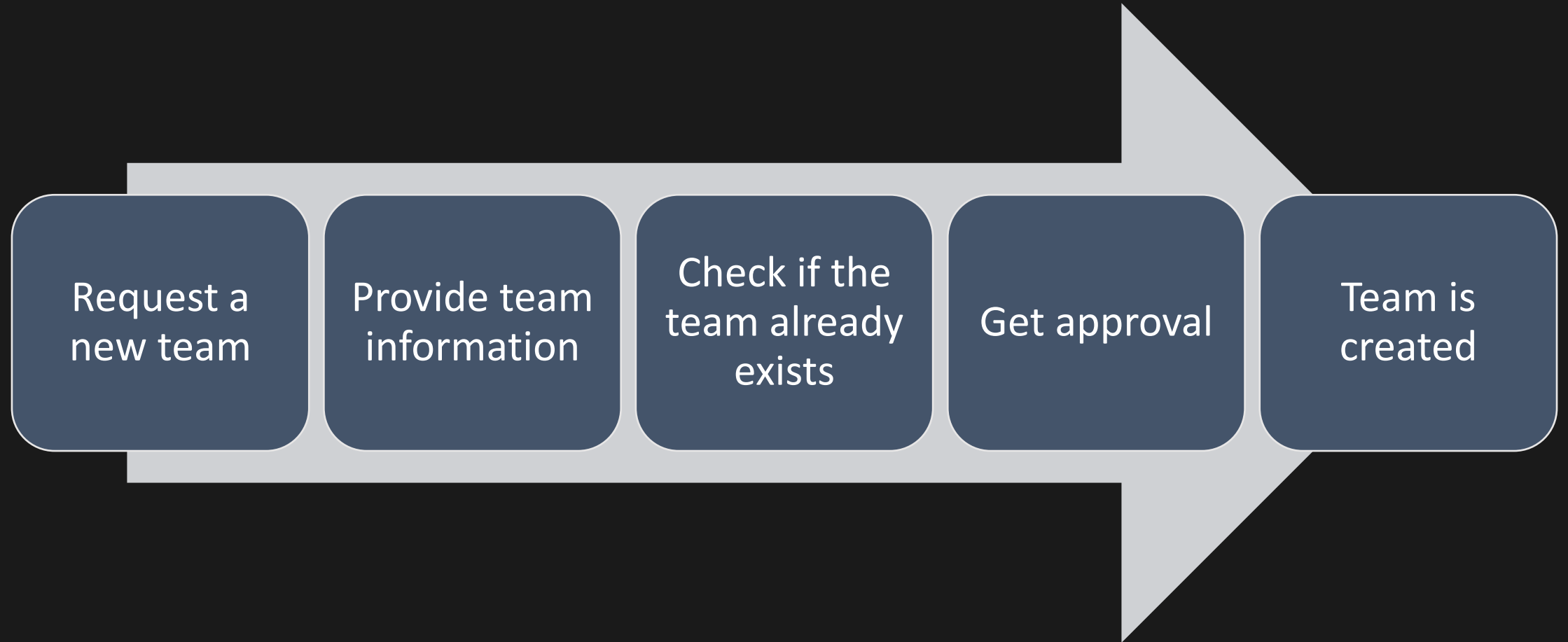


# “Request a Team” design elements





# “Request a Team” flow





# Demo

Teams provisioning engine

# It's free!



## Request-a-team App Template

<https://github.com/OfficeDev/microsoft-teams-apps-requestateam>

- Scripts & assets
- Documentation
- Troubleshooting

# One API to rule them all

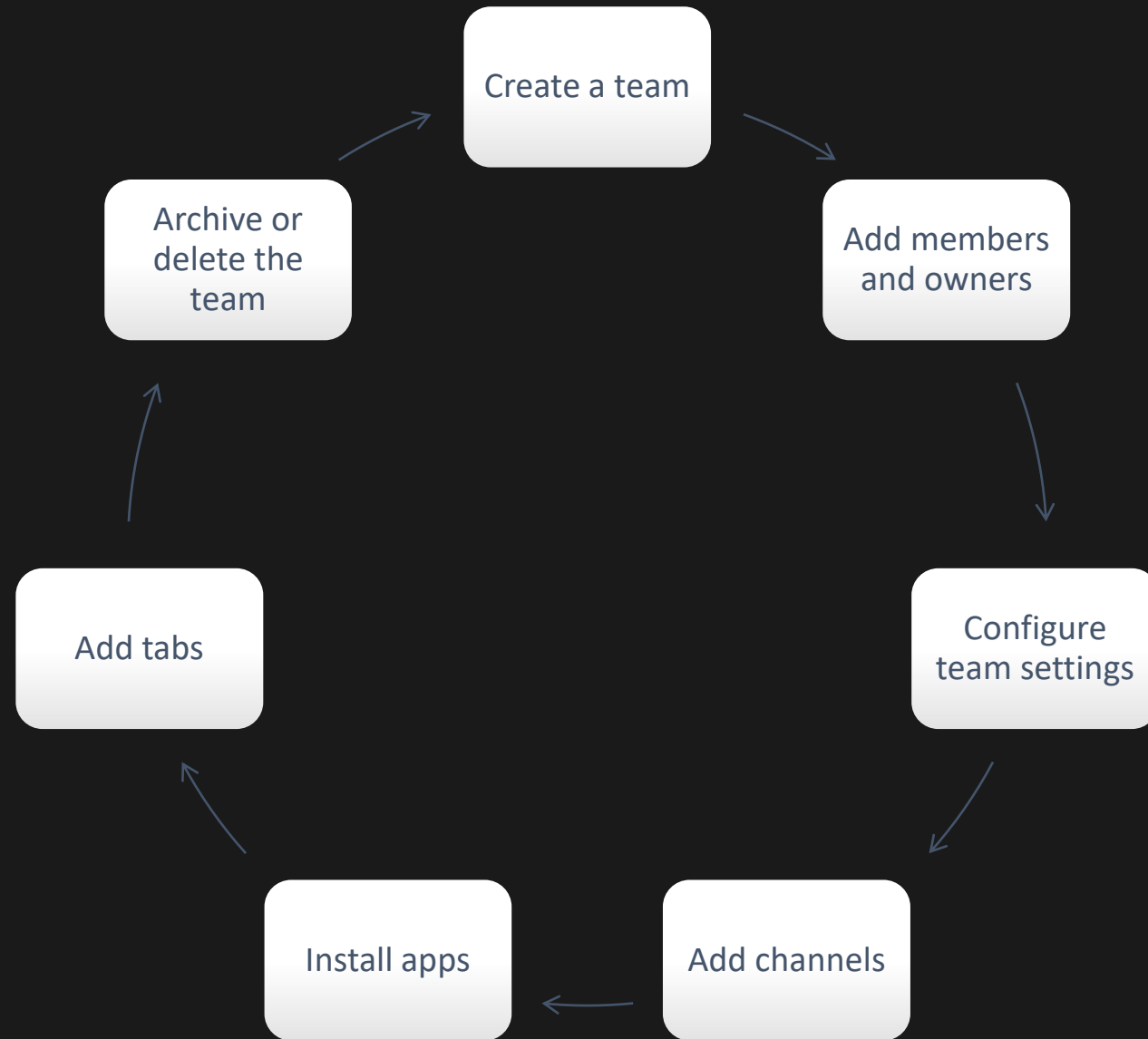


<https://docs.microsoft.com/en-us/graph>



# Teams and the Microsoft Graph

A typical workflow



# Register your app in Azure AD



Authentication



Authorization

API / Permissions name	Type	Description	Admin consent req...	Status	
▼ Microsoft Graph (8)					
<a href="#">Directory.ReadWrite.All</a>	Application	Read and write directory data	Yes	✔ Granted for thvo.net	...
<a href="#">Group.ReadWrite.All</a>	Application	Read and write all groups	Yes	✔ Granted for thvo.net	...
<a href="#">Team.Create</a>	Application	Create teams	Yes	✔ Granted for thvo.net	...
<a href="#">Team.ReadBasic.All</a>	Application	Get a list of all teams	Yes	✔ Granted for thvo.net	...
<a href="#">TeamMember.ReadWrite.All</a>	Application	Add and remove members from all teams	Yes	✔ Granted for thvo.net	...
<a href="#">TeamSettings.ReadWrite.All</a>	Application	Read and change all teams' settings	Yes	✔ Granted for thvo.net	...
<a href="#">User.Read</a>	Delegated	Sign in and read user profile	-	✔ Granted for thvo.net	...
<a href="#">User.ReadWrite.All</a>	Application	Read and write all users' full profiles	Yes	✔ Granted for thvo.net	...

# Teams creation through the Microsoft Graph

```
POST https://graph.microsoft.com/v1.0/teams
Content-Type: application/json

{
  "template@odata.bind": "https://graph.microsoft.com/v1.0/teamsTemplates('standard')",
  "displayName": "My Sample Team",
  "description": "My Sample Team's Description",
  "members@odata.bind": [
    {
      "@odata.type": "#microsoft.graph.aadUserConversationMember",
      "roles": [
        "owner"
      ],
      "userId": "0040b377-61d8-43db-94f5-81374122dc7e"
    }
  ]
}
```

Minimal request to create a team based on a template,  
with application permissions.

# Teams creation through the Microsoft Graph

- Programmatically
- PowerShell

or leverage Graph support in:

- Power Automate
- Power Apps
- Logic Apps



# PowerShell to the rescue!

A good alternative to “real” development  
Can be leveraged with:

- Azure Automation
- Azure Functions

Microsoft Graph PowerShell SDK

```
Install-Module Microsoft.Graph
```



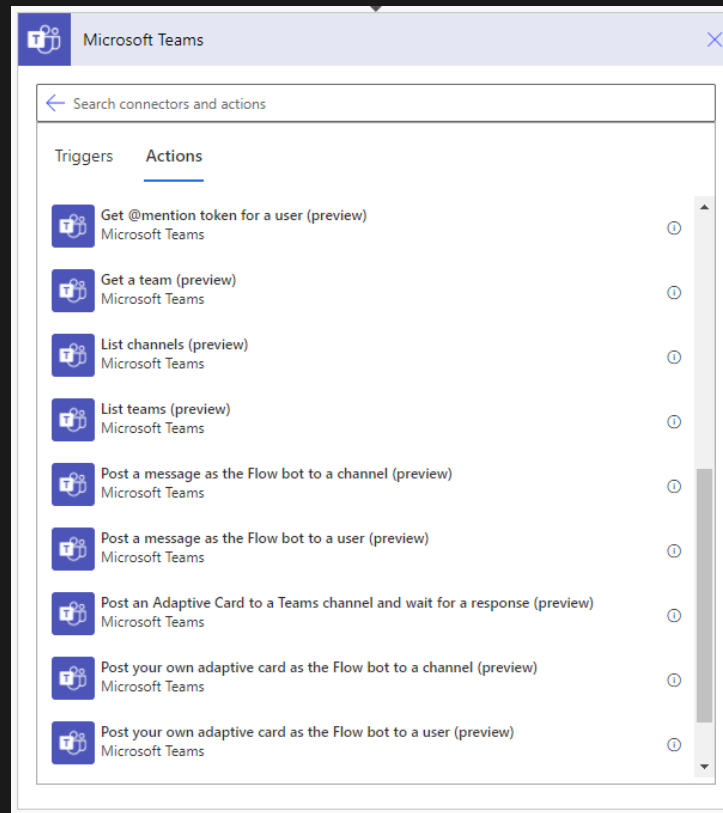
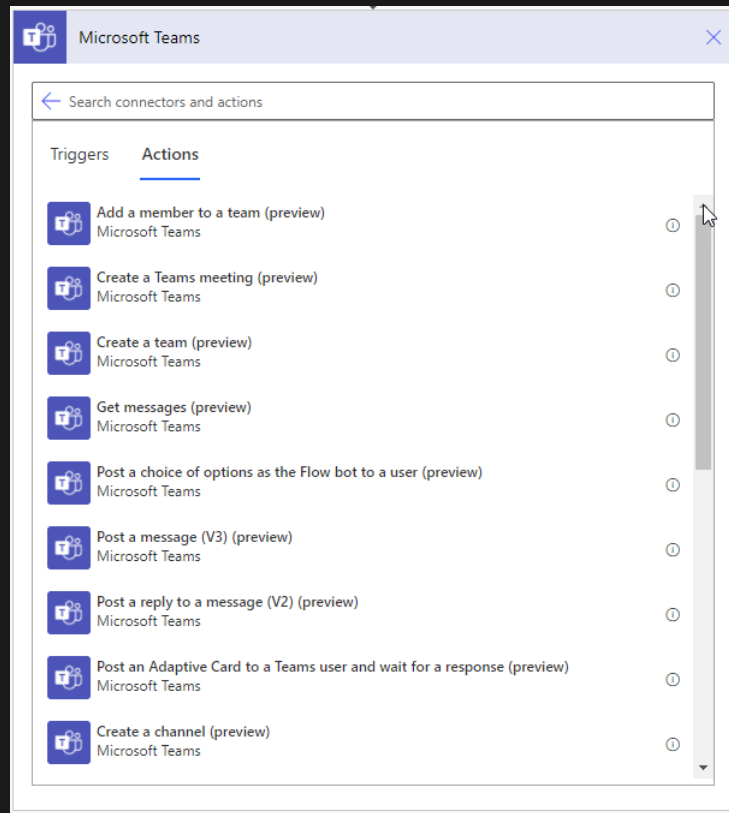
# All PowerShell options

- MicrosoftTeams
  - New-Team
- PnP.PowerShell
  - New-PnPTeamsTeam
- Microsoft.Graph
  - New-MgTeam



# Power Automate

Teams connector is now in preview



# Key takeaways

- There's no one size fits all
- Leverage Teams as a platform to build your solution
- Get to know the Microsoft Graph
- Choose your weapons wisely, there's a lot of choice
- Dive into the Power Platform and its built-in connectors
- Don't dismiss PowerShell



# Some useful reading

[Request a team app on GitHub](#)



[Joanne Klein](#)

[Laura Kokkarinen](#) (also: [30 questions to ask](#))

[Yannick Reekmans](#)

[Bob German](#)

[Microsoft Graph Teams documentation](#)

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Rate this  
session



Attend more  
sessions and  
join our  
keynotes at  
19.00 CET



Show your love  
for Teams Nation  
on Twitter and  
LinkedIn using  
#TeamsNation  
and  
@TeamsNation

<https://teamsnation.rocks/feedback>