MICHIGAN STATE UNIVERSITY

Project Plan Presentation

Collaboration Bot for Microsoft Teams

The Capstone Experience

Team PwC

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From Students…
…to Professionals

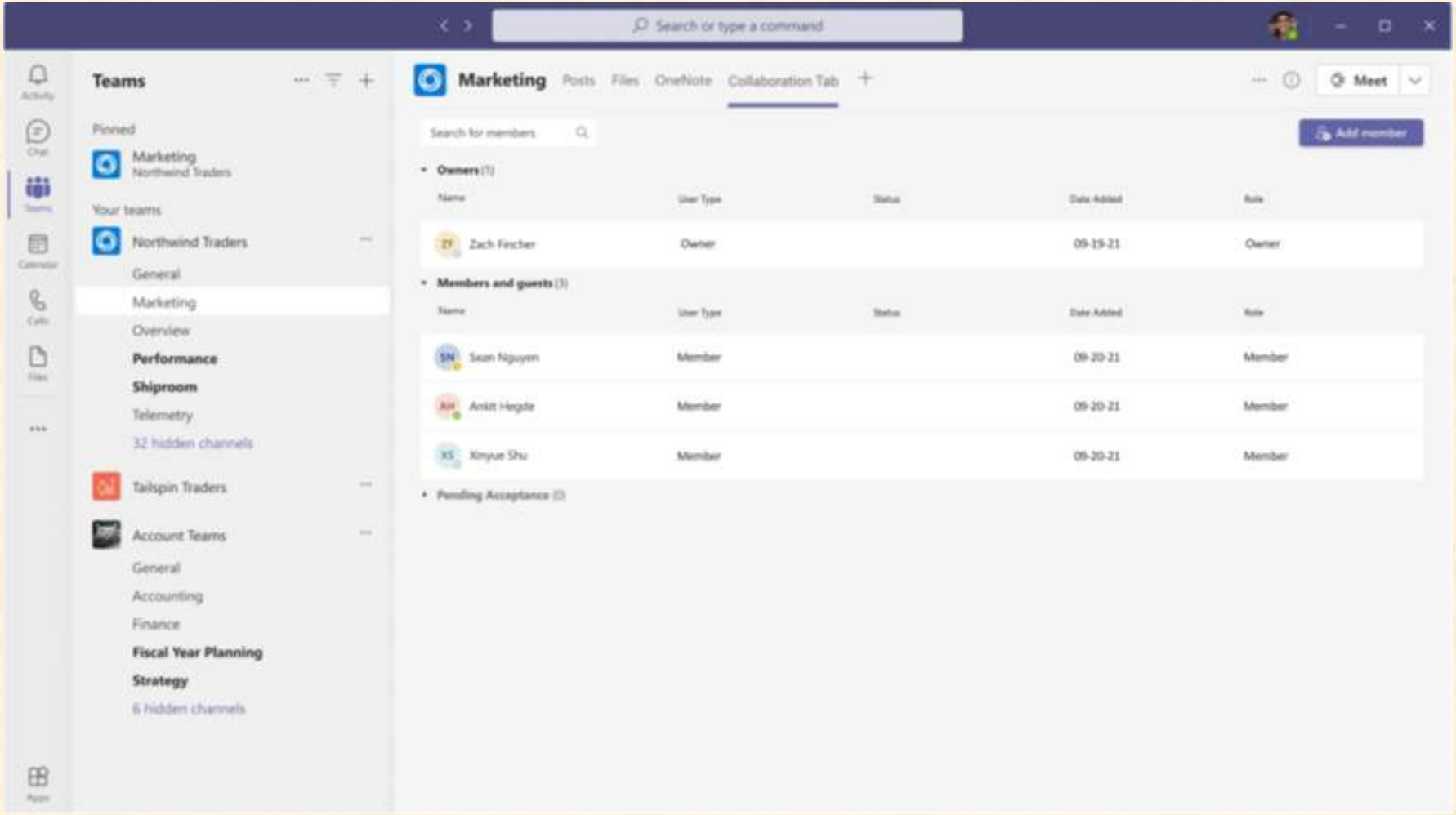
Functional Specifications

- PwC collaborates with many people outside of the immediate organization. The process of gathering all these external members onto one platform is manual and tedious.
- The Collaboration Bot will allow PwC employees to request to add external users to the organization on Microsoft Teams.
- The process to grant external users the access they need on a Microsoft environment should lessen the manual work an IT admin used to do.

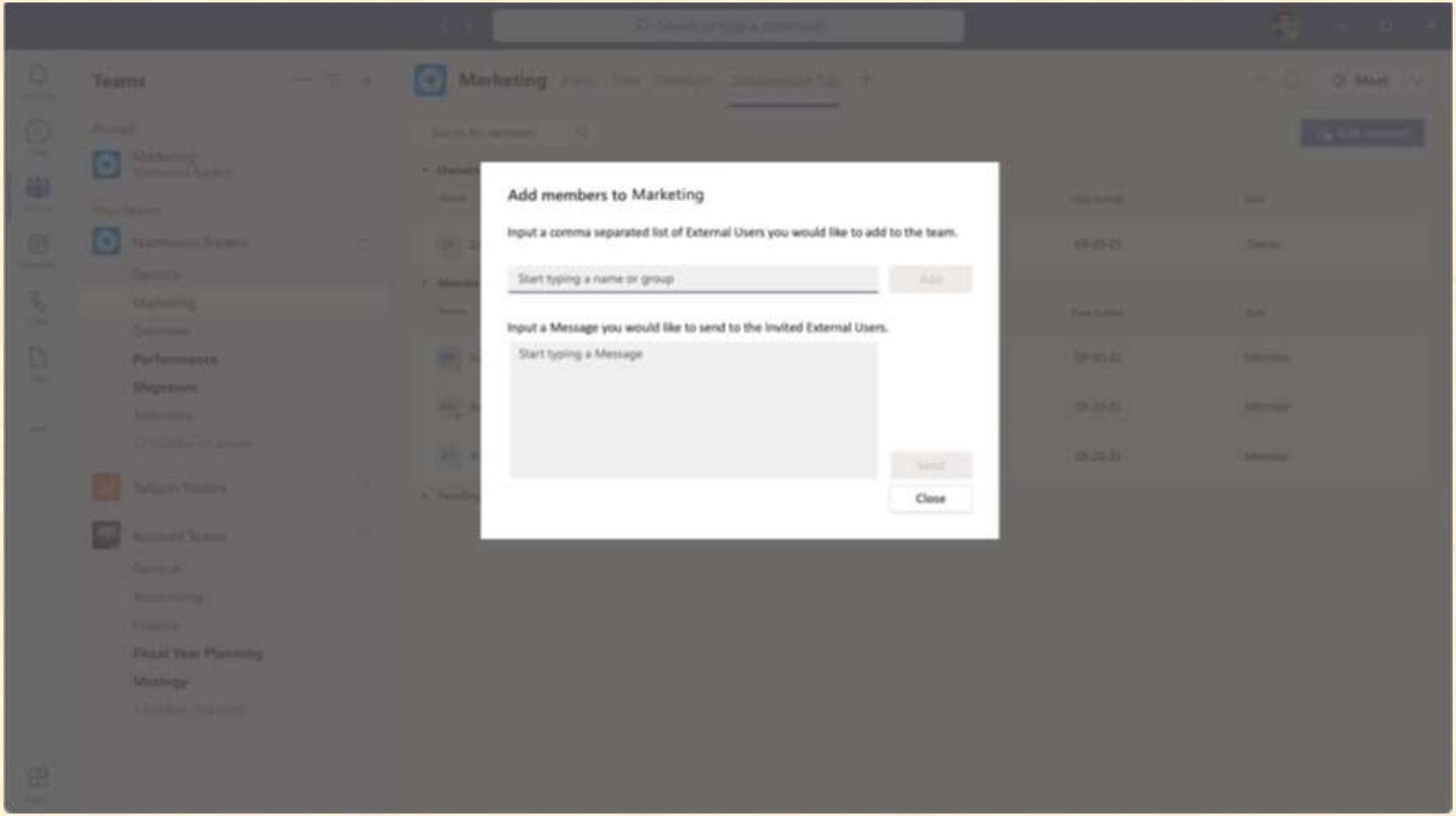
Design Specifications

- Two main views: Internal User View & External User View
- Internal User View:
  - Give Internal Users the ability to View and Manage their Team via a Layout that is similar to the built in Manage View of Microsoft Teams
- External User View:
  - Give External Users the ability to only view the members of the team

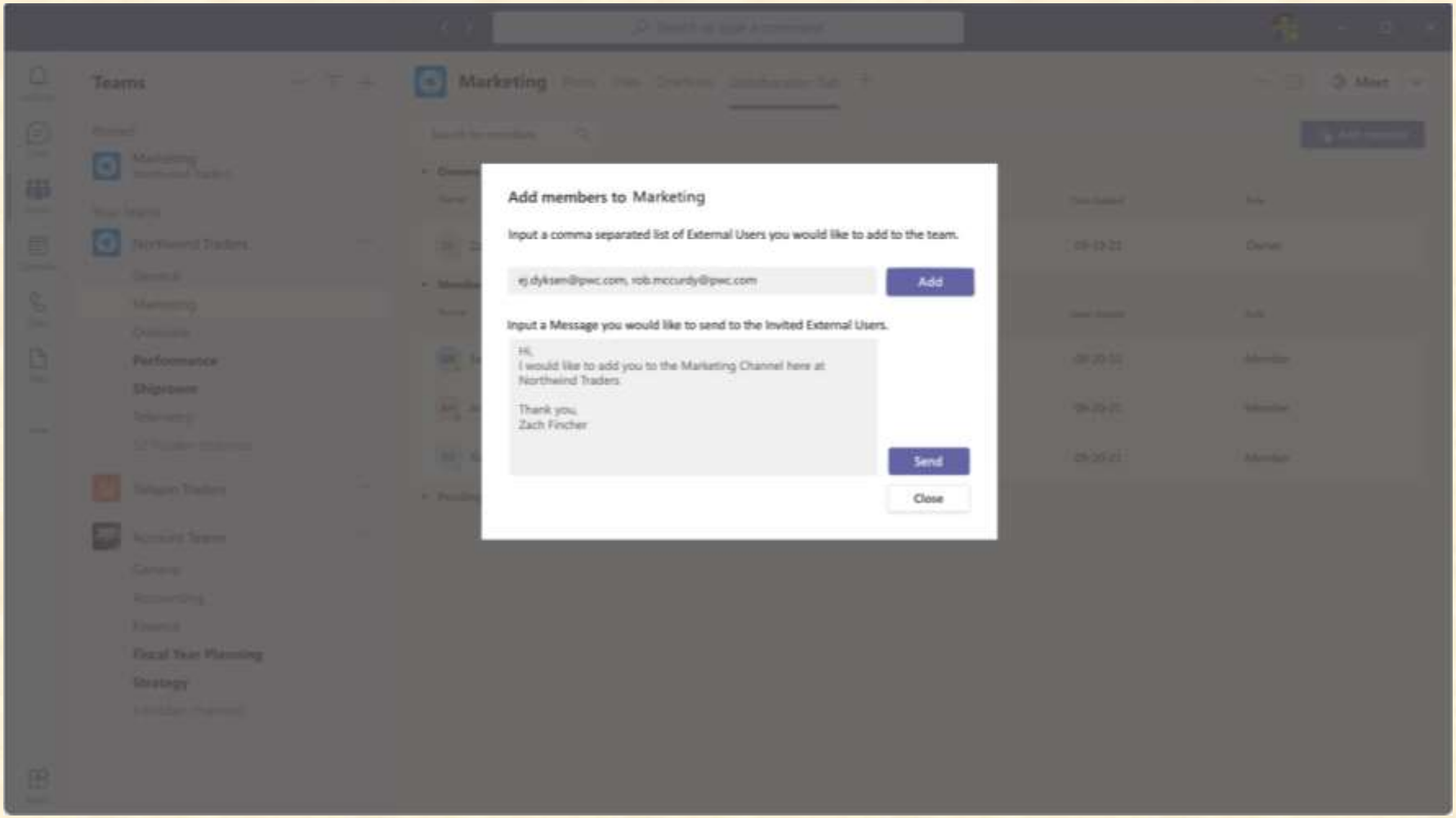
Screen Mockup: Internal User View 1



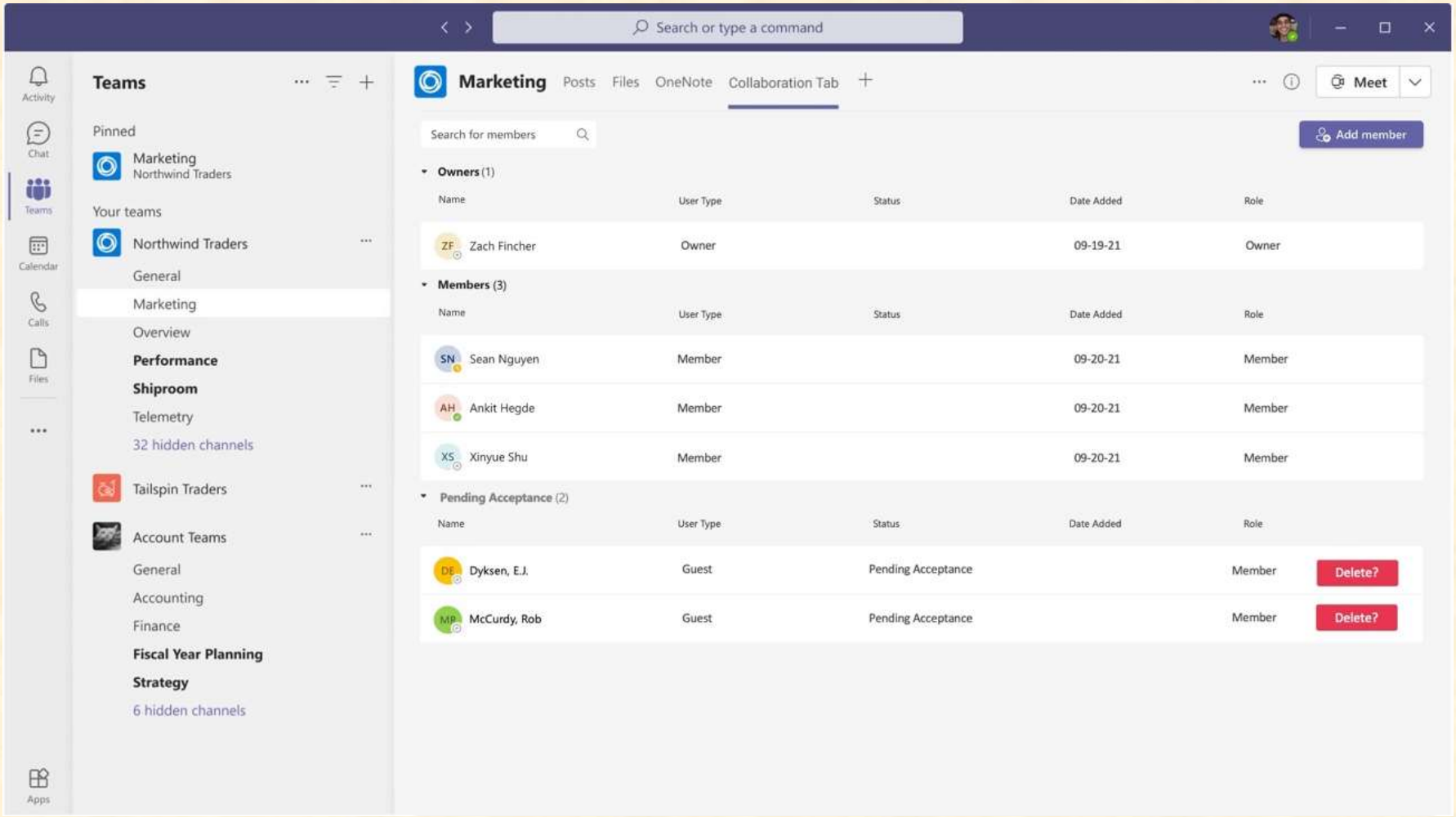
Screen Mockup: Internal User View 2



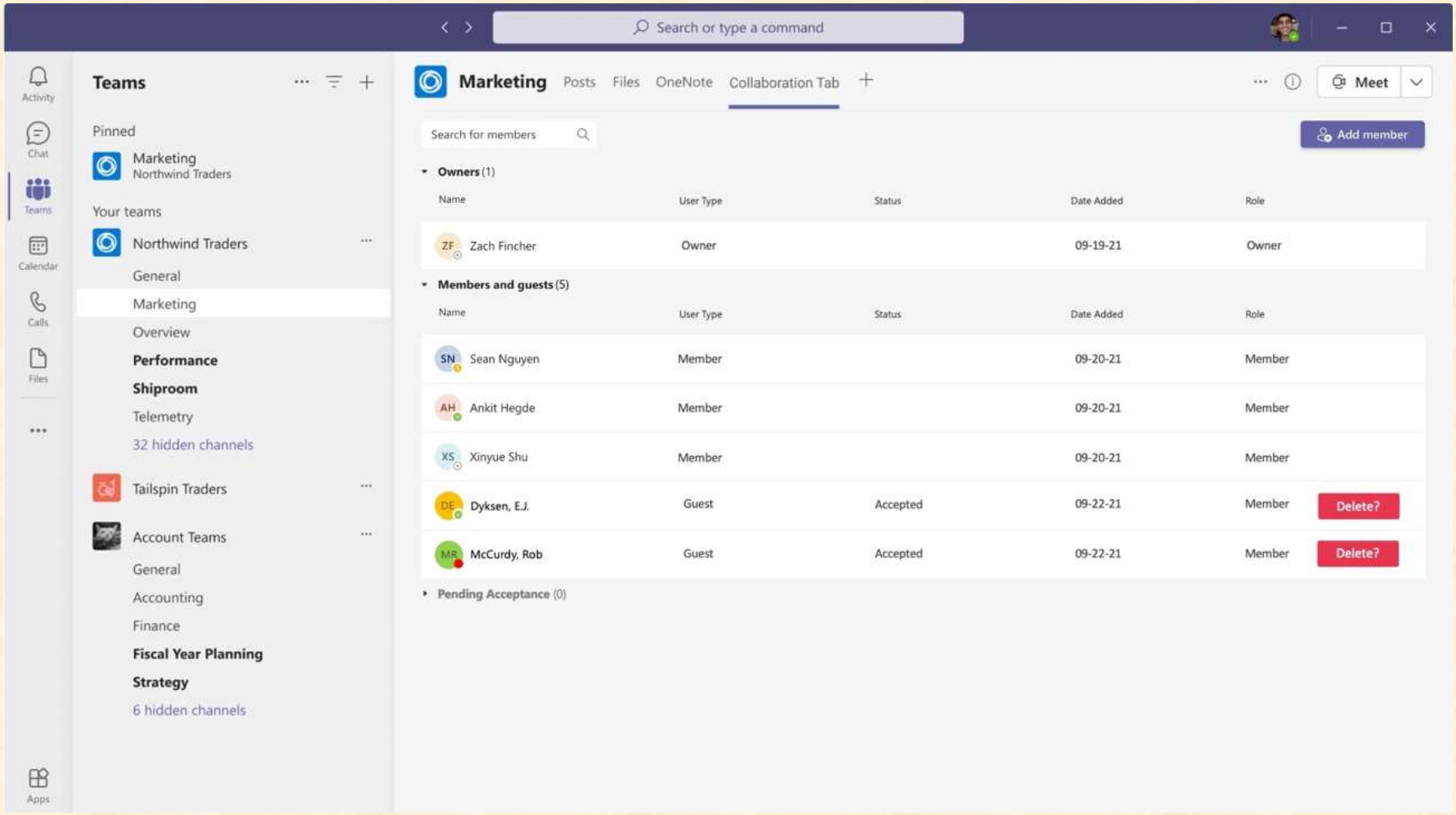
Screen Mockup: Internal User View 3



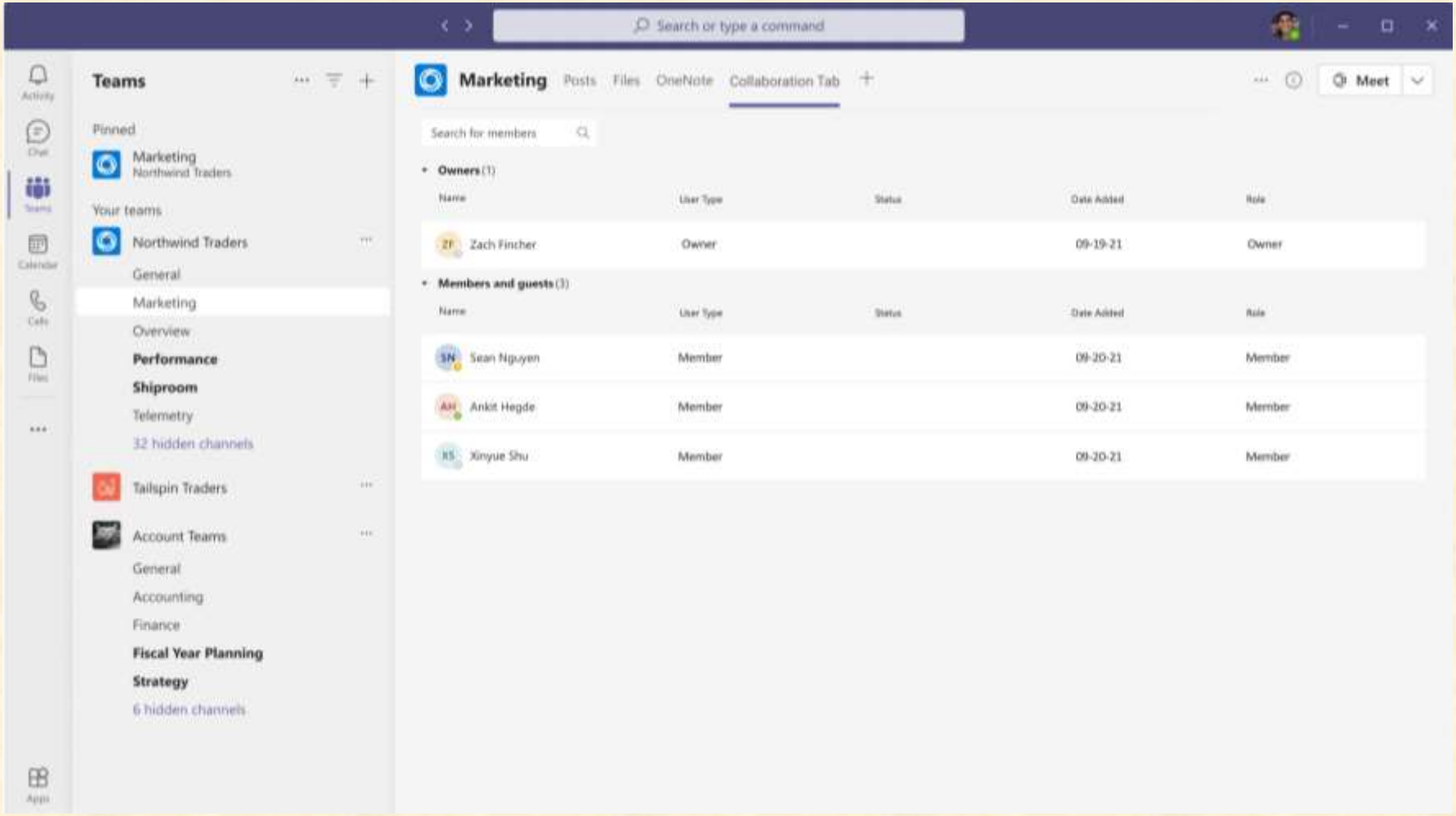
Screen Mockup: Internal User View 4



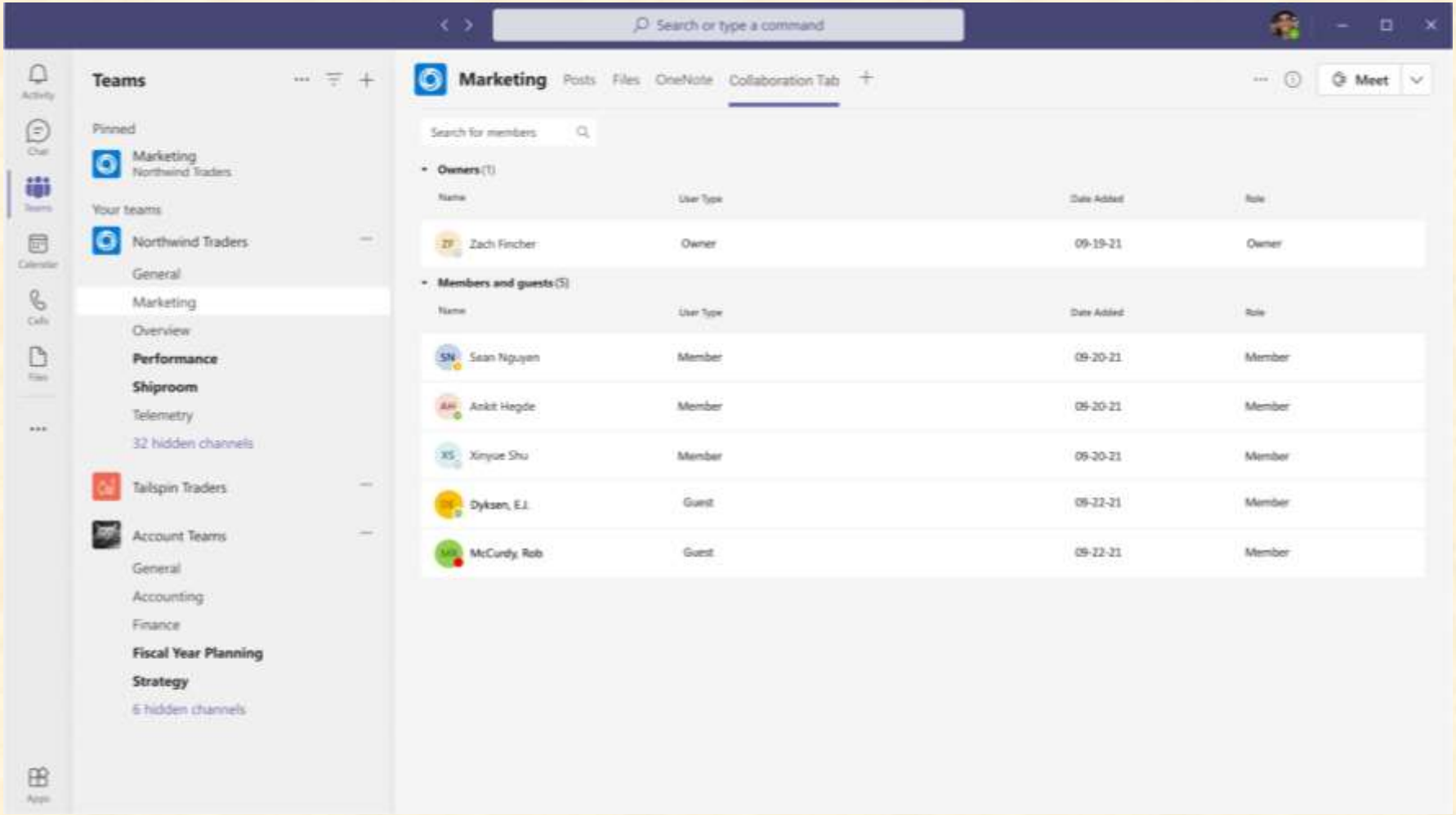
Screen Mockup: Internal User View 5



Screen Mockup: External User View 1



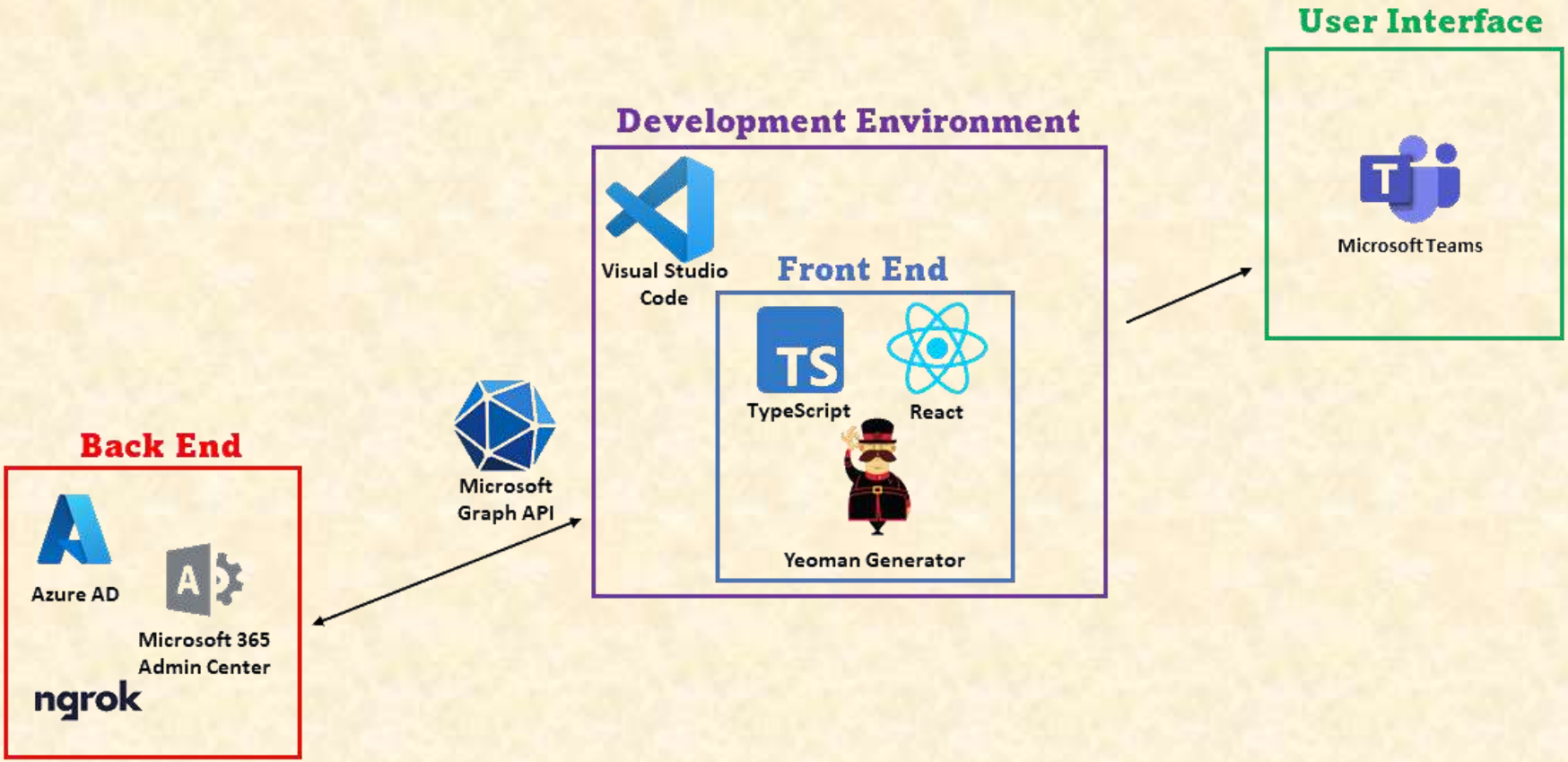
Screen Mockup: External User View 2



Technical Specifications

- Graph API will be used for direct integration into Microsoft Teams and Azure AD
- Bot will create unique email invitations using the API that will add a guest into our Azure AD by following a link in the email
- Notify and alert a manager with a message sent to them via Graph API, but also allow for all users to track guest located within a certain teams' channel
- Yeoman will assist in structuring the tab framework for the bot, and house it within the Microsoft Teams app center

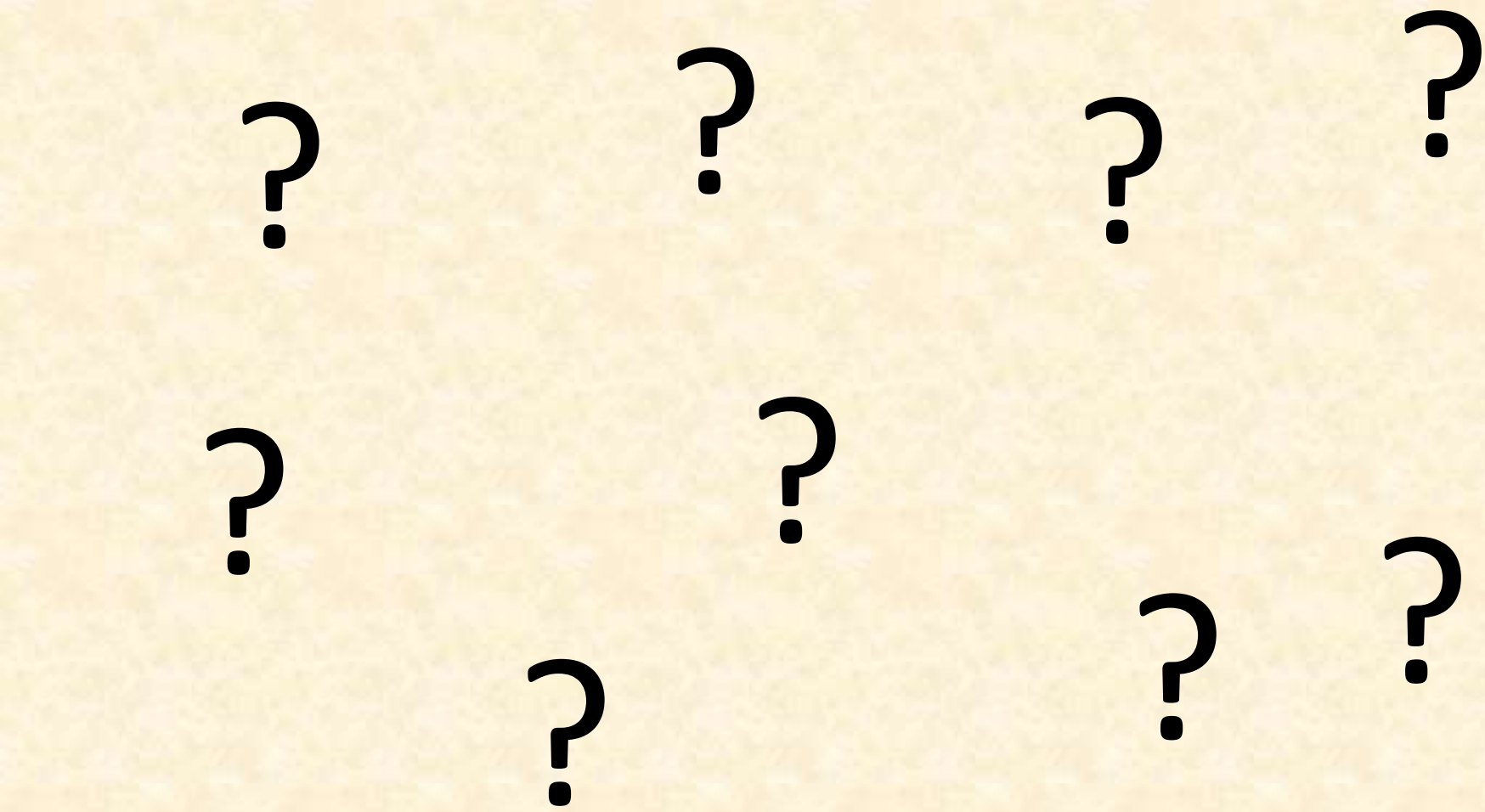
System Architecture



System Components

- Hardware Platforms
  - Desktop/Laptops
- Software Platforms / Technologies
  - Microsoft Teams
  - Microsoft 365 Admin center
  - Azure Active Directory Admin center
  - Visual Studio Code
  - Microsoft Graph API
  - NGROK
  - Yeoman Generator

Risks

- Risk 1
  - Description: Since our team is unable to attain access to the internal PwC Microsoft 365 tenant for data collection and development, our team needs to mock up a tenant to behave similarly to a PwC Microsoft 365 tenant.
  - Mitigation: To create a mockup similar to the PwC system, team members will keep in contact with a client to decrease the discrepancies. Our team will work with PwC resources to configure accounts to reflect internal permissions for stimulating the end-user experience effectively.
- Risk 2
  - Description: Our team is relying on Microsoft Graph API to access data from the Microsoft 365 tenant. It is a relatively new API, and some features will not be able to be accessed using Graph API. Some features are exclusive to the beta Graph API.
  - Mitigation: The known issues of Graph API are documented, and the developer community has created workarounds to common problems. For features that do not have workarounds, we plan on using methods outside of Graph API, such as storing data in a file or database.
- Risk 3
  - Description: External guests from certain domains will be invited to the Microsoft Team, but before them being added, their domain needs to be approved by the correct approver. Microsoft Azure Active Directory does not have enough space to store these domains.
  - Mitigation: The team will create an static API to access these domains from the application and the other needed information about the approver so they can complete the authentication.

Questions?