Assessment for Hiring Associate Product Managers

Problem Statement:

The CloudEagle platform specializes in SaaS Management. Currently, when a new customer joins the platform without a guided tour by a human, they lack context about the platform. This includes an understanding of its various terminologies, the processes they can fulfill, the actions they can take, and the information they can discover related to SaaS management. This creates a gap in usability and onboarding experience.

Scope:

We want to design and build a **global search feature** on the CloudEagle platform to bridge this gap. This feature will allow users to search for any string query via a search box. The search results should be intelligently mapped to four primary modules to provide relevant information. Additionally, the design should guide users to understand what constitutes a relevant search term to achieve the desired outcome.

Key Search Modules:

The global search feature should surface results from the following four modules:

1. Tasks:

Searchable actions such as:

- Confirm Apps
- Confirm Vendors
- Remove an App or Vendor
- Add a User to CloudEagle
- Start a Workflow
- Connect Direct Integration
- Change Company Settings
- Adjust Notification Settings

2. Apps/Vendors:

Search queries like:

- Usage of Salesforce
- Spend of Salesforce
- Contract of Salesforce
- General gueries (e.g., "What is Sentry?")

3. Help Docs:

Queries for help articles, such as:

- "How to revert a vendor?"
- "How to confirm a vendor?"
- "How to add a user to CloudEagle?"
- "How to connect a direct integration?"

4. Reports:

Allow users to search for available reports across the platform.

Challenges

Challenge 1: Wireframing the User Journey

Using Figma, Balsamiq, or any online wireframing tool, create mockups that visualize the user journey for this global search feature. Your wireframes should:

- Clearly show how users can input search queries.
- Use creativity to guide users in formulating relevant search terms.
- Capture the flow for refining and viewing search results across the four modules.
- Depict how results from different modules will be visually presented (e.g., categorized or prioritized).

Focus on usability and how the design can simplify navigation for users unfamiliar with the platform.

Challenge 2: Write a PRD (Product Requirements Document)

Draft a 1-2 page document outlining the requirements for this global search functionality. The PRD should:

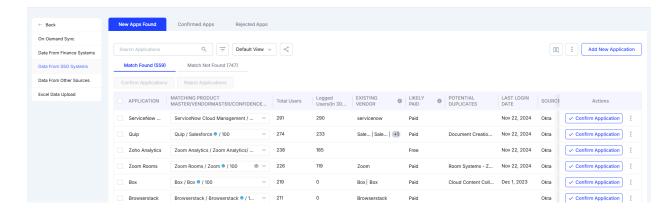
- Clearly define the **scope** and **objective** of the feature.
- Specify **user personas** and their needs.
- Break down the **functional components**, such as the search box, result categorization, query guidance, and any filtering options.
- Include details for developers (e.g., API integration points for fetching results), designers (e.g., user experience considerations), and QA (e.g., expected behaviors and test cases).
- Address any non-functional requirements, such as response time or scalability considerations.

Think of this document as a guide for cross-functional teams to align on the vision and deliver the feature effectively.

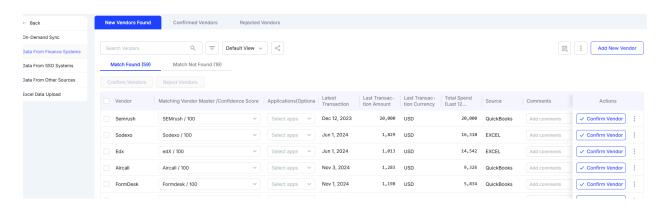
Provided Assets:

Screenshots of relevant modules are included to assist you in understanding the platform's structure and content.

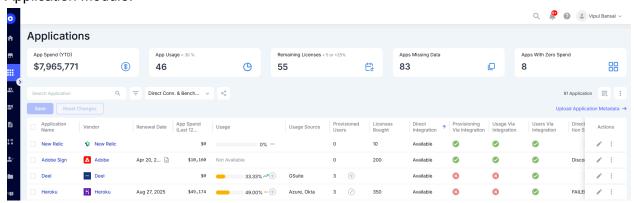
Confirm Apps:



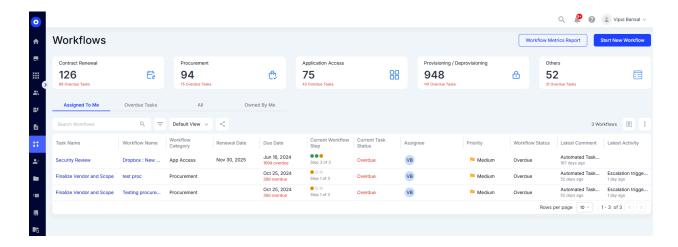
Confirm Vendor:



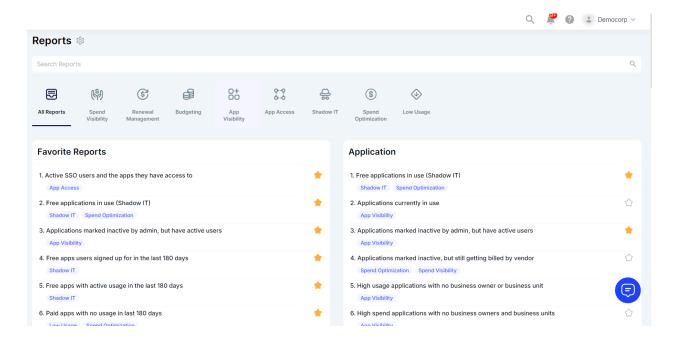
Application Module:



Workflows:



Reports:



Challenge 1: Wireframing the User Journey

A.) To implement a Global Search Feature that surfaces results from the Tasks Module, the following detailed breakdown ensures clarity and efficiency for the end-user:

Part - 1 - Tasks Module: Overview

The **Tasks Module** provides actionable items for users to interact with the platform. These tasks help users manage apps, vendors, workflows, and settings directly from the search results. The global search feature will allow users to quickly locate these tasks by entering relevant queries.

Tasks: Searchable Actions

1. Confirm Apps:

- Users can confirm app subscriptions, usage, or data accuracy.
- Query examples:
 - "Confirm Salesforce app."
 - "How to verify app usage?"

2. Confirm Vendors:

- o Ensure vendor-related details are accurate and updated.
- Query examples:
 - "Confirm vendor contracts."
 - "Verify vendor details."

3. Remove an App or Vendor:

- Search for actionable steps to remove apps or vendors from the system.
- Query examples:
 - "Remove Salesforce app."
 - "How to delete a vendor?"

4. Add a User to CloudEagle:

- o Provide an option to onboard new users to the platform.
- Query examples:
 - "Add a team member to CloudEagle."
 - "Onboard a new user."

5. Start a Workflow:

- Automate processes by initiating predefined workflows.
- Query examples:
 - "Start a vendor approval workflow."
 - "How to create a workflow?"

6. Connect Direct Integration:

- Guide users to integrate external systems with CloudEagle.
- Query examples:
 - "Connect Salesforce integration."
 - "Integrate Slack with CloudEagle."

7. Change Company Settings:

- Allow access to modify organizational settings.
- Query examples:
 - "Update company profile."
 - "Change company notification preferences."

8. Adjust Notification Settings:

- Customize alerts and updates for specific tasks or modules.
- Query examples:
 - "Turn off email notifications."
 - "Adjust vendor notification settings."

Search Results Categorization

When a query is submitted, results from the **Tasks Module** will be displayed as follows:

1. Primary Match:

 Exact matches to tasks, such as "Confirm Apps" or "Remove Vendor," are shown at the top of the Tasks category.

2. Suggested Actions:

 Related actions based on the user query, e.g., "Remove Salesforce App" suggests steps for both confirming and removing apps.

3. Contextual Help:

 Relevant documentation links under the Help Docs Module, e.g., "How to start a workflow."

Wireframe Layout for Tasks Module

Search Bar Interaction

- Prominent placement in the top navigation bar.
- Autocomplete suggestions categorized by:
 - o **Tasks**: Specific action items.
 - Other Modules: Apps/Vendors, Help Docs, Reports.

Search Results Page

1. Categorized Sections:

- Tasks Module results are displayed at the top, with expandable/collapsible functionality.
- o Each task result includes:
 - Title: E.g., "Confirm Apps."
 - Short description: E.g., "Verify usage details for Salesforce."
 - Action button: E.g., "Perform Task" or "View Details."

2. Filter Options:

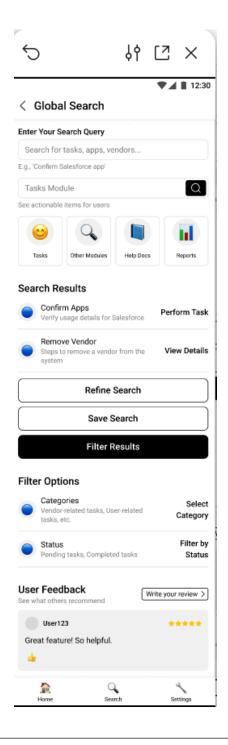
- Enable users to refine results within the Tasks Module:
 - Categories: "Vendor-related tasks," "User-related tasks," etc.
 - Status: "Pending tasks," "Completed tasks."

3. Icons and Visual Cues:

 Icons next to each task for quick identification (e.g., checkmark for confirmations, trash icon for removals).

WIREFRAME FOR TASK MODULE LAYOUT IN FIGMA

Link: ∃ Figma



Backend and API Integration

- 1. Indexing Tasks:
 - Index each task with attributes like:
 - Task Name: "Confirm Apps."
 - Task Description: "Verify app data."
 - **Keywords**: Tags like "confirm," "verify," "app."
 - o Example: Elasticsearch or AWS OpenSearch.
- 2. Search Queries:
 - Utilize fuzzy matching and synonym recognition:
 - Query: "Approve apps."
 - Results: Match "Confirm Apps."
- 3. Task API Endpoints:
 - /tasks/search: Fetch tasks matching the user query.
 - /tasks/action: Direct execution of a task.

User Guidance for Search Queries

- 1. Placeholder Text:
 - o "Search for tasks like 'Add User' or 'Start a Workflow."
- 2. Suggestions Dropdown:
 - o "Recent Searches" for frequently used tasks.
 - o Example tasks: "Change Notification Settings," "Confirm Vendors."
- 3. No Results Message:
 - If no matches, display: "No tasks found. Try searching for 'Confirm Vendors' or 'Remove an App.'

User Journey Example

- 1. **Step 1**: User types "Add User" in the search bar.
- 2. Step 2: Autocomplete dropdown shows:
 - Task: "Add a User to CloudEagle."
 - Help Docs: "How to add a user?"
- 3. Step 3: User selects the task from the dropdown and is directed to the action page.
- 4. **Step 4**: Task is completed, and success confirmation is displayed.
- B.) To implement a Global Search Feature that effectively surfaces results from the Apps/Vendors Module, the design and functionality will focus on making it intuitive for users to access app- and vendor-related information. Below is the detailed breakdown for handling this module:

Part - 2 - Apps/Vendors Module: Overview

The **Apps/Vendors Module** focuses on providing detailed information about applications and vendors integrated into or managed via the CloudEagle platform. The global search feature will enable users to quickly retrieve data related to app usage, spend, contracts, and general vendor information.

Apps/Vendors: Searchable Queries

1. Usage of Salesforce:

- Retrieve app usage metrics, such as user count, frequency of use, and activity logs.
- Query examples:
 - "Usage of Salesforce."
 - "How many users are active on Salesforce?"

2. Spend of Salesforce:

- o Provide financial insights, including monthly or annual spend on specific apps or vendors.
- Query examples:
 - "Spend of Salesforce this year."
 - "Annual cost for Microsoft Teams."

3. Contract of Salesforce:

- Display contract details, renewal dates, and compliance information.
- Query examples:
 - "Salesforce contract renewal date."
 - "Contract details for HubSpot."

4. General Queries:

- General information about an app or vendor, such as its purpose, category, or integration status.
- Query examples:
 - "What is Sentry?"
 - "Is Slack integrated with CloudEagle?"

Search Results Categorization

When a query matches results from the **Apps/Vendors Module**, the results will be categorized and displayed as follows:

1. Primary Results

- Exact matches for the app/vendor name and query type (e.g., usage, spend, contract).
- Example:
 - o Query: "Spend of Salesforce."
 - o Result: "Annual spend for Salesforce: \$12,000."

2. Related Insights

• Additional, relevant details related to the app or vendor.

- Example:
 - Query: "Contract of Salesforce."
 - o Related Results: "Renewal Date: Jan 2025" and "Contract Owner: John Doe."

3. Suggested Queries

- Suggest similar or follow-up queries based on user intent.
- Example:
 - Query: "What is Sentry?"
 - Suggested Queries: "Usage of Sentry," "Spend on Sentry."

Wireframe Layout for Apps/Vendors Module

Search Bar Interaction

- Dynamic Suggestions:
 - Autocomplete shows app/vendor names and associated queries.
 - o Categories displayed (e.g., Usage, Spend, Contract, General Info).

Search Results Page

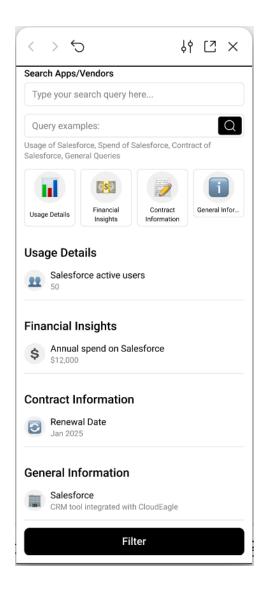
- 1. Categorized Sections:
 - Results are grouped under:
 - Usage Details
 - Financial Insights
 - **■** Contract Information
 - General Information
 - Example:
 - Usage Details: "Salesforce active users: 50."
 - Financial Insights: "Annual spend on Salesforce: \$12,000."
 - Contract Information: "Renewal Date: Jan 2025."
 - General Information: "Salesforce is a CRM tool integrated with CloudEagle."

2. Filters:

- Enable refinement based on:
 - App vs. Vendor.
 - Date range (e.g., spend reports for the last quarter).
 - Integration status (e.g., only show integrated apps).
- 3. Icons and Visual Hierarchy:
 - Use app/vendor logos and icons to distinguish results.
 - Highlight key metrics like spend or user count.

WIREFRAME FOR APPS/VENDORS MODULE LAYOUT IN FIGMA

Link: Figma



Backend and API Integration

1. Indexing Apps/Vendors Data:

- Index key attributes for apps/vendors:
 - Name: "Salesforce."
 - Category: "CRM."
 - Usage Data: User count, activity logs.
 - Spend Data: Monthly/annual cost.
 - Contract Data: Terms, renewal dates.
- o Example: Store indexed data in Elasticsearch or AWS DynamoDB.

2. Search Query Processing:

- Use a query parser to map user input to indexed fields.
- Example:

- Query: "Spend on Slack."
- Parsing: Map "Spend" to financial insights and "Slack" to app name.

3. API Endpoints:

- o /apps-vendors/search: Fetch app/vendor data.
- o /apps-vendors/details: Fetch detailed metrics for a specific app/vendor.

User Guidance for Search Queries

- 1. Placeholder Text:
 - o "Search for app usage, spend, contracts, or vendor details..."
- 2. Dynamic Suggestions:
 - Autocomplete provides structured suggestions:
 - "Usage of [App]."
 - "Spend on [App]."
 - "Contract of [Vendor]."
- 3. Error Handling:
 - If no results:
 - "No data found for your query. Try searching for 'Usage of Salesforce' or 'What is Sentry?'"

User Journey Example

- 1. **Step 1**: User types "Spend of Salesforce" in the search bar.
- 2. Step 2: Autocomplete suggests:
 - o "Spend of Salesforce."
 - o "Usage of Salesforce."
 - o "Contract of Salesforce."
- 3. **Step 3**: User selects the suggestion, and results are displayed:
 - o Financial Insights: "Annual spend on Salesforce: \$12,000."
 - Related Insights: "Monthly spend breakdown available."
- 4. Step 4: User applies filters to view data for Q1 2024.

Advantages

- 1. Quick Access: Direct retrieval of key app/vendor metrics.
- 2. Categorization: Clear grouping ensures users find relevant data faster.
- 3. **Guided Experience**: Suggestions and placeholders make the search intuitive.

This approach ensures users can seamlessly navigate the Apps/Vendors Module to obtain actionable insights. Let me know if you need further refinements or visual mockups!

C.) To implement the Help Docs Module in the Global Search Feature, the design and functionality must focus on providing clear, actionable guidance by surfacing relevant articles, guides, or FAQs. Below is the detailed approach for integrating this module:

Part - 3 - Help Docs Module: Overview

The **Help Docs Module** provides users with access to a knowledge base of articles and guides. This module is designed to address common queries related to using the CloudEagle platform effectively, such as troubleshooting, workflows, and feature integrations.

Help Docs: Searchable Queries

1. Specific How-To Queries:

- o Examples:
 - "How to revert a vendor?"
 - "How to confirm a vendor?"
 - "How to add a user to CloudEagle?"
 - "How to connect a direct integration?"

2. General Feature Guidance:

- Examples:
 - "What are workflows?"
 - "Understanding vendor confirmation."

3. Troubleshooting and FAQs:

- Examples:
 - "Troubleshooting integration issues."
 - "Common

To ensure that the **Help Docs Module** within the **Global Search Feature** functions effectively, the implementation must focus on precision, usability, and relevance. Here's a detailed breakdown of how this module will surface results for help articles:

Designing the Help Docs Module in the Global Search Feature

1. Key Features and Functionality

The **Help Docs Module** should address user needs for guidance on platform usage through relevant articles and FAQs.

Searchable Queries:

- Users can type specific questions or general topics, such as:
 - "How to revert a vendor?"
 - "How to confirm a vendor?"
 - "How to add a user to CloudEagle?"
 - "How to connect a direct integration?"
- Synonym Matching: Queries like "undo a vendor" should match with "revert a vendor."

Prioritized Relevance:

- The search algorithm will prioritize articles based on:
 - Exact keyword matches.
 - Popularity (most frequently accessed articles).
 - Recency (newly updated articles).

Category Tags:

Each result will be tagged with its category (e.g., "Getting Started," "Advanced Actions," or "Integration").

2. User Journey

1. Input Phase:

- Users type queries in the search bar, e.g., "How to confirm a vendor?"
- Autocomplete suggestions guide them with related topics, e.g., "Confirming vendors,"
 "Reverting vendors."

2. Processing and Search Logic:

- The system parses the query using natural language processing (NLP).
- Matches are fetched from the Help Docs repository.

3. Results Display:

- o A categorized section labeled **Help Docs** appears in the search results.
- Articles are displayed with:
 - **Title**: e.g., "How to confirm a vendor."
 - Snippet: A brief preview of the article content.
 - **Icon**: A book or question mark icon indicating a help article.

4. Actionable Links:

- Clicking a result opens the full article in a modal or new tab.
- o The article contains:
 - Step-by-step instructions.
 - Links to related articles.
 - Multimedia support (images/videos).

3. Wireframe Overview

Search Bar:

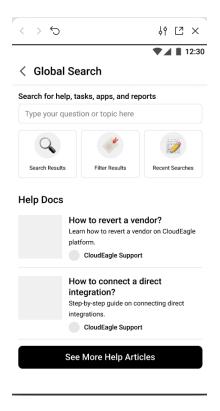
- Located prominently on the platform.
- Placeholder text: "Search for help, tasks, apps, and reports."

Results Page:

- A distinct section labeled "Help Docs" displays matching results.
- o Results include titles, previews, and tags.
- o Filters: Users can refine results to show only help articles.

WIREFRAME FOR HELP/DOCS MODULE LAYOUT IN FIGMA

Link: Figma



4. Real-Time Examples

- Query: "How to revert a vendor?"
 - Results:
 - **Title**: "How to revert a vendor?"
 - Snippet: "Learn the steps to revert a vendor in CloudEagle."
 - Tag: "Vendor Management."
- Query: "How to add a user?"
 - Results:
 - Title: "How to add a user to CloudEagle?"
 - Snippet: "This guide explains how to invite and manage users."
 - Tag: "User Management."

5. Error Handling

- If no results are found:
 - o Display message: "No articles found. Try searching for related topics."
 - o Suggest similar queries based on available content.

6. Integration Notes

- Content Repository:
 - The Help Docs Module fetches data from a centralized repository of articles.
- Backend Support:
 - Use an API to dynamically fetch and update help article data.
- Scalability:
 - Ensure the system accommodates new help articles and categories.
- D.) The Reports Module within the global search functionality will enable users to locate and access various reports across the CloudEagle platform efficiently. Below is a detailed approach for designing and implementing this module.

1. Key Features and Functionality

The Reports Module should focus on enabling users to search for and access reports based on specific criteria or keywords.

Searchable Queries

- Example queries:
 - o "Monthly spend report for Salesforce."
 - o "Q1 usage report."
 - o "User activity report."
 - "Annual contract spend summary."
- Flexible Query Parsing:
 - The system should understand synonyms and variations, e.g., "spend report for Salesforce" matches "Salesforce cost report."

Report Categorization

- Reports should be grouped into categories such as:
 - Financial Reports (e.g., spend analysis, cost summaries).
 - Usage Reports (e.g., SaaS usage trends, app utilization).
 - Activity Reports (e.g., user activity logs, workflows completed).
 - Custom Reports (e.g., user-generated or tailored reports).

2. User Journey

- 1. Input Phase:
 - Users type queries like "Monthly spend report" or "Contract report for Salesforce."
 - Autocomplete suggestions appear, offering:
 - Popular reports.
 - Recently accessed or frequently used reports.
- 2. Search Processing:

- The query is processed to match:
 - Exact keywords (e.g., "Spend" matches "Monthly Spend Report").
 - Associated metadata (e.g., date, category, vendor name).

3. Results Display:

- o Results are displayed under a dedicated Reports section.
- Each result includes:
 - Report Name: e.g., "Q1 Usage Report for Salesforce."
 - Date: Timestamp of the report generation or update.
 - Category Tag: Financial, Usage, etc.

4. Actionable Links:

- Clicking a report result opens:
 - The full report in a new tab or embedded viewer.
 - Export options (e.g., download as PDF/CSV).
 - Report filters for on-the-fly adjustments (if supported).

3. Wireframe Overview

Search Results Page

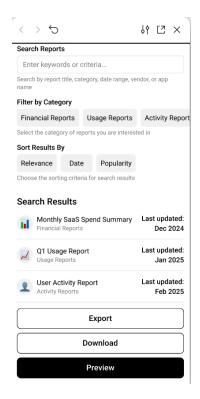
- Reports Section:
 - o Label: "Reports."
 - o Layout: Results are listed with icons indicating report type.
 - Metadata Display:
 - Report title (e.g., "Monthly SaaS Spend Summary").
 - Creation date (e.g., "Last updated: Dec 2024").
 - Tags (e.g., Financial, Usage).
 - Hover Options:
 - Preview button for a guick view.
 - Export/download button.

Filters and Sorting:

- Filters:
 - Report category (Financial, Usage, Activity).
 - o Date range (e.g., "Last 7 days," "Last quarter").
 - Vendor or App name.
- Sorting:
 - o By relevance, date, or popularity.

WIREFRAME FOR REPORTS MODULE LAYOUT IN FIGMA

Link: ∃ Figma



4. Real-Time Examples

Query 1: "Salesforce spend report"

Results:

- o Title: "Q3 Spend Analysis for Salesforce."
- Date: "Generated on October 10, 2024."
- o Tag: Financial Report.
- o Icon: Dollar symbol indicating a financial report.

Query 2: "User activity"

Results:

- Title: "User Activity Log December 2024."
- o Date: "Generated on December 15, 2024."
- o Tag: Activity Report.
- o Icon: User profile icon.

5. Error Handling

• If no reports are found:

- o Display a friendly message: "No reports found matching your query."
- Suggest alternatives: "Try searching for 'Spend report' or 'Usage summary."

6. Integration Notes

Backend Support

- Report Repository:
 - Centralized storage for all reports with metadata.
- API Integration:
 - o API endpoints to fetch report data dynamically based on search input.
- Scalability:
 - o Ensure seamless addition of new report types and categories.

User Experience Enhancements

- Onboarding Hints:
 - o Include tooltips guiding users to sample queries like "Search for monthly spend reports."
- Real-Time Updates:
 - o Automatically display newly generated reports in search results.

This Reports Module ensures users can access actionable insights quickly, improving their overall experience on the CloudEagle platform.

Challenge 2: Product Requirements Document

Global Search Functionality for CloudEagle Platform

1. Scope and Objective

Scope:

The global search feature aims to bridge the usability and onboarding gap by enabling users to search for relevant information across the CloudEagle platform efficiently.

Objective:

To provide an intuitive, fast, and scalable search solution that surfaces categorized, relevant results from four key modules (Tasks, Apps/Vendors, Help Docs, and Reports) while guiding users to formulate effective search gueries.

2. User Personas and Needs

1. IT Admins

- O Needs:
 - Prominently access tasks like adding users, confirming apps/vendors, or adjusting settings.
 - Search for SaaS usage, spend, and contract details.
 - Find help articles for troubleshooting.

2. Finance Professionals

- O Needs:
 - Search for reports related to SaaS spend, contract costs, and budget utilization for tracking purpose.

3. Platform Users (General)

- O Needs:
 - Easily locate and find the help docs for onboarding or troubleshooting.
 - Search for specific tasks and their execution steps for easy navigation.

3. Functional Components

3.1 Search Box

• Location:

 Header across all pages of the platform for global accessibility to maintain uniformity.

Features:

- Placeholder text (e.g., "Search tasks, apps, reports, help docs...").
- Autocomplete with suggested queries as users type based on user personas and demographics
- Search initiation via "Enter" key or search icon click.

3.2 Search Results Categorization

- Results are grouped into four modules:
 - 1. Tasks: Direct actionable items like "Start a Workflow."
 - 2. Apps/Vendors: Queries like "Usage of Salesforce."
 - 3. **Help Docs**: Articles for common queries, e.g., "How to add a user."
 - 4. **Reports**: Insights and analytics reports.
- Results within each module are listed by appropriate relevance with icons and metadata (e.g., last updated date).

3.3 Query Guidance

- Hints and sample queries below the search bar to guide users efficiently, such as:
 - "Try searching for 'Monthly spend report' or 'Confirm vendors."
- Autocomplete dropdown with predictive text and common queries required by users.

3.4 Filtering Options

- Filters available on the search results page:
 - o **Module**: Tasks, Apps/Vendors, Help Docs, Reports.
 - Date Range: For reports and help docs.
 - o Relevance/Recency: Sorting options.

3.5 No Results Handling

- If no results are found:
 - Display a friendly message: "No results match your query."
 - Suggestions for alternative queries or module redirection.

4. Details for Cross-Functional Teams

4.1 For Developers

- API Integration Points:
 - o **Tasks**: Fetch actionable items from the task management service.
 - Apps/Vendors: Pull data from the SaaS management database.

- **Help Docs**: Query the documentation repository.
- o **Reports**: Access analytics data APIs for report generation and metadata.

Backend Requirements:

- Unified search service for parsing queries and fetching results from respective modules
- Caching frequently accessed queries to improve response times.

• Data Handling:

- Real-time updates for dynamic data like reports.
- Secure access to sensitive data with role-based permissions.

4.2 For Designers

• User Interface:

- Ensure search bar prominence and accessibility.
- Design categorized result displays with intuitive grouping.
- o Implement tooltips or placeholder text for query guidance.

User Experience (UX):

- Smooth transition between typing a query and viewing results.
- Minimized clicks to access relevant data.

4.3 For QA

Test Cases:

- Verify that gueries return accurate results for each module.
- Test autocomplete suggestions for correctness and relevance.
- Validate filters for proper functionality.
- Check no-result handling and alternative suggestions.

• Performance Testing:

- o Ensure search results load within 2 seconds.
- Validate scalability for concurrent users.

5. Non-Functional Requirements

Response Time:

o Results must load within 2 seconds for 95% of gueries.

Scalability:

Support concurrent searches by at least 500 users during peak usage.

• Security:

o Role-based access to sensitive data in search results (e.g., financial reports).

Localization:

Support for multi-language queries if applicable.

6. Success Metrics

- Adoption Rate: Percentage of users actively utilizing the search feature.
- Search Accuracy: Queries returning correct results.
- Response Time: Average time taken to display results.
- User Feedback: Positive ratings or suggestions from usability tests.

This document provides a comprehensive guide for designing, developing, and deploying the global search feature to enhance usability and onboard new users effectively.