Design Spec

Agustin Liscano, Charles Lopez, Damian Bonds, Matthew Moc, Miguel Vasquez-Naranjo

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This document outlines the breakdown of the pages, parts, tools, packages, dependencies, and libraries required for Project Mirage, an AI-powered assistant named Anya designed to streamline IT support, administrative workflows, file retrieval, translation, document automation, and internal communications. Anya is built using a modular architecture, with components interacting via secure API communications, primarily orchestrated through PowerApps and Copilot Studio.

1 User Interface

The entire user experience is contained within a single conversational interface in a Teams chat.

- Main Chat Interface: The primary interaction canvas where users type requests and Anya responds.

- Adaptive Card Components: Dynamically generated UI elements used for specific actions (e.g., submitting a time-off request, displaying a ticket status, viewing file search results).

2 Core Subsystems & Logic Handlers

These components manage the logic and communication flows.

- ChatHandler: The primary entry point for user input. Utilizes Copilot Studio's NLP engine to interpret user intent (e.g., "submit ticket," "search file," "translate"). Directs the intent to the appropriate manager/handler.

- TicketManager (IT Support): Manages interactions with the "PDHelpDesk" system (built on SharePoint). Handles ticket submission forms (Adaptive Cards), status lookups, updates, and administrative actions (reassign, resolve).

- AdminRequestManager (Admin Workflows): Manages interactions with the "PDGo" system (built on Smartsheet). Manages flows for time-off requests, MCLE logging, and general admin submissions via Power Automate workflows triggered by Adaptive Card submissions.

- FileRetriever: Handles search queries across knowledge bases. Executes keyword-based and metadata-aware searches in SharePoint document libraries and Smartsheet databases. Returns formatted results as Adaptive Cards with direct links.

- Contact Lookup (Office 365 Integration): Searches the Office 365 directory for staff contact information (name, title, contact details).

- Translation Engine: Sends text snippets or entire documents to a translation service (Azure AI/Cognitive Services via Power Automate) and returns translated content.

- Document Generator (Fillable Forms): Manages selection of templates, populates fields based on user input, generates final documents (e.g., PDF/DOCX), and stores the output.

- SessionLogger: Tracks all user actions, intents, and system responses for auditing, troubleshooting, and compliance purposes, storing logs in a dedicated SharePoint list or database.

3 Data Services Layer & Storage

- Secure API Communication: All communication between Power Platform components and external data sources (SharePoint, Smartsheet, O365) uses built-in, secure Microsoft connectors and APIs.

- Storage Platforms:
  - SharePoint: Used for IT ticketing system (PDHelpDesk), document storage (file retrieval), session logs, and document metadata.
  - Smartsheet: Used for administrative workflows (PDGo).

Packages

- **axios** or **node-fetch**: For making HTTP requests to external APIs (SharePoint, Smartsheet, Power Automate endpoints).

- **dotenv**: For managing environment variables (API keys, connection strings) within the Docker environment.

Dependencies

Anya is primarily built using Microsoft SaaS/PaaS offerings, which abstracts most traditional software library/package management. The execution environment (Docker container) primarily needs a base image capable of hosting potential custom connectors or authentication proxies, although the base design relies solely on managed cloud services.

- Base Image: mcr.microsoft.com (for a C# API) or python:3.10-slim (for a Python API).

- Microsoft.SharePoint.Client (if using CSOM externally)

- Smartsheet.Api (for complex external Smartsheet interactions)

- Azure.AI.TextAnalytics (if calling Azure services outside of Power Automate)

Libraries

- **@microsoft/teams-ai**: Core library for building conversational AI apps in Teams.

- **botbuilder-js**: Microsoft Bot Framework libraries for basic bot functionality.

- **smartsheet-api** (or similar SDK): Specific client library for Smartsheet interactions.

- **sharepoint-rest-api** (if not using MS Graph): Libraries to interact with SharePoint data.

- **@microsoft/microsoft-graph-client**: For accessing Office 365 contact information.