Problem Statement: AI-Driven Mission-to-Procurement Automation Platform

Background / Context

Organizations often define strategic mission statements or transformation goals that require multiple initiatives, vendor engagements, and procurement processes to execute. However, translating a high-level mission into actionable projects, preparing RFPs, coordinating vendors, and evaluating proposals is typically manual, time-consuming, and fragmented across teams and tools.

This leads to delays, inconsistent vendor evaluation, unclear requirements, and inefficient communication between organizations and suppliers.

Problem to Solve

Design and build an AI-powered procurement orchestration platform that converts an organization's strategic mission into structured procurement execution.

The solution should enable an organization to:

1. **Input a mission or strategic objective** through a user interface.
2. **Automatically analyze and decompose the mission** into actionable projects or initiatives.
3. **Classify and group projects** into procurement categories such as infrastructure, purchasing, software vendors, services, or other relevant domains.
4. **Generate structured, professional RFP documents** tailored to each project category, ready to be shared with vendors.
5. **Allow internal review and approval** of generated RFPs before release.
6. **Distribute approved RFPs** to vendors via a portal and/or email communication.
7. **Enable vendors to submit responses** through the platform.
8. **Evaluate vendor proposals using AI**, scoring and ranking submissions based on defined criteria, while providing transparent and explainable evaluation insights.

Optional Capabilities

The system may also support:

- Vendor clarification workflows (vendors can ask questions and organizations can respond).

- Structured communication management between buyers and vendors.
- Integrated email-based communication and notifications.

Implementation Approach

Participants may design the solution using:

- A **centralized AI-based system**, or
- A **fully agentic architecture using multiple specialized AI agents** (e.g., mission analysis agent, project decomposition agent, RFP generation agent, vendor evaluation agent, communication agent, etc.), or
- A hybrid approach combining both.

Teams are encouraged to demonstrate intelligent task orchestration, autonomy, and collaboration if adopting a multi-agent design.

Objectives

The solution should aim to:

- Transform strategic intent into structured procurement execution.
- Reduce manual effort in RFP creation and vendor evaluation.
- Improve consistency and transparency in vendor selection.
- Enable structured collaboration between organizations and suppliers.
- Accelerate procurement lifecycle timelines.

Scope & Constraints

In scope

- Mission analysis and project decomposition using AI
- Category-based procurement structuring
- Automated RFP generation
- Vendor response intake and evaluation
- Explainable scoring and ranking

Out of scope

- Legal contract execution
- Financial transaction processing
- ERP integration (optional unless implemented by teams)

Constraints

- Solution should demonstrate a clear workflow from mission input to vendor evaluation
- AI decisions must be explainable and auditable
- User experience should support both organization and vendor roles

Expected Deliverables

Teams should provide:

- Functional prototype demonstrating the end-to-end workflow
- AI logic for mission breakdown and vendor evaluation
- Sample generated RFP documents
- Vendor response evaluation and ranking output
- Architecture overview (including agent design if applicable)
- Demonstration of user roles and process flow