**Statement of Work (SoW)**

**for a Minimum Viable Product (MVP)**

**Virtual Agent (Chatbot) for IT Support**

**using Generative AI**

**CONTENTS**

[I. BACKGROUND 3](#_Toc155122337)

[A. Overview 3](#_Toc155122338)

[B. Organizational Context 3](#_Toc155122339)

[C. Business Need 3](#_Toc155122340)

[II. Objectives 4](#_Toc155122341)

[III. SCOPE OF WORK 4](#_Toc155122342)

[D. Assessment and Discovery 4](#_Toc155122343)

[E. MVP 5](#_Toc155122344)

[F. Feasibility Analyses 5](#_Toc155122345)

[G. Out of Scope 5](#_Toc155122346)

[H. Timeline 5](#_Toc155122347)

[I. Summary of Expected Deliverables 5](#_Toc155122348)

[J. Acceptance Criteria 6](#_Toc155122349)

[K. Qualifications 6](#_Toc155122350)

[L. Service Levels 7](#_Toc155122351)

[M. Place of Performance 7](#_Toc155122352)

[N. Working Days and Business Hours 7](#_Toc155122353)

[O. Intellectual Property 7](#_Toc155122354)

[IV. TECHNICAL EVALUATION AND PAYMENT SCHEDULE 8](#_Toc155122355)

[P. Technical Evaluation 8](#_Toc155122356)

[Q. Payment Terms 8](#_Toc155122357)

# BACKGROUND

## 

## Overview

1. This statement of work (SoW) describes the deliverable-based engagement to design, develop, and deploy a Minimum Viable Product (MVP) chatbot that can provide conversational IT support to the staff and consultants of the Asian Development Bank (ADB). The MVP chatbot will use natural language processing (NLP) and generative AI technologies to understand and respond to user queries and requests.
2. The MVP chatbot will be built using or on top of ServiceNow’s Virtual Agent platform, which offers a low-code, drag-and-drop interface for creating chatbot workflows and integrations. The MVP chatbot will also leverage existing generative AI models and frameworks, such as GPT-3, Rasa, or Dialogflow, to enhance the chatbot’s natural language understanding and generation capabilities.

## Organizational Context

1. The ADB is an international development financial institution headquartered in Manila, Philippines, and is composed of 68 members states, 49 of which are from the Asia and Pacific region. ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific while sustaining its efforts to eradicate extreme poverty. ADB combines finance, knowledge, and partnerships to fulfill its expanded vision under its Strategy 2030.
2. The ADB IT Finance and User Services Division (ITD-ITFS) ITFS manages the end-user (client) IT services and key administrative functions that support the day-to-day business of ITD. ITD-ITFS is responsible for maximizing the value of IT for end users through effective user support and continuous learning on digital technologies to increase end-user productivity. The department delivers digital innovation, IT infrastructure, services, and solutions, and provides tools and knowledge platforms to 6000+ users in ADB’s Headquarters and 40+ field offices (FOs) in Asia and the Pacific.
3. The ADB IT Finance and User Services Division (ITD-ITFS) manages the end-user (client) IT services and key administrative functions that support the day-to-day business of the ADB IT Department (ITD). ITD-ITFS is responsible for maximizing the value of IT for end users through effective user support and continuous learning on digital technologies to increase end-user productivity. The department delivers digital innovation, IT infrastructure, services, and solutions, and provides tools and knowledge platforms to 6000+ users in ADB’s Headquarters and 40+ field offices (FOs) in Asia and the Pacific.’

1. ITD-ITFS manages the IT Service Desk, which is the centralized point of contact for all IT-related inquiries and issues.
2. The IT Service Desk uses ServiceNow as its ticketing tool and IT service management (ITSM) platform. However, the IT Service Desk has not fully implemented the Virtual Agent capabilities of ServiceNow, including the conversational chatbot. As a result, the IT Service Desk faces challenges such as long resolution times, frustrated employees, and loss of productivity.

## Business Need

1. With the increasing reliance on technology, ADB needs to provide reliable and efficient IT support services (including self-service and self-solve capabilities) to all personnel, 24x7, globally.
2. As ITSM technology progresses, ADB needs to leverage innovative technologies to enhance its IT service management processes through its existing investment in ServiceNow (known internally as AskIT). ADB needs to take advantage of the latest features and functionalities of ServiceNow, especially the Virtual Agent chatbot, which can provide 24x7, on-demand access to IT services and solutions.
3. A fully functioning Virtual Agent chatbot is seen as a key technology enabler for improving the IT service delivery and user experience. A Virtual Agent chatbot can:

* Reduce the workload and pressure on the IT Service Desk agents by handling common and repetitive queries and requests.
* Provide faster and more accurate responses and resolutions to user queries and requests.
* Increase user satisfaction and engagement by providing personalized and interactive conversations.
* Enhance user knowledge and skills by providing relevant and timely information and guidance.
* Integrate with other IT systems and platforms to provide seamless and consistent service delivery.

1. To address this business need, ADB has initiated a deliverable-based engagement to design and implement a MVP chatbot using generative AI. The MVP chatbot will integrate with ServiceNow’s IT knowledge base, the IT Service Catalog, other IT knowledge repositories within ADB, as well as with other generative pre-trained AI-based chatbots in pilot use within ADB.

# Objectives

1. The main objectives of this deliverable-based engagement are to:

* Design a MVP chatbot that can provide conversational IT support to ADB staff and consultants using NLP and generative AI technologies.
* Develop the MVP chatbot using or on top of ServiceNow’s Virtual Agent platform and existing generative AI models and frameworks.
* Deploy the MVP chatbot to a selected group of users for testing and evaluation.
* Evaluate the performance and effectiveness of the MVP chatbot and provide recommendations for improvement and scaling.
* Determine feasibility of interfacing the chatbot with other repositories and integrating it with other distribution channels.

# SCOPE OF WORK

## Assessment and Discovery

* Assess the state of the current implementation of the Virtual Agent.
* Assess existing knowledge repositories: ServiceNow IT knowledge base, the IT Service Catalog, Yammer, IT training site, and IT learning site (SharePoint), for training the Virtual Agent on these repositories.
* Assess the current state of the generative pre-trained AI-based chatbot pilot being performed by the Infrastructure Team of ITD (ITID) and potential integration paths.
* Conduct a user needs assessment and a chatbot design workshop to define the user personas, use cases, intents, entities, dialog flows, and responses for the MVP chatbot.

## MVP

* Develop the MVP chatbot using or on top of ServiceNow’s Virtual Agent platform and existing generative AI models and frameworks, such as GPT-3, Rasa, or Dialogflow.
* Integrate the MVP chatbot with ServiceNow’s IT knowledge base, at a minimum.
* Test and debug the MVP chatbot to ensure its functionality, usability, and reliability.
* Deploy the MVP chatbot to a selected group of users for testing and evaluation.
* Collect user feedback and metrics to measure the performance and effectiveness of the MVP chatbot.
* Provide an engagement report that summarizes the engagement outcomes, challenges, lessons learned, and recommendations for improvement and scaling.

## Feasibility Analyses

* Conduct feasibility analysis of interfacing and training the chatbot on other ADB data sources, including Yammer, IT training and IT learning sites (SharePoint).
* Conduct feasibility analysis of enabling the availability of the Virtual Agent conversational (client) interface across multiple platforms, including.

1. MS Teams Chat.
2. Apple iOS environment.
3. Google Android environments.
4. ServiceNow Mobile app.

## Out of Scope

* Deployment and Rollout
* Developing a custom generative AI model or framework for the MVP chatbot.
* Deploying the MVP chatbot to the entire ADB user base.
* Providing ongoing maintenance and support for the MVP chatbot after the Feasibility Analysis.
* Training and adoption

## Timeline

1. It is expected that the successful rollout of the MVP Virtual Agent will occur two or three months from the start of the engagement using an agile, iterative approach.
2. Mobilization will occur in 2024.

## Summary of Expected Deliverables

* A user needs assessment (workshop) that identifies the user personas, use cases, pain points, and expectations for the MVP chatbot.
* A MVP chatbot prototype that can provide conversational IT support to ADB staff and consultants using NLP and generative AI technologies.
* A user feedback and metrics report that evaluates the performance and effectiveness of the MVP chatbot.
* Feasibility analyses for interfacing with other ADB data sources.
* Feasibility analyses of enabling the availability of the Virtual Agent conversational (client) interface across multiple platforms, including.
* A summary report that details the engagement outcomes, challenges, lessons learned, and recommendations for improvement and scaling.

## Acceptance Criteria

1. It is expected that final acceptance will depend upon the successful completion and acceptance of all deliverables as per the defined and agreed scope and successful operational of the Virtual Agent using Generative AI in a test environment. The MVP chatbot should integrate with ServiceNow’s IT knowledge base.

## Qualifications

1. ADB is seeking a Vendor Team that possesses a blend of expertise, practical experience, and formal education. The Vendor must be able to deploy a team with the following qualifications:

Educational Background:

* Bachelor’s or master’s degree in computer science, Information Technology, Software Engineering, or a related field.

Experience:

* Demonstrable experience in projects creating chatbot or conversational interfaces involving Natural Language Processing and generative AI technologies.
* Experience in integrating third-party tools or systems with ServiceNow.
* Experience and expertise in conducting user needs assessment and chatbot design workshops using participatory methods and tools.

Technical Proficiency:

* Familiarity with AI and ML tools, frameworks, and methodologies.
* Hands-on experience with API integrations.
* Prior experience in integrating and consolidating knowledge bases from diverse sources.
* Familiarity with common IT challenges and solutions to train the chatbot effectively.

Project Management Skills:

* Familiarity with agile methodologies and tools.
* Ability to manage timelines, resources, and risks associated with the engagement.
* Demonstrated capability in delivering projects on time and within budget.

Soft Skills:

* Excellent English communication skills, both written and verbal, to effectively convey complex technical topics to non-technical stakeholders.
* Strong problem-solving and critical thinking abilities.
* Adaptability and flexibility in handling changing project requirements or challenges.
* Collaborative team player, able to work with cross-functional teams.

Security and Compliance:

* Knowledge of security best practices, especially concerning chatbot implementations.
* Understanding of data protection and privacy regulations applicable to the engagement.

1. The Vendor may propose an appropriate mix of personnel based on their understanding of the SOW and the minimum qualifications noted above.

## Service Levels

1. Not applicable for this MVP.

## Place of Performance

1. The services will be delivered remotely. The vendor may propose an onsite visit in its response to this SOW if deemed necessary.

## Working Days and Business Hours

1. Working hours in ADB Headquarters in Manila, Philippines, are between the hours of 9:00 AM and 6:00 PM, Mondays through Fridays, including Philippine public holidays but excluding ADB holidays.
2. The official ADB holidays are listed below and will be strictly followed. The Vendor is to be aware of these dates and align them with scheduled meetings, tasks, and deliverables. [Refer to this link](https://www.adb.org/contacts/adb-holidays) for the calendar of ADB holidays.

## Intellectual Property

1. All developed documentation, processes, procedures, source code, configuration files, resolutions, fixes, workarounds, training materials, and other forms of intellectual property developed under this SOW will be considered ADB property unless otherwise discussed and mutually agreed upon by ADB and the Vendor on a case-to-case basis.
2. All data and training related to the Virtual Agent will remain the property of ADB. ADB reserves the right to reproduce or distribute any documentation for official purposes.

# TECHNICAL EVALUATION AND PAYMENT SCHEDULE

## Technical Evaluation

1. To qualify and be considered in the evaluation of proposals, the vendor should have experience in developing application program interface. The proposal submitted in response to this SOW must include the following documents:

|  |  |  |
| --- | --- | --- |
| No. | Description | Documents/  Evidence to be submitted |
| 1 | **Cover page,** including company name, contact information, company biography and proposal summary.  **Engagement Narrative Plan:** communicates vision, commitment to scope and overall timeline, proposed plan, and schedule. | company biography and proposal summary  proposed plan/schedule |
| 2 | **Organizational Capacity**: resumes and/or summary biographies of the key personnel with detailed description of their roles related to the engagement; description of any subcontractors and their work, including but not limited to resumes and/or summary biographies; | Resumes of Key Personnel |
| 3 | **Tools/ Equipment**: detailed description of tools/equipment required for the engagement including the identification of equipment that partner(s) owns, rents, and/or borrows from. | Tools and Equipment list to be used |
| 4 | **Client References:** one (1) professional references/letters of recommendation from a former client. Current shall mean references for which the vendor has performed work within the past 24 months. Organization name and contact information must be provided. | at least one (1) client reference. Organization name and contact information must be provided. |

1. A Pass- Fail technical evaluation process shall be used for the assessment of the required evidence/documentation. Only the technically complying respondent will proceed to financial evaluation. The least priced technically complying respondent will be awarded the task order.

## Payment Terms

1. Proposed payment milestones are below. Payment terms are as per the IDIQ contract.

40% upfront upon contract signing for mobilization.

40% after successful delivery of MVP and confirmed acceptance from ADB.

20% after completion of feasibility analyses and engagement and confirmed acceptance from ADB.