



Info-communications Media Development Authority (IMDA)

Requirements for Customer Engagement Chatbot

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Version: 1.0

1. IMPORTANT NOTE

- 1.1 This requirements document must be read in conjunction with the information on Advanced Digital Solutions (ADS) at www.imda.gov.sg/AdvancedDigitalSolutions.

2. CALL FOR PROPOSALS (CFP)

- 2.1 IMDA is inviting industry partners, either individually or as part of a consortium (led by a single industry partner), to submit proposals for cost-effective customer engagement chatbot solutions. These solutions shall help Small and Medium Size Enterprises (SMEs) to improve customer support, increasing sales, and enhancing customer engagement and loyalty.

3. BACKGROUND

- 3.1 Chatbots usage has becoming increasingly popular among businesses. Some common use cases for chatbots include:
- 3.2.1 Customer support: chatbots can be used to provide 24/7 customer support, answering common questions and resolving issues in real-time.
 - 3.2.2 Lead generation: chatbots can be used to collect information from website visitors and generate leads for sales teams.
 - 3.2.3 Sales assistance: chatbots can be used to guide customers through the sales process, providing product recommendations and answering questions about pricing and features.
 - 3.2.4 Order tracking: chatbots can be used to provide customers with real-time updates on the status of their orders.
 - 3.2.5 Feedback collection: Chatbots can be used to collect feedback from customers, helping businesses to improve their products and services.
- 3.2 Current implementations of chatbots often struggle to understand the context of a conversation beyond basic keywords and phrases. This can lead to generic or irrelevant responses that do not address the customer's actual needs.
- 3.3 The next generation of chatbots use a technology called Generative Pre-Trained Transformer (GPT) based on Large Language Model. Compared to previous generation chatbots, the next generation chatbots have better natural language processing (NLP), which means they can provide more accurate responses and engage in context-aware conversations with the customers. Additionally, the next generation chatbots can learn from user interactions and improve their responses over time, resulting in a more personalized and effective user experience.
- 3.4 This CFP seeks for the next generation Customer Engagement chatbot solutions that can either replace SME's existing chatbot or be implemented as a new chatbot on

their business website. The scope of the proposal should not include the development of a new business website.

4. REQUIREMENTS

4.1 **[Mandatory]** The Chatbot solution must be cost-effective. The solution must provide more value (such as increased productivity, improved efficiency, and better customer service) than it costs to implement and maintain. The chatbot solution package should be appropriate for SMEs with annual revenue between \$100,000 to \$5 million.

4.2 **[Mandatory]** The Chatbot solution must have the following features:

4.2.1 Ability for the chatbot to be trained via at least two of the following sources:

- Direct website crawl (with website URL being an input)
- Direct database integration (such as via SQL)
- Unstructured files such as PDF or Word Document
- Structured files, such as FAQ with Question-and-Answer pairing.

4.2.2 Ability for the chatbot to answer customer questions via natural language conversation, such as questions about products, shipping, returns, and other topics. The chatbot must be able to converse in English. Chatbot solution that can converse in more than one language will be evaluated favourably.

4.2.3 For chatbot taking the role of a sales assistance in e-commerce environment, it must have the ability assist the customer to complete an end-to-end sales via the chatbot conversation. This will help to streamline the checkout process and make it easier for customers to complete their purchases. Chatbot with the ability to provide product upselling and cross-selling recommendation during the sales checkout process will be evaluated favourably.

4.2.4 Ability for the chatbot to provide product/service recommendations, such as the use of customer data to provide personalised product/service recommendations. This will help customers to find the products/services that they are most likely to be interested in and increase the chances of a sale.

4.2.5 Ability for business owners to define the conversation boundaries to restrict the chatbot from providing information outside the scope of the business website.

4.2.6 Ability for business owners to re-train the chatbot on their own after they have made any changes to their business website or information.

4.3 **[Optional]** The chatbot solution may include one or more of the following features. Solution with these features will be assessed favourably.

- 4.3.1 Ability to converse via voice chat with the customer
- 4.3.2 Ability to run marketing campaigns by engaging with potential customers on social media, providing information about products and services, and even running contests and giveaways. This can help businesses to reach a wider audience and generate more leads.

5 APPLICATION REQUIREMENTS AND PROPOSAL SUBMISSION PROCESS

- 5.2 Please submit the required details and documentations in this [form](#) to indicate your interest to participate in this CFP before **29 Sep 2023**. Please include a URL leading to a website that has a working implementation of the Chatbot solution in your solution presentation slide (Question 11).
- 5.1.1 IMDA shall conduct an initial assessment to pre-qualify the participants; and
 - 5.1.2 A CFP briefing will be scheduled with the pre-qualified participants, who are required to attend the briefing before submitting proposal(s) to IMDA.
- 5.3 For this CFP, your eventual proposal submission will be assessed based on the following evaluation criteria:
- 5.3.1 Vendor's track record – number of relevant past project deployments.
 - 5.3.2 Cost-effectiveness – Cost-Benefit-Analysis based on the total cost of solution ownership.
 - 5.3.3 Accuracy of the Chatbot conversation – Chatbot's ability to understand the context of a conversation and provide relevant responses.
 - 5.3.4 Ease of implementation, including ease of setting up and training of the chatbot and/or integration with e-commerce website and inventory management system.
 - 5.3.5 Ease of maintenance (such as effort to re-train the chatbot).
 - 5.3.6 Fulfilment of optional requirements specified in Para 4.3.
- 5.4 Details of the proposal submission process will be shared during the CFP briefing. IMDA reserves the right to reject incomplete or late submission(s).

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