

REQUEST FOR PROPOSAL

Chatbot

DOCUMENT DETAILS

Owner	Ministry Of Education
Purpose	Chatbot
Version	Version#1.3



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1 PROJECT INFORMATION AND BACKGROUND

Definition of Terms

- 1.1.1 In this Request for Proposals Document, the following capitalised words and expressions have the meanings hereby assigned to them, unless the context specifically requires otherwise. It should be noted that references to the singular include the plural and vice versa:
- 1.1.1.1 **MOE:** Ministry of Education
- 1.1.1.2 **Vendor:** Hardware and Software manufacturer
- 1.1.1.3 **Engineered Solution:** is a solution that is supported by the vendor as a single solution and includes an engineered architecture of hardware, software, services, blueprints, automation, orchestration workflows and plugins and full lifecycle management of all the components
- 1.1.1.4 **Authorised Representative:** means the nominated representative of the Bidder;
- 1.1.1.5 **Bidder:** means any person, firm, or company/consortium that has been invited to compete for the award of the contract and who submits an RFP Response to MoE;
- 1.1.1.6 **Closing Time and Date:** shall have the meaning given to it in Section 4 of this RFP;
- 1.1.1.7 **Competition:** means the Competition for the award of contract by MOE;
- 1.1.1.8 **Contractor:** means, if MOE awards the Contract following the Competition, the entity with which MOE enters into the MOE Contract;
- 1.1.1.9 **MOE Contract:** means the contract for the carrying out of the Project;
- 1.1.1.10 **Preferred Bidder:** means the Bidder who, on the basis of applying the scoring and award criteria established by MOE for the purposes of this procurement, will be invited to enter into the post tender negotiation stage.
- 1.1.1.11 **Project Agreement:** means any contract or contracts awarded by MOE to any Contractor relating to the Project;
- 1.1.1.12 **RFP Response:** means the response including the Annexes submitted by Bidders in response to the Request for Proposals (RFP) issued by MOE; and
- 1.1.1.13 **UAE:** means the United Arab Emirates.
- 1.1.1.14 **MBRSLP:** means the Mohammed bin Rashid Smart Learning Programme (MBRSLP) which was set up by Cabinet Decision No (25) of 2012;
- 1.1.1.15 **Technical Terms:**
- **IaaS:** Infrastructure as a Service
 - **PaaS:** Platform as a Service
 - **DRaaS:** Disaster Recovery as a Service
 - **BaaS:** Backup as a Service
 - **SDN:** Software Defined Networking
 - **SDA:** Software defined Access
 - **NAS :** Network-attached storage
 - **SAN:** Storage Area Network
 - **SDS:** Software Defined Storage
 - **SDWAN:** Software Defined Wide Area Network
 - **SDDC:** Software Defined Data Centre

2 STATEMENT OF REQUIREMENTS

2.1 Scope of Required Services

INTRODUCTION

Ministry of Education; *hereafter referred to as (MOE)*, keen to competitively procure and engage a professional vendors to implement, develop, integrate, Configure, train, and customize a **Chatbot Solution** that offers a convenient interaction and communication with MOE customers, End users, and backend employees, and it should have the main reason to be cost-effective and engage services used within the chat environment across many digital channels like MOE portal and other social media channels (WhatsApp) To reach that point MOE requests to have chatbot solutions that scalable, and easily be; upgraded, modified, integrated and implemented.

In addition, MOE try to find a vendor who can provide the **Messaging Solution** that send systems and services notifications by different channels (business WhatsApp, imessage, Telegram, line, Wechat, Wire, numbuzz, lifewire, Google for business, Textmagicetc, or any of tools available in this link <https://www.business.com/categories/best-text-message-marketing-services/>, etc) depending on the Customer used channel with cost effectiveness as a replacement and/or complement to SMS notifications.

Provided CHATBOT solution should be more than just a means of answering customer questions, service queries, or FAQs. it should have the power to digitally transform complete customer and employee journey, upping the ante on asking CHATBOT about services and driving the business transformation to digital communications.

Provided CHATBOT solution should be deployed on all platforms and have the ability to integrate with the following major points at least:

1. Integration with MOE Applications, systems, databases, and channels
2. Integration with other MOE tools such as Ivanti ITSM, and any other tool needed by MOE

BACKGROUND

MOE found a certain needs and opportunities where can bring the emerged technologies in Artificial Intelligence (AI) and Natural Language Processing - NLP under MOE CHATBOT that finds solution of the current challenges; those which face both MOE customers and employees, and predefine in terms of ease the communication and produce better way to interact with MOE services, on the other hand; increase quality and governance over the systems and data communicated.

MOE tries to bring efficiency in its services by automate the process of getting the data from different sources and provide it to customers & use the information available in distributed systems.

Hence; MoE focuses on solving customer's inquiries, notes, and challenges by creating a one-stop solution for all customer needs related to any service request of inquiries, challenges, data sharing, customer know-who recognition, guidance on MOE services, and perform smooth end-end e-government services and transactions, etc.

Note: Vendors may showcase all possible features that they offer as possible options or that make the system fully work seamlessly without any missing part and should provide their experience in this domain, even if



there is any need to 3rd party tools, The vendors are required to guarantee the solution to meet MOE objectives and targeted business user demand

2.2 Proposed Solution

The proposal must include and reflect the full understanding of all sections within the RFP. The technical proposal should address clearly and in-depth the requirement points that are subject to the evaluation criteria against which the proposal will be evaluated. Simply by adding the requirements table and fill it with bidder input, in order to facilitate the evaluation of the bid, MOE requests that bidders address and present topics in the order of the evaluation criteria under the same headings.

FORMAT OF VENDOR'S COMPLIANCE TABLE:

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-X-01	MOE Requirement 1	X	XXXXXXXXXXXXXXXXXX
CH-X-02	MOE Requirement 2	X	XXXXXXXXXXXXXXXXXX

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
This section	This section	This section	This section
Should include every single requirement ID as per the RFP (e.g. CH-G-01)	Should include every single requirement description as per the RFP (e.g. MOE Requirement 1.....)	Vendors should enter a "Y" (Yes) or "N" (No) to indicate if it complies with the RFP requirement or not	<p>Vendors have 3 option only:</p> <p>1</p> <p>In case comply with an RFP requirement exactly as written, the vendor must enter a "Y" in the "Compliance (Y/N)" column. Without any need to add more details in Remarks section</p> <p>2</p> <p>In case comply with an RFP requirement but with customization; vendor must enter a "Y" in the "Compliance (Y/N)" column with <u>adding "C"</u> in the Remarks section, and <u>add how to</u> cover this requirement and if there is any impact or not in the Remarks section</p> <p>3</p> <p>In case you do NOT comply with an RFP requirement exactly as</p>



			written must enter an "N" in the "Compliance (Y/N)" column.
--	--	--	---

2.3 General deliverables and features

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-G-01	All documentation that requested to this project which will be submitted by the vendor becomes the property of the MoE, also shall follow MoE standards and it will go through MoE approval process and reviewed by MoE team, Vendor must follow MoE notes and correct any required item/items, vendor must show their proficiency in all provided documents that follow best practices <u>P.S. Vendor should review the documents before sending them to the Ministry in a proper way and rely on the accuracy</u>		
CH-G-02	Vendor must study\analyze, and provide the full journey map of MoE customers that makes the customers achieve a certain goal using the communication with MoE CHATBOT		
CH-G-03	Vendor must study the current situation and provide it in a form of As-Is processes, which include all related touchpoints between MoE and its customers at its different channels, like; Call Center, Happiness Center, website, social media communication, and others. to find the best solution of the current customer's pain points		
CH-G-04	Vendor must provide tools, software, and utilities for the chatbot solution on production, development, and test environments with any needed interface		
CH-G-05	Vendor must design and build the solution with redundancy options, to ensure the system will not be affected by the failure of any component, software, or server in the production environment		
CH-G-06	Vendor must provide all resources, tools, and software for an end to end setup, development, deployment, configuring, customizing, training, and support and maintenance of the Platform		
CH-G-07	The bidder must consider the variety of system that works to serve MoE customer and must provide a full overview of the opportunities that can reduce time, cost, efforts and may result in an increase the happiness of the customers		



CH-G-08	The bidder shall provide all licenses and tools that may need to implement CHATBOT solution in addition to all libraries, and 3 rd party tools, that needed to make the solution work as required		
CH-G-09	The bidder must provide all documentation for the Business and technical views and the architecture document and design of the solution		
CH-G-10	The bidder must provide the best practice approach for process design, configuration, deployment, etc. in line with MOE standards and its practices		
CH-G-11	The bidder team must cover all project tasks as per the agreed plan, such as: <ul style="list-style-type: none"> • Project Manager • Business Analysis team • Quality team • Development team • Solution Architect • Security Team 		
CH-G-12	The bidder must provide patches, updates, and upgrades during the warranty		
CH-G-13	The bidder must provide details of hardware configuration and sizing to meet requirements		
CH-G-14	The proposed solution shall have the ability to deal and integrate with different tools, databases, platforms, and systems used by MOE		
CH-G-15	Vendors may be required to undertake to build a Pilot or PoC		
CH-G-16	The bidder should provide training for MOE team in different roles from the technical side, business side and how these teams can deal with both areas		
CH-G-17	Vendor to provide documentation and user manual for the product, tools, and utilities. The documentation for the processes should also be provided.		
CH-G-18	Have a central data of all contact persons in all MOE systems		
CH-G-19	Store all connected channels for each contact, for example to know each contact number if it is activated on WhatsApp or Telegram or linked to any proper and known messaging service.		
CH-G-20	When a message sent to a contact number, the system should identify the least cost channel to send the message through it, if the service provides message delivery reports, it should be captured as well		
CH-G-21	The system should provide APIs to be used by other		



	applications to be able to send messages		
CH-G-22	The system should be able to read contact persons information from different systems in the ministry through APIs		
CH-G-23	The system should identify the important notifications and send it through the most reliable service which is the regular SMS, the importance can be identified by end user and/or by some configuration in the system based on some factors like message category and message source, for example, if the message sent by some system in MOE it will be treated as important, but if the message sent by end user in a school it will be treated as low priority. Also we may identify some users in schools to send important messages that goes through regular SMS like students absence or any other critical information that parent must read		

2.4 Functional deliverables and features

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-F-01	Messaging Solution: The proposed solution shall consider being used as one of the main MESSAGING / NOTIFICATION channels, like sending customer updates on their requests to replace the SMS notification, this: <ul style="list-style-type: none">- The solution to find which channel the customer own and he prefer to send the notification, also trusted enough assuring to deliver the notification to the client, and in		



	<p>the last step if customer did not have option rather than SMS, the solution will use it as last option</p> <ul style="list-style-type: none">- The messages or notification that comes from any system can use this solution to send the notification to the customer- The messaging solution shall be ready to integrate with other system and services <p><i>This feature shall not require any previous communication between CHATBOT and customer</i></p>		
CH-F-02	<p>The bidder to cover the following channels:</p> <ul style="list-style-type: none">- MoE Portal and MOE Mobile app- MoE WhatsApp channel- IVR (call center)- OmniChannel		
CH-F-03	<p>The bidder must provide the solution that has the capabilities to integrate with different platforms and can be configured and scalable in an easy way, and this at least include, but not limited to:</p> <ul style="list-style-type: none">- IVR- WhatsApp- Portal- OmniChannel		
CH-F-04	<p>The bidder must cover the following services:</p> <ul style="list-style-type: none">- Systems notification- Inquiry Services in MOE systems- Complain Service- Suggestion Service- "Request status" Service		
CH-F-05	<p>The performance takes the highest priority, but also CHATBOT personality is an important part that needs to be considered, CHATBOT solution shall be ready to answer the question, opening chat, and closing it smoothly without bothering customers, also it should attract them to use this channel again, this include at least:</p> <ul style="list-style-type: none">• The greeting or opening of the conversation,		



	<ul style="list-style-type: none"> • Answer unrelated questions, • Avoid repetitive responses, • Finish the chat responses, and • Answer "about CHATBOT" questions like (name, Age, do what, etc.) 		
CH-F-06	<p>The proposed solution should support cognitive automation features with the artificial intelligence (AI), to recognize and deal with:</p> <ul style="list-style-type: none"> - Text Chatting - Voice Chatting - NLP <p><i>This shall include Text-to-Speech, Speech-to-Text, and translation from English to Arabic and vice-versa</i></p>		
CH-F-07	<p>The proposed solution should be more natural in conversation by the applying natural language processing and understanding, AI capabilities, Machine Learning, adding into consideration the rule-based flows where the CHATBOT try to provide the customer with service within MoE list of services</p>		
CH-F-08	<p>The proposed solution shall have the capability to minimize the user input in the chatbox to be at the minimum level, this means the interaction with chatbot shall be smart, accurate and can recognize the user personal information, details, old conversations, all user requests, and his behavior, and build and update the continuous information bank of user preferences and needs in order to give him the fittest and appropriate answers and response</p>		
CH-F-09	<p>The proposed solution shall have the capabilities to communicate with MOE systems in order to recognize the customer and can then suggest the most appropriate service or answer as per the customer needs</p>		
CH-F-10	<p>The proposed solution shall depend on many factors that assure the customer needs will be defined and answers</p> <p>Identify the needs of the user by his intent, in respect to the way he asked, entities that used, in the utterances, phrase, and statements</p>		
CH-F-11	<p>The proposed solution shall be meaningful in terms of data communication and conversation content (CHATBOT answers and responses) with the customer more than simple question-answer flow</p>		
CH-F-12	<p>The proposed solution must support multi-lingual</p>		

	in Arabic, English, and (Urdu), Plus other languages if needed as per the study of MOE services		
CH-F-13	The proposed solution shall have the ability to allow users have the flexibility to go back in conversation or jump number of steps backward or forward in an easy way without requesting him to do multiple actions or clicks for completing the task		
CH-F-14	The proposed solution shall allow the user to be flexible to change the conversation flow in terms of adding a different question or different data or in case need to fix misunderstandings in the conversation and the interactions		
CH-F-15	The proposed solution shall handle interruption from the user while CHATBOT perform an action		
CH-F-16	The proposed solution shall work with multiple concurrent customer requests simultaneously at the same without affecting each other in terms of communication speed, results, recognition, and performance		
CH-F-17	<p>The proposed solution shall have the ability to transfer/ take over the conversations between bot agent and human agent at any specific action on the conversation (automatic at certain conditions, or manually by human agent) this may include a workspace that manage it including all active chat by different categories and filters, like but not limited to:</p> <ul style="list-style-type: none">- Time- User details- User preference- Chat type- Subject- Agent type- Etc.		
CH-F-18	<p>The proposed solution shall deal with all customer inquiries, this meaning the CHATBOT shall cover all chat behavior and the solution shall deal with exception cases or unrelated questions and each exception need to be resolved with its related behavior or actions, those activities may include redirect user to human agent or taking another decision, or/and response with a proper messages</p> <p><i>The unknown questions and exceptions shall be highlighted and saved in administration screens, administrators to answer and configure it in order to learn the CHATBOT with such questions and exceptions</i></p>		



CH-F-19	<p>The proposed solution shall generate customer information from MoE different sources of information's, this data shall lead the CHATBOT engine to prepare the fittest answers and respond to the customers, even in case the conversation will move to human agent the CHATBOT shall produce this information in proper view and send it to concerned employee; this view shall include customer personal information, customer pending requests, customer needs from that chat, and the chat details, like but not limited to; chat time, chat duration, number of chat that user enter, chat channel, user intent, etc.</p>		
CH-F-20	<p>The proposed solution should provide the ability to links the chatting users who logged from different channels to the concerned account</p> <p><i>e.g. this means if the user x used WhatsApp channel to communicate, then use MOE portal chat channel and so on; then the system shall link all channels to the same user x account in the backend, this shall provide the chatbot solution with all capabilities to train him about the customer and let the chatbot train and follow-up with customer regardless the channel that used</i></p> <p>User accounts links shall be smoothly happened without affect user chat box with many questions to confirm links, and shall be smart enough, and accurate in this feature</p> <p>All links and customer profiles shall be managed by admin/admins user in his workspace, which may include editing the links by removing it in a specific account/accounts, and other management/monitor facilities</p>		
CH-F-21	<p>The proposed solution should provide the customer with feedback in different types, format, and resources, like but not limited to:</p> <ul style="list-style-type: none">- Text, like service user, etc.- Images, like service catalog images, etc.- Files, like user manuals, etc.- Video, like service customer journey, etc.- Links, like links to services, or MOE site links, Maps and location, like customer happiness centers map location- Voice, like telling the customer where to find customer happiness center		

	<ul style="list-style-type: none"> - Quick replies (icons, links, pictures, etc.) - Buttons - Card (e.g. about a service) <p><i>The configuration and managing all of these features shall be considered by the vendor to be provided</i></p>		
CH-F-22	<p>The proposed solution shall read/analyze and recognized user responses regardless of the input type, like but not limited to:</p> <ul style="list-style-type: none"> - Text Chatting - Voice Chatting - User selection for any of the quick replies (icons, links, Images, Buttons, Card, etc.) 		
CH-F-23	<p>The proposed solution shall have its own dialog management controls and the ability to find and recall old conversations, memorize it and find the best way to follow the dialog for each specific customer</p>		
CH-F-24	<p>The proposed solution shall have the ability to save and archive conversation with the customer and build a relationship with each customer for different purposes, like but not limited to:</p> <ul style="list-style-type: none"> - Know customer behavior and needs for the next communication, - Ease the next communication results and feedback and make more as human conversation, like asking the user about the last request status! Or his last chat, <i>etc</i> - Keep records of each communication in case it needed to be audited or reviewed, - The employee may use it to find key needs or for review it, - it should be used to enhance next time communications for this customer, and - for others by train the CHATBOT incrementally 		
CH-F-25	<p>The proposed solution shall work from the beginning of launching the CHATBOT this meaning the CHATBOT shall be trained before starting the communication with MOE customers to understand specific knowledge and terms regarding the ministry of education, and pre-configured to resolve common customer needs and services of MoE, which need to feed the CHATBOT with services, information, FAQ, configurations, etc.</p>		
CH-F-26	<p>The proposed solution shall have the ability to import data that help to train the CHATBOT with the different file format</p> <p>And system users shall have the ability to import or export the questions, answers, and other system</p>		



	settings and configurations		
CH-F-27	<p>The proposed solution shall have quick replies and greetings messages and its configuration module, these messages shall be used wherever needed in start conversation or at the end each conversation, <i>and it can be used in unrelated questions from customers</i></p> <p><i>The starting of the conversation shall be differ between first time communication, or if its the second time communication, like (Hi, how can I help you) or (welcome back, how can I help you)</i></p> <p><i>For greeting it can be in different way and responded to user depending on the user environment factors, like time (e.g. good morning or good evening)</i></p> <p><i>All can be managed and edited at any time</i></p>		
CH-F-28	<p>The proposed solution shall have the ability to collect and gather the user feedback on the conversation, this also can be configured in terms of following at least: can</p> <ul style="list-style-type: none"> - When it be used - Type of survey/questions - The content that will be used (it's dropdown, selection, happiness meter, other types) 		
CH-F-29	<p>The proposed solution must collect, store events and audit any action of human agents or bot agent perform any operation within the proposed solution, including at a minimum:</p> <ol style="list-style-type: none"> 1. Successful and unsuccessful attempts to access, 2. Modify, or delete data (include audit data, system configuration files, and file or users' formal access permission), 3. Successful and unsuccessful actions on the systems, 4. Type of activity happened, 5. Activity time, 6. Where the activity happened, 7. The source, 8. The result of the activity, and 9. The identity of any individuals or subjects associated with the activity <p><i>The proposed solution must secure the credentials of authentication information</i></p>		



CH-F-30	The proposed solution shall have the ability to marks and flag changes that happened on any configuration, settings, system files, and other components of the system with its details, this will be used in system auditing		
CH-F-31	Vendor to provide Management Console (Control Panel) to manage and monitor all system component, system users, human agents, bot agents, and Processes with activity monitoring		
CH-F-32	<p>The proposed solution shall have at least the following administrative modules and features with its configuration capabilities to each of them, that allows the system to work and administrators to manage it:</p> <ul style="list-style-type: none"> - User and agents management, and Mange chat switching between bot agents and a human agents, and vice-versa - Customer management and account links - Channels management - Contextual Intent, Keywords, and Entity management for each system - Dialog management (<i>Vendor to build the dialog that will be used as per requirements</i>), and manage business process logic and design - Manage knowledge base, FAQ, and Training - Unknown and Exceptions module (<i>also vendor to make the system answers and work in all cases with respect to user needs</i>) - Alert and notification management - Resources management input and output (text, voice, cards, etc.) - Manage clients/contacts source of information - Manage systems connection and integration (enable, or disable the connection to a specific system) - Dashboard Reports management - Mange audit-trail - Manage system configurations <p><i>With the ability to import/export the configuration files in a different format</i></p> <p><i>In case; vendor implement any other feature from the third party he should consider it in the above list and all features that added but not included in this point shall be added in the administration module</i></p>		
CH-F-33	The proposed solution shall have reporting capabilities:		

	<ul style="list-style-type: none"> - Dashboard with different filters, and different views - Statistical and detailed reports with different filters like time, date, channel, user preferences and their details, user behavior, etc. - Export capability with different types/formats, like; excel, word, pdf, etc. - Switch between different reports views and charts - Allow user to select the data required in the report view and output, and may include Message Metrics, User Metrics, etc. - Monitoring the solution behavior and the impacted results in many parts that may include but not limited to: <ul style="list-style-type: none"> • Customers engagement • Customers happiness • Does the human agent get fewer requests • Does other chatting channels get fewer requests than before • Solution performance • Chat performance • Etc. 		
CH-F-34	The proposed solution shall be less in customization when its developed and it should easy for implementation, the solution shall be scalable in terms of updates, upgrades, integration with new systems, and have the capabilities to reduce the efforts required to add any new update		
CH-F-35	The proposed solution shall have the capability to alert and notify users, this module cares about the communication between CHATBOT system and different types of users, in some cases may need to notify an employee about urgent customer requirements, which need employee attention, etc.		
CH-F-36	The proposed solution shall have the ability to provide system administrators with all system errors, failed attempts communication, and misunderstanding cases, and this may require to use alert module and report module to provide the administrators with that results, in different words the solution shall have the quality controls that notify system administrators in case any actions required to improve the solution or enhance it		
CH-F-37	The proposed solution shall have its built-in knowledge and data that make it run, also the solution shall have the ability to be used at early stages parallel with updating/developing remaining parts		



CH-F-38	The proposed solution shall have the ability to configure/add intents, and entity/slots, in addition to configure keywords, and synonyms which express user need in different ways with same value.		
CH-F-39	The system should provide capability to manage thousands of requests per second, we have almost 650 schools that will use the system, so the system should not delay any scheduled message more than 10 minutes.		
CH-F-40	The system should priorities important message to be sent instantly without any delay.		
CH-F-41	The system should support SMS gateways using protocol SMPP to send regular messages.		
CH-F-42	The system should provide ability to add more channels by the time, for example if the MOE decided to release a new application that pushes notifications to end users, then it should be one of the channels in the system.		
CH-F-43	The system should provide users hierarchy to manage users access and quotas, for example limiting the number of important messages per user, restricting messages language and size, like if a user sending a regular SMS containing both Arabic and English, then it will be better from the cost perspectives to be sent in two different messages.		
CH-F-44	The system should provide statistical reports on different levels of the users, for example number of sent messages per user or per school or per emirate. This depends on the defined users' attributes and hierarchy.		
CH-F-45	The system should be integrated with MOE Active Directory for authentication.		
CH-F-46	The system should be available 24X7 with high availability architecture		



3 NON-FUNCTIONAL REQUIREMENTS

3.1 TRAINING REQUIREMENTS

The bidder must consider and provide training that makes sure all needed knowledge transferred to the concerned teams from MOE and transfer the CHATBOT solution Know how to MOE team technical and business side teams, including system administrators and others selected by MOE.

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-T-01	Handouts, and User Manuals to be provided to all participants to whom the Training would be provided by the Bidder		
CH-T-02	Provide training plan and details for various user types (administrator, end-user) for which training will be provided, the mode and duration of the training, numbers of users for whom training will be provided, Describing the knowledge transfer plan		
CH-T-03	Provide training on the implemented solution and its different aspects for MOE team		
CH-T-04	Provide the training on system functionalities & features for MOE team		
CH-T-05	Provide training and knowledge transfer to deal with implemented processes and services for MOE business department team and how to work in line with the new solution		
CH-T-06	Provide training and certificate for MOE Technical team		
CH-T-07	Trainers provided by the vendors must be certified		

3.2 HELP & USER GUIDE REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-H-01	Bilingual User Manual in Arabic and English and shall be clear for the end-user and the other stakeholders regardless of their backgrounds especially technical background, also provide other advance help for the technical team with detailed step by step use and functions		
CH-H-02	Provide the user guide in a different format and each type of users shall have in the different user guide and others that include all guides and helps		
CH-H-03	Provide the user guide in a professional way that makes easy to learn and know the document content		

3.3 INTEGRATION REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-I-01	Does the bot platform provide the ability to execute tasks by integrating and consuming APIs provided by various systems of record?		
CH-I-02	Does the platform support REST & ODATA APIs?		
CH-I-03	Does the platform support Web Services/ SOAP APIs?		
CH-I-04	Does the platform support other integration protocols? Please explain.		
CH-I-05	Does the platform have out-of-the-box adapters to support various message delivery channels?		
CH-I-06	Does the bots platform expose APIs that can be invoked using another application?		



3.4 SUPPORT & MAINTENANCE REQUIREMENTS

The Vendor shall provide comprehensive maintenance services for the proposed solution, onsite support & maintenance services will include, but not limited to:

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-M-01	The system should support the Omnichannel strategy of MOE		
CH-M-02	The system should have a framework for integrations		
CH-M-03	What kind of support we will receive during and after implementation		



3.5 FLEXIBILITY AND SCALABILITY REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-FS-01	Can the bots be targeted towards end consumers (B2C)?		
CH-FS-02	Can the bots be targeted towards employees (B2E)?		
CH-FS-03	Can the bots be targeted towards business users (B2B)?		
CH-FS-04	Will the bot allow end users to authenticate and authorize using their own personal credentials?		
CH-FS-05	Can the bot perform action tasks for the users? (Action tasks are user-initiated interactions with the bot that usually update back-end systems or perform transactions.)		
CH-FS-06	Can the bot alert the user of specific events that maybe of relevance to the user? (Alert tasks allow a bot to initiate a conversation with the user by bringing relevant & personalized information to the users from systems of record.)		
CH-FS-07	Can users personalize the bot alerts? (Personalization can be in the form of individual filters and scheduling options that each user can specify per their preferences.)		
CH-FS-08	Can the user also request reports or information that the bot can fetch for the user?		
CH-FS-09	Can the report requests be on demand and scheduled for periodic retrievals?		
CH-FS-10	Does the bot enable you to respond to questions from users? (The question and answer (FAQs) content can be either within a content management system (accessed via APIs) or stored within the platform.)		
CH-FS-11	Does the platform provide the ability to make the alerts actionable? (Users should have the ability to take quick actions when alerts and notifications are delivered to the user.)		
CH-FS-12	Does the platform provide the ability to send proactive, contextually relevant smart alerts to users?		
CH-FS-13	Can enterprises execute workflows by mapping		



	actions to actions?		
CH-FS-14	Can users automate and suggest subsequent actions?		
CH-FS-15	Can bots be instantiated within a team context?		
CH-FS-16	Do the bots support input in natural language so that users can utter sentences in natural language to the bot? (This is generally an unstructured input provided by the user.)		
CH-FS-17	Is there a feature that enables creating bot families? (Parent and child bots with bot feature inheritance)		
CH-FS-18	Is there a way the configuration can be transferred between bots?		
CH-FS-19	Do the bots provide a forms-based UI in addition to natural language based input? (Forms would need to be dynamically generated based on bot configuration when the user requests it. This feature also be used in combination with natural language input depending on use cases.)		
CH-FS-20	Can the bot transfer a conversation to a human?		
CH-FS-21	Does the bot detect/analyze sentiment based on user utterances?		
CH-FS-22	Does the platform allow for invoking intents or present custom responses based on a defined list of platform or channel-specific events?		
CH-FS-23	Can the bot follow up an FAQ task with further dialog with the user and invoke another dialog task?		
CH-FS-24	Can the bot allow customers visualize conversation flows and user journey?		
CH-FS-25	Does the solution provide bot summary including training provided, channels, events, variables and extensions configured in the bot and help navigate to the corresponding module from a single screen?		
CH-FS-26	Does the solution provide search function and key board short-cuts to invoke commonly used tasks?		
CH-FS-27	Is live webchat available with your solution?		
CH-FS-28	Can the bot generate auto-dialogues given a human-to-human dialogue history?		
CH-FS-29	Is there a capability to present relevant information using widgets to enhance user engagement with the bot?		



3.6 PERFORMANCE REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-P-01	Can interpret commands accurately		
CH-P-02	Can execute requested tasks		
CH-P-03	Can maintain a discussion		
CH-P-04	Can activate a new topic		
CH-P-05	Number of services available in the chatbot		
CH-P-06	Offers dependable information		
CH-P-07	Offers rating capability		
CH-P-08	Shows breadth of knowledge		
CH-P-09	Gracefully handles unexpected input		
CH-P-10	Offers transparency		
CH-P-11	Protects and respects privacy		
CH-P-12	Is safe from intrusion/breach		
CH-P-13	Is easy to use		
CH-P-14	Supports canned responses vs. free text		
CH-P-15	Is always available		
CH-P-16	Is accessible via multiple platforms		

3.7 SECURITY AND PRIVACY REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-S-01	Does the bot allow enforcement of authentication and authorization rules as specified by the enterprise systems? (Enterprise systems may have specific user access privilege rules and other security configuration such as session timeouts that would need to be enforced and emulated by the bots platform.)		
CH-S-02	Does the bot platform support standard authentication models (Basic HTTP Auth, OAuth, API key, etc.) to authenticate the user? Please explain.		
CH-S-03	Are bot messages encrypted while at rest within the database?		
CH-S-04	Are bot messages encrypted in transit?		



CH-S-05	Is there an option to redact and secure sensitive user information, such as PCI, PII, PHI ?		
CH-S-06	Can enterprises audit the bot conversations with users?		



3.8 USABILITY REQUIREMENTS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-U-01	Talk to people, systems & things		
CH-U-02	Language emotions		
CH-U-03	Learn from interactions		
CH-U-04	Work across multiple channels		
CH-U-05	Interact when needed (scheduled/on-demand)		
CH-U-06	Remember context		
CH-U-07	Use natural language (voice & text)		
CH-U-08	Via conversational user interfaces		
CH-U-09	Visual and Intuitive Dialog Builder		
CH-U-10	Can Visual NLP Training models		
CH-U-11	No/Low code development -simple bot builder tools usable by business users versus IT.		
CH-U-12	Knowledge extraction and ingestion from multiple sources and formats.		
CH-U-13	Creating tasks using GUI based dialog builder		

4 PLATFORM & TECHNOLOGY

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-PT-01	Does the platform have a tool to build bots in a comprehensive, step-by-step manner?		
CH-PT-02	Does the platform enable any developer to build a bot for custom requirements?		
CH-PT-03	Does the platform provide out-of-the-box bots that		



	can be used?		
CH-PT-04	Can enterprise customize and extend the out-of-the-box bots that are provided by the vendor?		
CH-PT-05	Does your solution offer Livechat capability out of the box?		
CH-PT-06	Does the platform have omni-channel support?		
CH-PT-07	Does the platform provide multiple ways of following up the IVR session? (Call termination/initiate new task/jump to specific nodes in current task)?		
CH-PT-08	Is it possible to create instance-specific VXML properties while working with the IVR channel?		
CH-PT-08	Cisco WebEx Teams		
CH-PT-10	Does the platform allow the developer to take advantage of channel specific responses?		
CH-PT-11	Does the platform provide its own messaging application & platform where bots can be instantiated?		
CH-PT-12	Does the platform allow multiple users in a group chat?		
CH-PT-13	Does the solution have a NLP engine support standard functions such as Language Parsing, Grammatical Correction/ Normalization, POS tagging and logging and tracing for all utterances?		
CH-PT-14	Does the NLP engine support user prompting and dialog management to start and end a conversation with a user?		
CH-PT-15	Does the platform have intent recognition?		
CH-PT-16	Does the platform use machine learning algorithms to train and tune the NLP accuracy?		
CH-PT-17	Does the platform handle tasks based on domain-specific ontologies?		
CH-PT-18	Does the platform have an inbuilt methodology to handle domain-specific knowledge tasks such as FAQ?		
CH-PT-19	Does the platform support knowledge extraction from PDF documents, CSV files or URLs? ?		
CH-PT-20	Can enterprises only use NLP engine from the platform and develop their own custom logic to handle the task execution?		
CH-PT-21	Does the platform have speech or voice recognition capabilities?		
CH-PT-22	Is it possible to control/modify ML engine parameters via NLP thresholds?		



CH-PT-23	Is it possible to prioritize intents over entities or vice versa in a user utterance?		
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5 SYSTEM ARCHITECTURAL CHARACTERISTICS

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-SA-01	Is the bots platform available for hosting inside a cloud infrastructure?		
CH-SA-02	Does the platform offer its own cloud connector to securely connect and access on-premise services from the cloud tenant?		
CH-SA-03	Does the platform let you host and deploy the bot in an auto-scaling infrastructure environment?		
CH-SA-04	Is the platform available for on-premise deployment?		
CH-SA-05	Does the bots platform also support a hybrid deployment architecture?		

6 SOFTWARE DEVELOPMENT PRACTICES

ID	Requirement	Vendor Part	
		Compliance (Yes, No)	Remarks
CH-SD-01	Does the platform provide a developer tool which allows them to build new bots or extend existing bots?		
CH-SD-02	Are developers able to easily "configure" a task which consumes an API from a back-end system of record?		
CH-SD-03	Are developers able to configure the response provided by the bot once the API calls are made? (Developers should be able to simply configure the responses as well as develop custom code logic to manipulate the API response before presenting to the user.)		
CH-SD-04	Can developers test and run the bot to functionally test the bot?		
CH-SD-05	Is there an option to de-couple bot content from bot definitions to minimize coding effort?		
CH-SD-06	Can developers follow a complete software developer lifecycle for bot development?		
CH-SD-07	Can developers share bot and task development with other developers within the company?		
CH-SD-08	Is Batch Testing feature now enhanced to support matching of sub-intents with relevant entities in utterances?		
CH-SD-08	Can the developer convert business processes into conversational flows? Is there a storyboarding mechanism?		

7 PROJECT APPROACH

7.1.1 Project Methodology

All bidder teams are required to familiarize themselves with the policies and processes for project management in MOE. Bidders shall provide the methodology (Agile, Scrum, Kanban, Waterfall, lean, Prince2 ... etc.) they follow for executing the project successfully.

7.1.2 Project Plans

For the purposes of responding to this RFP the bidder must provide a high level project plan. The plan must be comprehensive enough in scope and detail to convey the bidder's ability to manage this project as specified in this RFP.

The bidder must stress work quality and how quality is ensured in all aspects of the project. The bidder must indicate in his plan how the status and visibility of project progress will be monitored. Bidders must describe their approach to project management during the implementation and operational phases as well as managing and coordinating different phases and activities of the project.

7.1.3 Project Approach Plan

The Bidder must describe their approach for delivering the project and create a structured project plan containing all project lifecycle phases and all related knowledge areas processes including Communication Management, Scope Management, Quality Management, Time Management, Risk Management, and stakeholders and Resource Management.

7.1.4 Project Change Management Plan

The bidder must clearly notify MOE officially of any change to the approved project plan in general and its impact with respect to scope, time, cost, and resource.

7.1.5 Project Scheduling Plan

The Bidder shall submit a master schedule, based on a work breakdown structure for defining and controlling the project.

The latest revision of the master schedule shall be used as the source of schedule data for developing all lower level subsidiary or supporting schedules and shall be used as the basis for all resource estimating and forecasting activities. The master schedule will also be used by the Bidder to monitor project milestones contained in the proposal.

MOE reserves the right to approve or request changes to the Bidder's schedules.

7.1.6 Project Organization Plan and Stakeholders Analysis

The Bidder shall provide an organization and staffing plan that includes the organization for the management and execution of the project. Functions and responsibilities of each department or group shall be detailed. Interfaces between departments, sections or groups, and between the Bidder and MOE shall be portrayed and explained, as well as the practices and procedures that will govern the control and execution of the work by these departments, sections or groups.

The bidder shall provide Arabic and English speaking project management as well as submit staffing or manpower allocation details in accordance with the project organization plan. Phase-in of the staff at various stages of the project shall be clearly shown, in addition to the amount of office space required during each stage. The Bidder shall include in the proposal, the job description of each staff position. Resumes of staff intended to participate in the project are to be submitted within thirty (30) days of contract signature by the successful Bidder. MOE reserves the right to accept or reject any of the Bidder's staff.

7.1.7 Project Issues and Risk Management Plan

Bidder shall describe their approach to managing risk and issues on the project. The processes and procedures used for managing issues & Risks should align with MOE.

7.1.8 Project Communications Management Plan

Bidder must describe how project communications will be managed making reference to project status reporting, meetings, visits, information gathering sessions, facilitating sessions, brain storming sessions, and other communications events.

7.1.9 Project Quality Management

The Bidder shall provide a quality assurance plan to insure that all delivered systems meet the stated requirements of this RFP. The Bidder shall insure that individuals appointed to measure quality (conformance to requirements) report directly to the manager of the project team and have status at least equal to other groups on the project team.

To achieve quality assurance objectives, the Bidder shall include in his quality assurance plan a detailed test plan that includes procedures and test reports.



8 DOCUMENTATION DELIVERABLES

The below list describes the minimum deliverables expected from the vendor. The vendor is also expected to add to the list any deliverables they deem important:

ANALYSIS / REQUIREMENTS

- BRD "Business Requirement Document"
- SRS "System Requirement Specifications"
- As-Is process details and map
- To-Be process details and map
- Business Exception Handling Document
- System Architecture / Integration Design
- System Design Document

PLANNING

- Project Charter
- Project Plan
- Risk mitigation Plan
- Change Management Plan
- MOM
- Proposed Team Structure

INTEGRATION

- Integration documents
- Integration Test Plan
- Completed Integration Test Plan (eservices, e-payments)
- Integration Test Results Review/Signoff

FUNCTIONAL TEST

- Completed Requirements Validation Plan
- UAT process document
- Test Cases Document
- Functional Test Results Review/Signoff



RELEASE

- [Software Release Documentation](#)
- [User Manual](#)
- [Technical Manuals](#)
- [Administrative Manuals](#)
- [Deployment Guide and Installation Scripts](#)
- [Released Software](#)
- [Source Code](#)
- [SDD "System Design Document" & DDD "DB Design Document"](#)
- [SAD "Solution Architecture Design Doc"](#)
- [System high level Architecture / Integration Design](#)
- [Implementation guide](#)
- [Technical Support commitment](#)
- [Deliverables signoffs](#)

Training:

- [Training Plan](#)
- [Training material](#)
- [Training certificates](#)
- [Training Signoffs](#)

9 THE EVALUATION PROCESS

The following weighting will then be applied to these scores for these sections of the bid:

Technical solution	60%
Delivery TimeLine	10%
SLA and Warranty	10%
Project Management and Project Delivery	10%
Company profile and references	10%

Following evaluation of RFP Responses, MoE will reserve the right to negotiate with all Bidders whose proposals have a reasonable chance of being selected.