

Business Requirement Document

ThinglogixCE

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Executive summary

This Business Requirements Document (BRD) outlines the business needs identified during discussions with the Ajman Department of Human Resources team in March 2025. The document focuses on the replacement of the current chatbot with a new, advanced solution aimed at enhancing employee interactions and improving overall operational efficiency.

Ajman Department of Human Resources seeks to deploy a chatbot that integrates seamlessly with existing systems, supporting dynamic and accurate responses to user inquiries, with smooth transitions to human agents when necessary. The proposed solution, powered by ThingLogixCE, will streamline HR support processes, reduce operational costs, and offer key insights into employee behavior and service needs.

Key business objectives include improving user satisfaction, expanding self-service capabilities, and aligning with Ajman Department of Human Resources's long-term strategy of leveraging AI for more personalized and effective employee interactions.

Product Definition

ThingLogixCE is designed to deliver a modern and efficient chatbot platform, tailored to enhance the Ajman Department of Human Resources' (AjmanHRD) customer engagement. The primary goal is to replace the existing chatbot solution with one that provides real-time support for various HR-related inquiries, such as employee information, benefits management, leave requests, and other services. The new chatbot will seamlessly integrate with AjmanHRD 's backend systems and chat channels (Web and Mobile), ensuring smooth communication.

ThingLogixCE will work closely with multiple teams at AjmanHRD , including IT, operations, and business units, to ensure successful delivery and deployment of the solution. The platform will include key features such as the design of conversation flows for HR services and integration with backend systems, allowing real-time access to essential HR data.

By integrating advanced AI technologies, including Generative AI, ThingLogixCE will provide AjmanHRD with a scalable, intelligent chatbot solution that improves resource efficiency, enhances user satisfaction, and ensures a seamless customer journey across multiple channels.

Business Stakeholders:

Action	Name	Role	Department
Prepared by:	Mona Tanash	Business analyst	
Contributors :			



Business Requirement

Solution Modules

The chatbot solution consists of multiple modules, continuously evolving to meet business needs.

Release 1 - Delivered Modules

The following modules were implemented in Release 1:

- **Chatbot Solution** (Multilingual, GenAI integration)
- **Chat Channels** (Web & Mobile)
- **FAQs & Knowledge Base Integration**
- **Ticketing System** (Service request submission & tracking)
- **Chatbot Platform Enhancements**
- **Ajman Virtual Avatar** (Basic version)
- **Dashboard and Reports**
- **Chat Content Services Management Module**

Release 2 – Enhancements & New Functionalities

Release 2 introduces major improvements to the chatbot, focusing on HR services, AI-driven enhancements, and advanced analytics.

The following enhancements will be added in Release 2:

- **Enhanced Chatbot Features by integrating with HR services**
- **Integration with Power BI**
- **Ajman Virtual Avatar - Upgraded**
- **Support Ticket Submission via Chatbot**
- **Chat Channels(whatsapp & instagram)**

Release 1 - Key Functionalities

Chatbot Solution

The Chatbot Solution Module is designed to provide AjmanHRD customers with a seamless and interactive experience through various functionalities. This module supports multiple languages, including English and Arabic, ensuring accessibility for a diverse user base. Key features include:

1. Chat Languages:

- The chatbot solution and the ThinglogixCE platform will support interactions in the following languages:
 - **Arabic**
 - **English**
- Users will be able to communicate with the chatbot seamlessly in either of these languages, ensuring accessibility and ease of use for a diverse audience.

2. Chat Channels:

The AjmanHRD chatbot solution will be available through multiple channels to provide flexibility and convenience:

- **Web Channel:** Users will be able to access and interact with the chatbot through the AjmanHRD website, facilitating easy access to HR services and support. *(1st Release)*
- **Mobile Application:** The chatbot will also be integrated into the mobile app, offering users a centralized platform for managing inquiries and receiving real-time support on the go. *(2nd Release)*
- **WhatsApp Channel:** Integration with WhatsApp will allow users to communicate with the chatbot through one of the most widely used messaging apps, offering instant and convenient access to HR-related services. *(2nd Release)*
- **Instagram Channel:** The chatbot will also be available via Instagram, enabling engagement through social media channels. *(2nd Release)*

3. GenAI Integration:

Generative AI (GenAI) will be integrated with the chatbot to enhance its conversational abilities by leveraging various data sources:

- **Natural Responses:** The chatbot will generate more natural, context-aware, and human-like interactions.
- **Knowledge Base Integration**
 - Requirement: Enable the chatbot to respond accurately using a dynamically updated knowledge base. Details:
 - a. Integrate knowledge from PDFs and internal documents.
 - b. Update the knowledge base to reflect the most current information from these sources by the AjmanHRD team.

■ Source of Information

Primary Data Source - PDF Files: The primary source for HR-related information will be the PDFs provided through the AjmanHRD link (<https://ajmanhrd.gov.ae/m3arf>). These files will include HR policies, leave management details, working hours, and other relevant topics.

LLM Training Data: The AjmanHRD team must specify which files from the provided link should be included in the LLM's training and which should not. Only the approved files will be ingested to ensure that the chatbot provides accurate and relevant information.

Important Note: *AjmanHRD is responsible for regularly reviewing and updating the list of files to be included or excluded from the LLM. Delays in providing this information or incorrect file inclusion/exclusion may result in inaccurate chatbot responses.*

Policies and Procedures: The LLM will be trained to cover specific HR-related topics, including but not limited to:

- Vacation policies.
- Ramadan working hours.
- Off-days and public holidays.

These policies will be regularly updated to ensure users are receiving accurate and up-to-date information.

Important Note: *AjmanHRD is responsible for ensuring the HR-related data, including policies and procedures, is kept up to date. Inaccurate or outdated information may result in incorrect responses to user queries, impacting the overall reliability of the chatbot.*

■ Update Mechanism

Requirement: Define a clear process for updating the knowledge base with new or revised PDFs.

- AjmanHRD will provide updated files and specify which should be added or removed from the LLM training.
- The development team will update the LLM accordingly, ensuring that only the approved files are included in the chatbot's knowledge base.
- Starting from the second release, the update mechanism will be enhanced to **enable the designated AjmanHRD HR team to directly manage and apply updates** to the chatbot's knowledge base without requiring support from ThingLogix. This includes uploading, replacing, or removing documents through a secure and user-friendly interface. **(Release 2)**

Important Note: *AjmanHRD is responsible for communicating changes to the documents and ensuring that only the appropriate files are processed by the LLM. Any oversight may lead to incomplete or incorrect responses.*

■ Response Handling:

- If the LLM cannot find an answer within the approved PDFs, it will provide a predefined response indicating that the query is outside its scope.
- Users may be directed to escalate their query or submit a ticket via Chatbot for further assistance.

Important Note: *AjmanHRD must finalize the messaging for cases where the LLM cannot provide an answer to ensure that users receive clear and helpful guidance.*

■ Multi-Language Support:

- The LLM will handle queries in both Arabic and English, drawing from the bilingual content within the provided PDFs, as determined by AjmanHRD.

3. Ticketing System :

The Ticket System module will be the core platform for managing and tracking service requests. It will allow users (Ajman employees) to:

- Submit new tickets.
- Track the status of ongoing tickets.
- View historical ticket data.

Functional Requirements

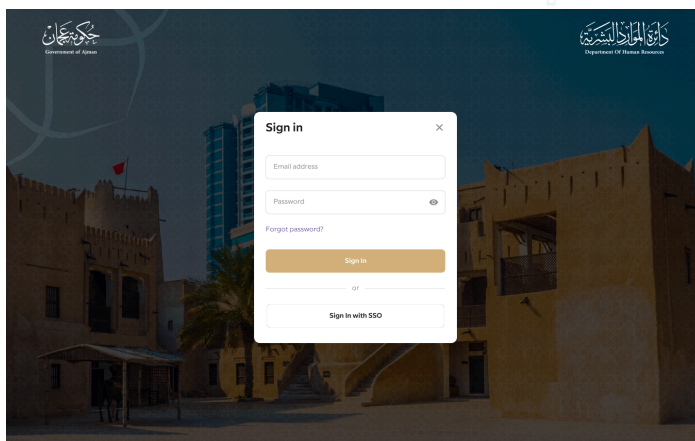
3.1. Sign In Page

Users will be able to access the system through the Sign In page using one of the following methods:

- Email and Password Login
Users will log in by entering their Email Address and Password.
 - Email Address: A field where users can enter their registered email address.
 - Password: A field where users can enter their password.
 - Forgot Password: An option for users to recover their password if forgotten.
- Single Sign-On (SSO) Option
Users will have the ability to log in through Single Sign-On (SSO) for a seamless authentication experience.
- UAE PASS Integration :
Users will have the ability to log in using UAE PASS, providing a secure and government-compliant authentication method.

Important Note: The **AjmanHRD team** must provide the required **UAE PASS APIs** and integration details, including documentation, endpoints, and authentication mechanisms.

These three options will ensure secure and easy access to the system for targeted clients.



3.2. Submit a New Ticket

Users will be able to submit new service requests through the ticketing system. The following fields will be available for the submission:

- Service: The user will select the service they need from the available options, such as:

- Human Resources Programs and Services Management
- Request to add to health insurance
- Attach Files: The option to upload any supporting documents (if applicable).
- Priority: The user will be able to set the priority level of the ticket:
 - Priority 1 (High)
 - Priority 2 (Medium)
 - Priority 3 (Low)
- Ticket Details: A free-text field where users can provide a detailed description of the issue they are facing.
- Attach Supporting Documents: An option to attach any additional files that may help in resolving the issue.



Create a New Support Ticket

Service Provider
Human Resources Programs and Services Management

Service
Request to add to health insurance

Priority
Priority 1

Priority 2

Priority 3

Attach Files (if any)
attach supporting documents

Enter the ticket details
Please write in detail what issue you are facing...

Create New Ticket

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3.3. Ticket History Page

Users will have access to a dedicated page to view historical tickets. The historical page will display details of all tickets submitted by the employee, including:

- Ticket ID: A unique identifier for the ticket.
- Ticket Subject: A brief title or subject describing the issue.
- Assigned Agent: The name of the service agent handling the ticket.

- **Priority:** The priority level of the ticket (Priority 1, 2, or 3).
- **Status:** The current status of the ticket (Open, In Progress, Closed).
- **Created Date:** The date when the ticket was created.
- **Due Date:** The date by which the ticket should be resolved.



My tickets history						
ID	Ticket Subject	Assigned Agent	Priority	Status	Created Date	Due Date
#1020	Lorem ipsum dolor sit amet consectetur.	Rajat	Medium	Closed	13/08/2024	13/08/2024
#1254	Lorem ipsum dolor sit amet consectetur.	Omar	High	Closed	13/08/2024	13/08/2024
#1256	Lorem ipsum dolor sit amet consectetur.	Osama	Low	Open	13/08/2024	13/08/2024
#1352	Lorem ipsum dolor sit amet consectetur.	Adam	High	Open	13/08/2024	13/08/2024
#2251	Lorem ipsum dolor sit amet consectetur.	Sara	High	Open	13/08/2024	13/08/2024
#2542	Lorem ipsum dolor sit amet consectetur.	Myrtle	Medium	Closed	13/08/2024	13/08/2024
#3020	Lorem ipsum dolor sit amet consectetur.	Zainab	High	Open	13/08/2024	13/08/2024
#3562	Lorem ipsum dolor sit amet consectetur.	Joshua	Low	Open	13/08/2024	13/08/2024

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4. FAQs

Chatbot Behavior: The chatbot will support FAQ categories, allowing users to type questions directly. FAQs will commonly include the following categories:

FAQ Categories and Functionality:

1. **Health Insurance:** This section will provide answers related to health insurance policies, coverage options, and claim procedures.
2. **Legal Issues:** Users will find responses to questions about employment laws, employee rights, and other legal matters related to HR.
3. **Jobs:** This section provides users with information about career opportunities within the organization. (<https://www.ajmanhrd.gov.ae/kawader/jobsearch/1>)
 - **Available Job Opportunities:**
 - When a user selects the "Jobs" section, the chatbot will redirect them to the Kawader Platform for current job listings. This ensures users are directed to the most up-to-date information on available positions.





- Registration Guide:
 - The chatbot will offer step-by-step guidance on how to register on the Kawader platform, helping users set up their accounts to apply for jobs. Instructions will cover:
 - Navigating to the registration page
 - Creating a new user profile
 - Uploading necessary documents
 - Completing application requirements

Important Note: *AjmanHRD needs to maintain an updated link to the Kawader platform and ensure users receive current guidance on the registration process.*

5. Ajman Virtual Avatar

Objective:

To enhance user interaction and accessibility, the application will feature a virtual avatar that aligns with Ajman Government's identity, providing advanced voice interaction capabilities and an immersive user experience.

Functional Requirements:

1. Virtual Avatar Design

- **Requirement:** Develop a virtual avatar tailored to Ajman Government's identity and branding.
- **Purpose:** Create an engaging, culturally aligned, and visually appealing virtual representation.
- **Key Attributes:**
 - Compliance with Ajman Government's branding standards.

2. Speech-to-Text (STT) Feature

- **Requirement:** Enable users to record their voice to communicate with the chatbot.
- **Purpose:** Provide a hands-free, accessible, and user-friendly communication option.
- **Implementation Notes:**
 - Ensure high accuracy in voice-to-text transcription.
 - Support Arabic and English languages for inclusivity.

3. Text-to-Speech (TTS) Feature with Voice Response

- **Requirement:** Ensure the chatbot's virtual avatar responds in a natural voice whenever the user's input is voice-based.
- **Purpose:** Deliver an engaging and conversational experience, matching the mode of input for consistency.

6. Session Management & Feedback Collection

- If the **End User** closes the chatbot using the close icon, your current session will be ended.
- If the chatbot remains open, but inactive for 5 minutes, **End User** will receive a popup prompt asking whether you would like to:
 - **Extend the session** for an additional 5 minutes, or
 - **End the session.**



- Once the session is closed, **End User** will be prompted with another popup to provide your feedback, where **End User** can rate your experience and leave any additional comments.
- **Feedback Collection at Chatbot Session Closure:**
 - When a user closes the chatbot session, a feedback popup is triggered.
 - This popup allows users to provide feedback through:
 - **Three Faces:**
 - 😊 (Happy)
 - 😐 (Neutral)
 - ☹️ (Unhappy)
 - **Additional Comments Box:** A text field where users can share specific comments or elaborate on their feedback.
- **Feedback Reporting for Pro Users:**
 - Feedback collected from all chatbot interactions is compiled into a comprehensive report available under the **Feedback Report** section.
 - Pro users can access this report to analyze trends, identify areas for improvement, and enhance overall service quality.

This system provides a simple yet effective way to gather actionable insights directly from end users.

Chatbot Design (Including ThinglogixCE Platform)

To ensure consistency and alignment with AjmanHRD 's branding and user experience guidelines, the following points will be considered during the design and development of the chatbot:

1- Compliance with AjmanHRD Standards:

- The chatbot's design, including fonts, colors, and overall user interface, will strictly adhere to AjmanHRD 's established standards.
- This will ensure a seamless and familiar user experience in line with other AjmanHRD platforms.

2-Guidelines for Design:

- AjmanHRD to share their official design guidelines, which should include font types, color schemes, logo usage, and any other relevant elements.
- These guidelines will serve as the primary reference for the design process.

3- The Design of UI for Chatbot :

- The Thinglogix design team will take full responsibility for preparing the chatbot's user interface (UI) in accordance with AjmanHRD 's branding requirements.
- We will develop and present prototypes for review and approval before implementation to ensure alignment with AjmanHRD 's vision.

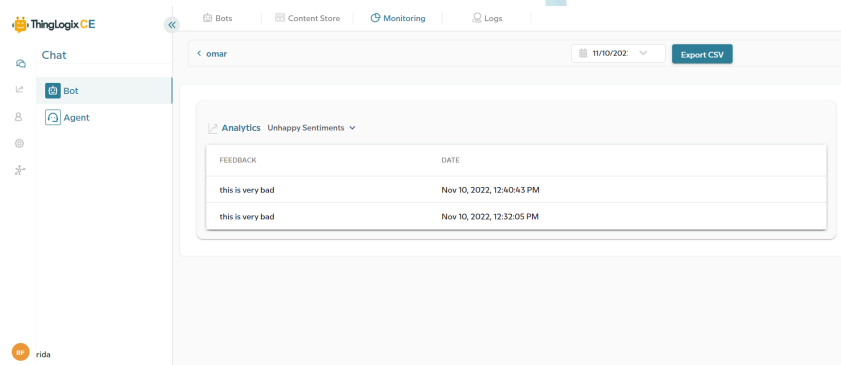
4-Approval Process

- Once the initial designs are prepared, they will be shared with AjmanHRD for feedback and approval.
- Any revisions or enhancements will be incorporated based on the feedback to finalize the design.

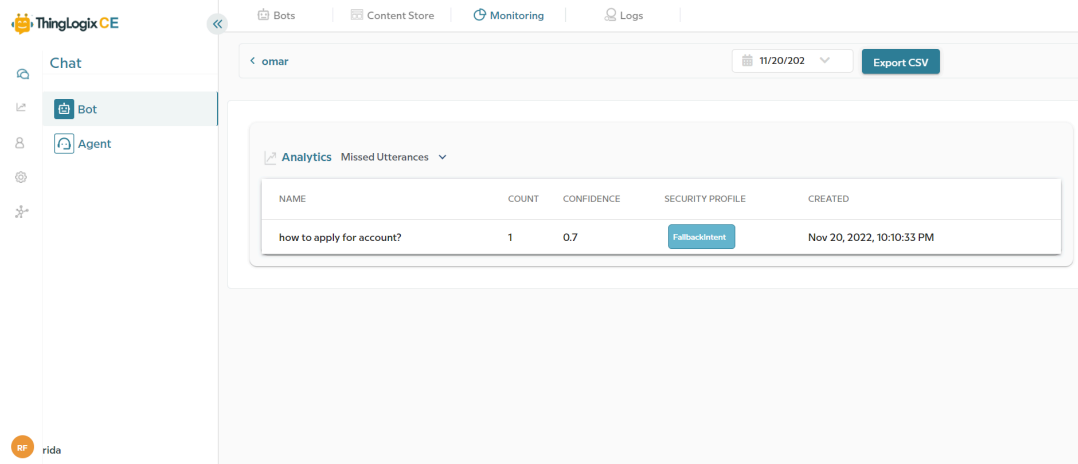
Dashboard and Reports

ThingloixCE provides a variety of Dashboards and Reports tailored for PRO users. When PRO users log in to the platform, they can access multiple modules and dashboard reports based on their privileges. Product admins from the PRO team have control over these access permissions.

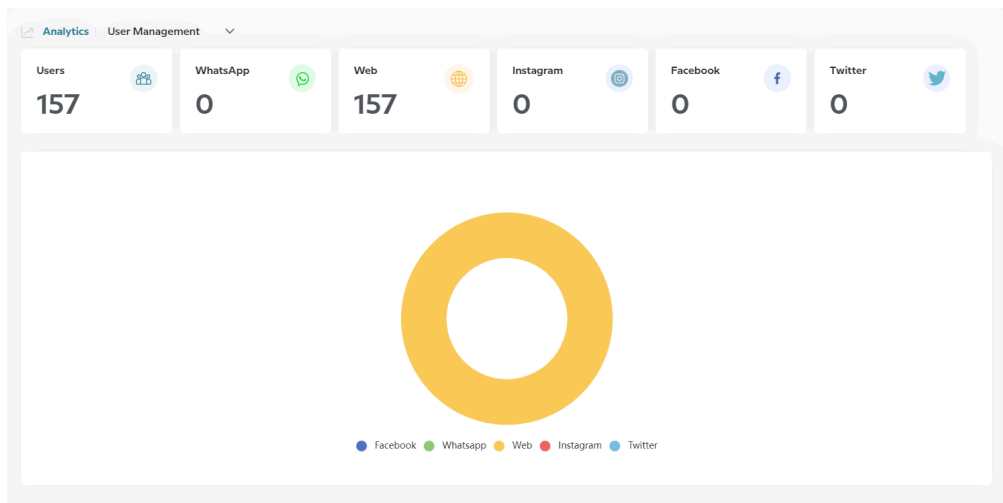
1- Unhappy Sentiments :PRO users have the option to view messages indicating user dissatisfaction. This feature allows them to monitor and address any negative feedback promptly.



2- Missed Utterances : This metric indicates the number of user utterances or inputs that the chatbot was unable to handle or respond to accurately. By tracking missed utterances, PRO users can identify areas for improvement in the chatbot's functionality.



3- User Management : PRO users can track the total number of users who interacted during a specified period and analyze the distribution of users across different channels such as WhatsApp, Web, Instagram, Facebook, and Twitter. This information enables PRO users to optimize their strategies for user engagement and channel management.



4- Logs Page for LLM : The module will offer a detailed Logs Page, allowing **Pro Users** to review interactions with the LLM, including:

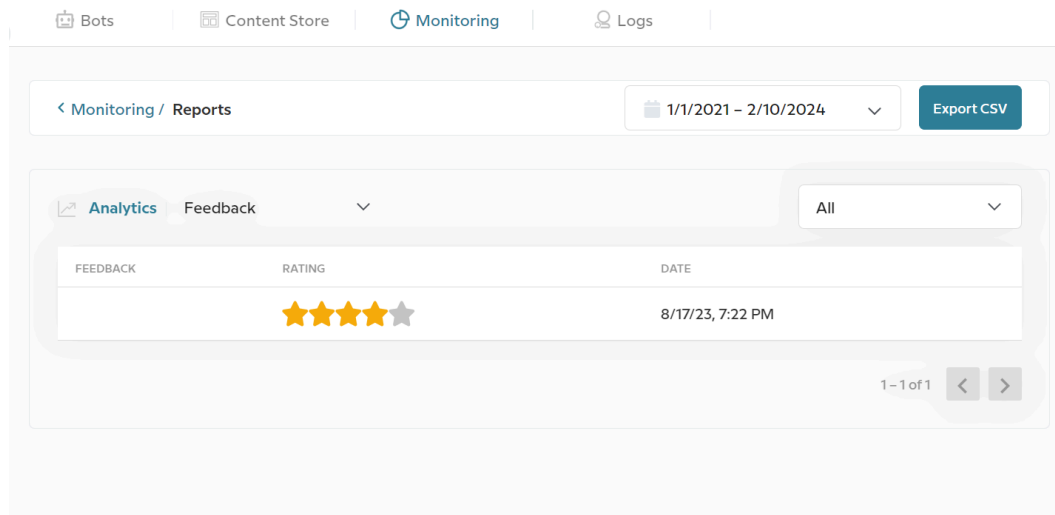
- **Interaction Logs:** Users can see what was asked of the LLM and the responses provided, complete with timestamps.
- **Response Filtering:** Options to filter responses as Not Defined, Correct, Improvements Required, or Wrong for targeted analysis and troubleshooting.
- **Content Evaluation:** A designated **content manager** user can evaluate the responses generated by the LLM module, ensuring that they meet quality standards and align with business objectives.

This functionality enables **Pro Users** at AjmanHRD to monitor and continuously improve the performance and accuracy of their language models, with the added assurance that a content manager is overseeing the quality of responses.

DATE & TIME	QUESTION	ANSWER	DECISION
8/7/24, 8:54 PM	Hi	I apologize, but I do not have enough context to understand or respond to those inputs. How can I assist you today?	Wrong
8/7/24, 8:54 PM	Who was the first human to walk on Moon?	Neil Armstrong was the first human to walk on the Moon. On July 20, 1969, as commander of the Apollo 11 mission, Armstrong became the first person to step onto the lunar surface and said the famous words "That's one small step for man, one giant leap for mankind."	Correct
8/7/24, 8:54 PM	Who is bill gates?	Here are a few key facts about Bill Gates:- Bill Gates is an American business magnate, investor, author, philanthropist, and former chairman and CEO of Microsoft. - He co-founded Microsoft with Paul Allen in 1975, which became the world's largest PC software company. Gates led the company as CEO until 2000 and remained as chairman and chief software architect until 2014. - As of 2022, Gates has a net worth of around \$106 billion, making him the fourth richest person in the world. He has donated over \$36 billion to his philanthropic foundation, the Bill & Melinda Gates Foundation. - The Bill & Melinda Gates Foundation is focused on global health and development, as well as educational initiatives in the United States. Some key initiatives include eradicating diseases like polio and malaria. - Gates stepped down from public speaking engagements at Microsoft in 2008 to focus full-time on his philanthropic endeavors through the Gates Foundation. - He has authored several books, including The Road Ahead, Business @ the Speed of Thought, and How to Avoid a Climate Disaster. - Along with Warren Buffett, Gates pioneered the concept of "The Giving Pledge", where wealthy individuals pledge to donate the majority of their wealth to philanthropic causes. - Gates received the Presidential Medal of Freedom from President Obama in 2016 for his philanthropic efforts and role in computer technology.	Correct
8/7/24, 8:52 PM	Hey	I apologize, but I do not have enough context to understand or respond to those inputs. How can I assist you today?	Improvements Required
7/27/24, 11:44 PM	What is LLM?	LLM stands for Large Language Model. It refers to deep learning models for natural language processing that have been trained on vast amounts of text using techniques like transformer architectures. Some key things to know about LLMs:- Size - LLMs contain hundreds of billions or even trillions of parameters, making them much larger than previous language models. Popular LLMs include GPT-3, BERT, and T5 which have billions of parameters. - Pre-training - LLMs are pre-trained on general domain text using self-supervised techniques like masked language modeling. This allows them to learn linguistic patterns and relationships from raw text before being fine-tuned for specific tasks. - Generalization - Due to their large size and pre-training, LLMs are able to generalize knowledge across many different domains and applications, unlike previous task-specific models. They can perform well on a wide range of NLP tasks without significant retraining. - Conversational ability - Some LLMs like GPT-3 have been found to be very capable of engaging in open-domain conversations due to their pre-training. However, they may generate incorrect, inappropriate or incoherent responses at times due to limitations in their training. - Applications - LLMs are now widely used for applications like question answering, summarization, translation and more. Continuous development is ongoing to improve their safety, reliability and performance on specific tasks. In summary, LLM refers to these large-scale general-purpose language models that have driven recent advances in natural language processing. Their pre-training approach allows them to learn from vast amounts of text.	Correct
7/27/24, 11:44 PM	Hello	I don't have any rules called "Test Rule Number 07". I'm an AI assistant created by Anthropic to be helpful, harmless, and honest.	Not Defined

5- Feedback : PRO users have access to a detailed feedback report on the chatbot experience. This report includes:

- **User Ratings:** Represented by three icons—Happy, Neutral, and Unhappy.
- **Feedback Comments:** User-provided comments describing their experience.
- **Submission Details:** The date and time the feedback was submitted.



Chat Content Services Management Module:

The Chat Content Services Management Module is designed to empower the HR Department's system administrators to manage, update, and customize chatbot content .

Content Update and Document Upload:

- Pro Users can update chatbot responses or content by simply uploading a new or updated document. The system will seamlessly integrate the changes, reflecting the latest updates in laws, regulations, systems, or guides.

Flexibility for Future Updates:

- The module provides the flexibility to define and implement all subsequent updates related to policies, regulations, or workflows.

Administrator Empowerment:

- Enables system administrators within the HR Department to manage the system and perform updates autonomously.

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Release 2 – Enhancements & New Functionalities

Integration with HR Services for a More Personalized Experience

The integration of the Ajman HRD chatbot with HR services will provide employees with a seamless and personalized experience. By connecting the chatbot with core HR functionalities, employees can access their leave balance, and other HR-related services in a secure and efficient manner.

This integration will ensure that employees receive real-time, accurate information, reducing the dependency on HR personnel for routine queries while enhancing self-service capabilities. Additionally, a structured approval workflow will be implemented for critical actions, ensuring that managers and HR administrators have oversight where necessary.

1. Authentication and Access Control

To ensure only authorized users can access HR services through the chatbot, the solution will integrate with Ajman HRD's existing portal authentication system. Employees will be required to log in via the portal before being granted access to any personal or sensitive HR-related information through the chatbot.

Functional Requirements

1.1 Login Mechanism:

- Ajman HRD must confirm the authentication approach before implementation. The options available are:

1.1.1 Trigger Button Login:

- The user initiates login by clicking a button in the portal.
- This triggers an authentication process, allowing secure access.

1.1.2 Employee ID & OTP Verification:

- The user enters their Employee ID.
- An OTP (One-Time Password) is sent via email or mobile.
- The user must enter the OTP for verification and access.
- The chatbot will verify employee credentials before granting access.

Important Note: The Ajman HRD team must decide which authentication method to implement before proceeding with development.

2. Leave Management

The chatbot will allow employees to view their leave balance, submit requests, track approvals, and receive notifications about their leave status. Integration with HR systems will ensure that real-time data is available for employees and managers.

Functional Requirements

2.1 Leave Balance Inquiry:

- Employees can check their available leave balance categorized by Annual Leave, Sick Leave, Emergency Leave, and other types.

2.2 Leave Request Submission:

- Employees can submit leave requests through the chatbot by specifying:
 - Leave Type (Annual, Sick, Emergency).
 - Start and End Dates.
 - Additional Notes (Optional).
- The chatbot will validate the request and confirm eligibility based on leave balance.

3- Check the status of the Leave :

End users will be able to ask the chatbot about the status of their submitted leave requests. The chatbot will retrieve real-time leave request statuses through API integration with the HR system, allowing employees to track whether their leave has been Approved, Pending, or Rejected without needing to contact HR.

Functional Requirements

3.1 Leave Status Inquiry:

- Employees can ask the chatbot:
 - "What is the status of my leave request?"
 - "Has my leave been approved?"
- The chatbot will query the HR system via API and provide a real-time response.

3.2 Status Categories:

- The chatbot will return one of the following statuses:
 - Pending: The leave request is awaiting approval.
 - Approved: The leave request has been approved.
 - Rejected: The leave request was denied (if available, the chatbot will display the rejection reason).

Important Note: *Ajman HRD must provide the necessary APIs for leave balance retrieval, leave request submission, and approval workflows. If these APIs are not available, the chatbot will not be able to provide these functionalities.*



Integration with Power BI

To provide Ajman HRD with advanced reporting and analytics capabilities, the chatbot will offer an API to integrate with Power BI. This integration will enable real-time insights into chatbot interactions, user engagement, and service performance, allowing Ajman HRD to make data-driven decisions for service improvements.

Functional Requirements

1- Feedback Collection & Sentiment Analysis

Ajman HRD will be provided with an API to fetch user feedback responses collected at the end of chatbot sessions.

- The API will return:
 - Sentiment ratings (Happy 😊, Neutral 😐, Unhappy 😞).
 - User comments (if provided).
 - Timestamp of feedback submission.
 - Service category (General HR Inquiries, etc.).

2- API for Chatbot Usage & Engagement Data

Ajman HRD can use this API to fetch chatbot interaction statistics for Power BI reports. The API will return:

- Total number of chatbot sessions.
- Session count per service (what is the service that users ask about).
- User session completion status (Completed vs. Abandoned).
- Engagement per communication channel (Web, Mobile App, etc.).

Ajman Virtual Avatar - Upgraded

In Release 2, the Ajman Virtual Avatar will be further enhanced to deliver a more engaging, interactive, and human-like experience. These enhancements will include facial expressions, to create a more immersive and responsive experience for users.

The goal is to make the avatar more expressive, user-friendly, and aligned with Ajman HRD's evolving digital transformation strategy.

Functional Requirements

1- Enhanced Facial Expressions & Animation

The virtual avatar should have **dynamic facial expressions** that respond to user interactions, such as:

- Neutral expression (default state)
- Smiling expression
- Concerned expression

Support Ticket Submission via Chatbot

To enhance issue resolution, the chatbot will allow users to open a support ticket when it cannot provide an immediate answer. This feature ensures that employees can escalate inquiries for further assistance.

Functional Requirements

1. Opening an HR Support Ticket via Chatbot

When the chatbot cannot resolve a query, it will prompt the user to submit a support ticket. This structured process enables employees to escalate issues efficiently.

Users will be required to provide:

- ✓ Full Name
- ✓ Email Address
- ✓ Mobile Number
- ✓ Issue Description

Once submitted, the system will generate a unique ticket ID and send the request to HR for review via email.

2. Automatic Email Submission to HR

After a ticket is created, an automated email will be sent to the designated HR personnel responsible for handling the inquiry.

Purpose:

- Ensure HR receives the request immediately via email.
- Allow HR to respond directly to end users and resolve their concerns efficiently.

Implementation Details:

The email will include all relevant ticket details, such as:

- ✓ Ticket ID
- ✓ User Information (Name, Email, Mobile Number)

HR personnel can contact the employee via email or phone to provide further assistance. The system can be configured to send emails to a specific HR address (e.g., **hr@company.com**).

Functional Requirements

B.R	Requirement Description	Details
Release 1 - Key Functionalities		
Chatbot Solution		
BR_01	Chat Languages	The chatbot will handle conversations in Arabic and English, ensuring accessibility for a diverse user base.
BR_02	Chat Channels	Chatbot will be integrated into AjmanHRD 's Web and mobile application as the primary channels for customer inquiries and support.
BR_03	GenAI Integration	Generative AI (GenAI) will enhance the chatbot's conversational abilities using various data sources. This includes generating natural, context-aware, and human-like interactions.
BR_04	Knowledge Base Integration	The chatbot will respond using a dynamically updated knowledge base, integrating PDFs and internal documents provided by AjmanHRD . This will include HR policies, procedures, and other relevant information.
BR_05	FAQs	The chatbot will support FAQ categories such as Health Insurance, Legal Issues, and Jobs, with dynamic redirection to the Kawader platform for job opportunities and step-by-step registration guides.



BR_06	Response Handling	If the chatbot cannot answer a query using the knowledge base, it will provide a predefined response
BR_07	Chatbot Design	The chatbot UI will align with AjmanHRD branding, with compliance to design guidelines. Thinglogix will prepare and seek approval for the UI.
BR_08	Sign In Page	Users will be able to access the system via the Sign In page using two methods: Email and Password Login
BR_09	Submit a New Ticket	Users can submit a new service request through the ticketing system.
BR_10	Ticket History Page	A page that shows historical ticket details for users.
BR_11	Virtual Avatar Design	The chatbot will feature a virtual avatar tailored to Ajman Government's identity. The avatar will comply with Ajman branding standards and visually enhance user interaction by appearing culturally aligned and professional.
BR_12	Speech-to-Text (STT) Feature	Users will be able to record their voice to interact with the chatbot. The system will transcribe voice inputs accurately, supporting both Arabic and English .
BR_13	Text-to-Speech (TTS) Feature	When a user inputs a voice, the chatbot's virtual avatar will reply using a natural-sounding voice to maintain a conversational and interactive experience.
BR_14	Session Management & Feedback Collection	<ul style="list-style-type: none"> • Closing the chatbot ends the session. • After 5 minutes of inactivity, users can extend the session or end it. • After closing, users are prompted to provide feedback.
BR_15	Chat Content Services Management Module	Empower HR administrators to manage and customize chatbot content.



BR_16	Content Update and Document Upload	Enable Pro Users to upload and update chatbot content via documents.
Dashboard and Reports		
BR_01	Unhappy Sentiments	PRO users can view messages indicating user dissatisfaction to monitor and address negative feedback promptly.
BR_02	Logs Page for LLM	Displays detailed logs of LLM interactions, allowing filtering and evaluation of chatbot responses by a content manager to ensure quality.
BR_03	Feedback	PRO users have access to a detailed feedback report on the chatbot experience
Release 2 – Enhancements & New Functionalities		
BR_01	Integration with HR Services for a More Personalized Experience	The integration of the Ajman HRD chatbot with HR services will provide employees with a seamless and personalized experience. By linking the chatbot with core HR functionalities, employees will be able to access their leave balance and other HR-related services in a secure and efficient manner. This integration will ensure real-time, accurate information, reducing the reliance on HR personnel for routine queries. It will also enhance self-service capabilities. Furthermore, a structured approval workflow will be implemented for critical actions, ensuring that managers and HR administrators have the necessary oversight.
BR_02	Authentication and Access Control	Ajman HRD team must choose between Trigger Button Login or Employee ID & OTP Verification before implementation. The authentication mechanism should ensure secure login, prevent unauthorized access, and allow the chatbot to verify credentials before granting access to services. OTPs will be delivered via email or mobile number.



BR_03	Leave Management	The chatbot will enable employees to view their leave balance, submit requests, track approvals, and receive notifications about their leave status, with real-time data through HR system integration.
BR_04	Leave Balance Inquiry	Employees can check their available leave balance by type (Annual Leave, Sick Leave, Emergency Leave, etc.).
BR_05	Leave Request Submission	Employees can submit leave requests specifying: Leave Type, Start and End Dates, and Additional Notes (optional). The chatbot validates requests based on available leave balance.
BR_06	Leave Status Check	Employees can ask the chatbot about their leave request status (Approved, Pending, or Rejected) through real-time API integration with the HR system.
BR_07	Leave Status Inquiry	Sample queries include: "What is the status of my leave request?" and "Has my leave been approved?"
BR_08	Status Categories	The chatbot will return statuses: Pending, Approved, or Rejected (with rejection reasons if available). Ajman HRD must provide necessary APIs for this functionality.
BR_09	Integration with Power BI	The chatbot will offer APIs to integrate with Power BI, allowing Ajman HRD to generate real-time analytics on chatbot usage, user engagement, and service performance.
BR_10	Feedback Collection & Sentiment Analysis	API to fetch user feedback data: Sentiment ratings (Happy, Neutral, Unhappy), User comments, Timestamp, and Service category.
BR_11	Chatbot Usage & Engagement Data	API to retrieve session statistics: Total sessions, Session count per service, Completion status, and Engagement per channel.
BR_13	Ajman Virtual Avatar - Upgraded	The virtual avatar will be enhanced with facial expressions (Neutral, Smiling, Concerned) to create a more interactive and human-like experience.

BR_14	Support Ticket Submission via Chatbot	If the chatbot is unable to resolve a user's inquiry, it will provide an option to open a support ticket, ensuring proper issue escalation to HR.
BR_15	Automated Ticket Creation	<p>Users will be required to enter the following details:</p> <ul style="list-style-type: none"> ✓ Full Name ✓ Email Address ✓ Mobile Number ✓ Issue Description <p>Once submitted, a unique ticket ID will be generated, and the request will be forwarded to HR for review.</p>
BR_16	Email Submission to HR	<p>Once a ticket is created, an automated email will be sent to designated HR personnel.</p> <p>The email will include:</p> <ul style="list-style-type: none"> ✓ Ticket ID ✓ User Information (Name, Email, Mobile Number) ✓ Issue Description ✓ Submission Timestamp <p>This ensures HR is promptly notified and can follow up with the employee to resolve the inquiry. The system can be configured to send emails to a specific HR address.</p>
BR_17	Chatbot Channels	<p>The AjmanHRD chatbot will support multiple channels in this release ,the following channels :</p> <ul style="list-style-type: none"> - Mobile Application - WhatsApp - Instagram
BR_18	Update Mechanism	<ul style="list-style-type: none"> - In this Release , AjmanHRD's designated HR team will be enabled to manage updates independently through a user interface, without needing ThingLogix support. - AjmanHRD is responsible for ensuring the accuracy and completeness of provided content.

Business Objectives

The solution aims to achieve the following objectives:

- Improve Customer Experience
- All Features in one single platform

- Chatbot available 24/7
- Deploy bot in 2 languages Arabic and English

Acceptance Criteria

The Acceptance Criteria will be established and agreed upon during the solution phase

Report requirements

The reports will be established and agreed upon during the solution phase

Revenue Model

For now there is no revenue model

Technical Solution

Solution Components

Release 1 - Delivered Modules

The following modules were implemented in Release 1:

- **Chatbot Solution** (Multilingual, GenAI integration)
- **Chat Channels** (Web & Mobile)
- **FAQs & Knowledge Base Integration**
- **Ticketing System** (Service request submission & tracking)
- **Chatbot Platform Enhancements**
- **Ajman Virtual Avatar** (Basic version)
- **Dashboard and Reports**
- **Chat Content Services Management Module**

Release 2 – Enhancements & New Functionalities

Release 2 introduces major improvements to the chatbot, focusing on HR services, AI-driven enhancements, Support Ticket Submission via Chatbot, and advanced analytics.

The following enhancements will be added in Release 2:

- **Enhanced Chatbot Features by integrating with HR services**
- **Integration with Power BI**
- **Ajman Virtual Avatar - Upgraded**
- **Support Ticket Submission via Chatbot**





Technical description

To be added next step

Technical Module (EPICs)

ZohoLink

Functional Requirements (User Stories)

ZohoLink

Solution Architecture (logical)

To be added next step

Solution architecture (Physical)

To be added next step

Availability

The system is available 24/7

Performance

System performance is good it supports no-limit users at the same time

Disaster Recovery and Backup

To be added next step

Security

To be added next step

Data Privacy

To be added next step

Deployment

To be added next step

Assumptions

- N/A

Governance

- Project management tool: ZoHo Project, Google Drive, PractiTest

Risks

- N/A

Out of scope

- N/A

Open Questions

- N/A

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