

Architecture Kata Competition- Kick-off

Architecture in Action: Fun, Learn, Collaborate!



Unveiling the Use case – Storyline



Richards flew from LHR to DXB on EK001 on August 19, 2023, for a crucial business meeting. Despite receiving a business class upgrade, he didn't get the expected service and his luggage went missing. When he contacted the airline's call center to express his frustration, the experience was frustrating as the agent asked numerous questions before acknowledging his complaint.



Serena, the Call Centre Manager, was alerted to this incident by a call center executive. Serena's goal was to consistently delight customers during interactions with call center agents. Unfortunately, the current systems only offered basic customer profiles and lacked insights into customer behaviours, preferences, past interactions, and choices. Moreover, at times, call center agents struggled to determine the best course of action, leading to less-than-optimal outcomes in customer interactions. Serena, aimed to obtain comprehensive customer information to empower her team in proactively addressing issues and transforming customer interactions into delightful experiences.



Maria, a check-in agent, hurried to her desk as her shift began. The day before had been challenging, as she had encountered some disgruntled passengers who were unhappy with their previous flight experiences. They had raised their voices at her, catching her off guard, and she found herself having to defend her actions. Determined not to face such situations unprepared again, Maria wished to acquire prior knowledge and experience of the customers she was assisting. Her goal was to better equip herself and pleasantly surprise passengers with personalized attention and special considerations.



Saina, a cabin crew member with a brief sales background, values creating concise yet significant connections with potential passengers before converting them into sales. She is interested in understanding passengers' preferences, choices, and past travel experiences to tailor her interactions for improved sales conversion rates. Presently, she only has access to a basic passenger list with limited details, which is not aiding her in achieving better sales conversions or improving customer satisfaction metrics.

Unveiling the Use case – Storyline Contd..



Imran, the proprietor of a sizable retail chain who recently acquired a catering business, had a strategic vision to enhance revenue by upselling and cross-selling products during in-flight retail. However, his on-site team encountered challenges in stocking items aligned with passenger preferences and assembling suitable product bundles. Imran subsequently engaged with airline management to request customer profile and segment data to boost his sales efforts, but the management faced difficulties in resolving these issues



Christiano, who serves as the leader of Data Analysis within the Customer Relations department, is grappling with the challenge of consolidating data from various operational systems to construct a thorough customer 360 view. The company aims to enhance Average Revenue per Customer (ARPC), but unfortunately, they are struggling to unearth fresh insights about their customers. Christiano has been tasked with supplying additional insights, yet he finds himself constrained by the limitations of the current dataset at his disposal.



Lyn, the Customer Complaints Executive, is enduring a challenging day, flooded with passenger complaints about baggage mishandling and flight cancellations due to adverse weather conditions. She's bogged down by the need to gather scattered information from various sources to complete compensation forms, leading to passenger frustration. Lyn hopes for a unified application that consolidates passenger data and automates refund calculations based on baggage details.



Alonso, assigned to the Data Privacy office, diligently navigates the maze of global data privacy requirements. Presently, customer consent management sprawls across disparate operational systems, posing a formidable challenge. Any regulatory audit could potentially cast doubt on the current data privacy and customer consent implementation, leaving him vulnerable.

Problem Summary

Design a comprehensive Customer Management Platform that enables the foundation of data-driven, customer-centric organization. This platform should enable to manage customer information across the ticket booking platforms both online and agents, call centre, check-in desks, customer affairs and services, in-flight retail, lounges, chauffeur driven services and baggage services

- Business Goal: Increased revenue, Enhanced customer satisfaction and retention
- Stakeholders: Customer Affairs, Skywards, Corporate Communications, Sales, Contact Center, Marketing, In-flight retail, Catering, Service Delivery, Commercial, Airport Operations, Chauffeur Driven Services
- Users: Passengers, Cabin Crew, Check in agents, Call center agents, Skywards, Baggage services, Vendors/Partners

Buy vs Build:

The executive leadership meticulously evaluated the Buy vs. Build dilemma, noting that the existing internal Customer Repository lacked modern capabilities, hindering optimal customer experiences. Instead of procuring conventional CRM solutions, typically requiring extensive customization, the team opted to develop an in-house, custom-made Customer Management platform, aligning seamlessly with the strategic objectives and gain competitive advantage

Key Business Requirements

Customer Profile Management

- Detailed and comprehensive customer profiles that include personal information, travel history, preferences, and past interactions.
- A centralized repository that aggregates and stores customer data from various touchpoints and systems.
- Tools for segmenting customers based on various criteria such as travel history, preferences, and loyalty status.
- Personalization features to tailor interactions and offers to individual customers.
- Capability to share profile data with strategic partners while preserving anonymity in compliance with privacy regulations, while also revealing essential insights into segments, preferences, and choices.

Customer Interaction Management

- Logs of all past interactions, including calls, emails, chats, and in-flight retail purchases, stored within customer profiles.
- A chronological timeline view of each customer's interactions and transactions, allowing for easy tracking and reference.
- Critical information from customer feedback data, including complaints, compliments, cases and suggestions, into customer profiles.

Customer Order Management

- Capture and store customer preferences related to orders, such as meal choices or seating preferences.
- Personalization of future orders based on customer preferences.
- Integration with customer support and complaint handling systems to address order-related issues promptly.

Key Business Requirements

Compensation Management

- Automated Compensation calculation and processing based on rules and policies
- Support for multiple compensation scenarios, flight cancellation, delays, and baggage mishandling.
- Notifications regarding compensation resolutions

Case Management

- Case creation, prioritization, tracking and updates.
- Case Assignment, Routing, and escalation capabilities
- Customer Self service capabilities
- Notifications regarding case status and closures

Easy to Use

- Intuitive, multi-channel and user-friendly interfaces for passengers, call center agents, check-in agents, cabin crew, service management and retail staff.
- Simplified navigation and clear layouts to access customer profiles and historical data.

Key Business Requirements

Customer Analytics Capabilities

- Data collection mechanisms from all the touchpoints to gather information on passenger interactions, preferences, and behaviours.
- Real-time data processing and analysis to provide timely insights and responses
- Advanced analytics capabilities including machine learning, and predictive analytics.
- Sentiment analysis of customer feedback and social media mentions to gauge passenger satisfaction
- Capability to envisage various actions that could be implemented for a specific customer and then chooses the best possible option to implement

Secured Platform

- Right authentication and authorization implemented
- Supports RBAC & MFA
- Sensitive data encrypted at rest and transit
- Conforms to GDPR, PCIDSS and other regulatory requirements.
- Comprehensive logging and auditing of all customer data access and modifications.

Key Integration Requirements

- ❖ Integration with Loyalty platform
- ❖ Integration with booking systems online and agent platforms
- ❖ Integration with Contact Centre System
- ❖ Integration with Passenger Reservation System
- ❖ Integration with Inflight retail and Meal order system
- ❖ Integration with Offer Management System
- ❖ Integration with Marketing management system
- ❖ Integration with agent-based Check-in systems as well as Self-service check-in systems.
- ❖ Integration with a knowledge base for support agents to access relevant information and solutions when addressing complaints.
- ❖ Integration with Baggage management and handling systems

Evaluation Pillars



Understanding of Architecture Requirements

Identification of Key NFR from the business/domain requirements

Understanding of integration requirements and dependencies

Identification of Architecture Vision and Architecture Principles



Completeness of Architecture

Appropriateness of recommended architecture patterns/styles

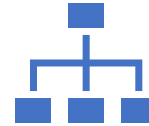
Trade offs in the architecture considered

Identification of critical ADR'S

Overall System Architecture, including Logical, Integration, Data, Deployment and Security Architecture

Architecture and Implementation Strategy for identified NFR's

Rationale for technology choices and their fitment/suitability



Clarity of Architecture

Seamless continuity in Organizing, documenting and describing the Architecture

Architecture artifacts and documentation. E.g., C4 models, ArchiMate Models, ADR's, Architecture Backlog items and sequencing

The level of detail provided in architectural artifacts to support implementation and understanding

Grasp of the practicalities involved in implementation

Alignment with the architectural vision and principles



Innovativeness

Degree to which the architecture of solution demonstrates novel and creative approaches to addressing the given problem scenarios

Extent to which the architectural design of the solution stands out as distinctive and original, showcasing a departure from conventional approaches



Santhosh



Sajith



Rajesh RV

Evaluation Panelists

Key Timelines



Form a team of two to five individuals (preferably try forming teams from different AAT's/portfolio) prepared to take on the architectural kata challenge.



Registration links will be shared today after the Introductory meeting and the final dates of registration will be on EOD **1st November, 2023**.



We'll share the architecture problem with you at the kickoff on **2nd of November 2023**



Conduct a Doubt Clarification Session on **November 9th, 2023**, and optionally share couple of examples on addressing some key architectural concerns.



Teams will submit solutions by **27th of November 2023**



Shortlisted teams will be announced on **7th December, 2023**



The final will be held on **13th December 2013**. At the finals, team will present their solutions to the judges and a winner will be announced

Q&A

