



Link Development Helps Adahi Enable Millions to Confidently Perform Religious Rituals Using Azure



“Adahi”, a flagship project that runs under the umbrella of the Kingdom’s Islamic Development Bank (ISDB), is tasked with enabling millions of Muslims and pilgrims around the globe to do religious meat-related rituals associated with Hej and others. Adahi entrusted Link Development to build a fully automated and integrated Azure-based solution that streamlines the implementation of the religious rituals at anytime and anywhere. The company modernized and migrated their applications, databases, services to Azure and applied multiple Azure services to ensure maximum security, performance and scalability of the solution.

Customer	ADAHI
Industry	Government
Solution	ADAHI Application Modernization & Migration to Azure
Technology	Azure, SharePoint, PowerBI, Azure Cognitive Services

Adahi, KSA Arm for Fulfilling Rituals on Behalf of Millions

Adahi is the Kingdom of Saudi Arabia project for utilization of rituals Muslim Rituals such as hady & adahi. The project is managed by the Islamic Development Bank (ISDB), a multilateral development bank that improves the lives of people serve by promoting social and economic development in Muslim countries and communities around the world. The bank oversees all processes by which Adahi manages requests, performs physical sacrifice/ransom (adahi) and distributes the meat to beneficiaries.

Towards a Digital Ecosystem of Utmost Performance

Since Adahi is serving millions of people during the Hej season, its receives millions of requests on its digital portal and internal systems to purchase adahi then perform the rituals on behalf of people.

Adahi needed to resolve their infrastructure shortcomings such as overcoming notification latency, increasing infrastructure cost & maintenance efforts, and applications hosting. They also needed to manage large number of concurrent sessions & transactions in addition to performing many back-to-back integrations.

Link Development worked with ADAHI to provide a modernized application on cloud that acts as a turnkey solution utilizing Azure and Power Platforms.

The primary objectives were simplifying infrastructure, providing immediate insights & notifications across different application

components plus managing and automating the whole process including purchasing, payment, customer services and distribution..

The platform targeted different type of personas such as resellers, distributors, slaughterhouses, ISDB users and top management

To complete the application modernization vision, the platform included a chatbot application that uses Microsoft Azure cognitive service and machine learning capacities to reduce workload and optimize call center interaction time.

It was imperative to launch the solution before the commencement of Hej, which was successfully orchestrated by a complete automation and integration of the entire buying process online from Adahi’s website and from affiliate resellers.

Cloud Migration

In light with Adahi's strategy to move to a cloud-based solution, Link Development was the partner to implement the full solution architecture and avail Azure resources to facilitate the transition to cloud.

Link Development provided a complete infrastructure consultation and implementation service to fulfill Adahi's goals. The infrastructure included building SharePoint applications that are hosted on Azure virtual machines and connected to Adahi's existing Active Directory.

The solution leveraged Azure VPN gateways and was integrated with the web application firewall to manage access to API management & App services using monolithic architecture & background services. It utilized Azure SQL Database and Azure Message Queuing service for application message management. It also integrated with on-premise servers for back-to-back integration.

Application Modernization

Link Development helped Adahi to move forward with application modernization by doing application re-platforming, refactoring, rehosting and perform solution continuous development, deployment and integration methodologies using DevOps capabilities.

In a challenging time-window, Link Development refactored a complex architecture within strict business scenarios. The company automated business processes, restructured the technology infrastructure and repurposed all on-prem servers to work on Azure for maximum load absorption of +1000 concurrent orders, 30K concurrent sessions while ensuring security and reliability.

Millions of orders/vouchers were received, processed and fulfilled with millions of real-time notifications sent to pilgrims in an 84 hours window as alerts of ritual conclusion. This mounted to over a million notification per day, with near-zero synching delays of reseller transactions and average response time 0.305 second.

Using Power BI, Link Development provided platform monitoring reports and payment statistics dashboards in order to keep track of al application changes.

As a part of application modernization, Link Development provided chatbot application built on top of Microsoft Azure services and machine learning to create a new digital communication channel with website visitors to answer inquiries, reduce number of calls with call center agents, and provide interactive backend features to monitor conversations and generate statistics.

The Benefits: Azure, Cloud Migration & Application Modernization

- Reduce solution hosting cost
- Increase sales ratio
- Enhance the external entities ordering data Syncing from 30 min to real-time syncing
- Automated scalability (Up/Out) based on the workload matrix
- Maintain system performance regardless of the workload
- Reduce call center's number of tickets
- Monitor application components
- Overcome all synchronization issues

Technologies

- Azure API Management
- Azure SQL Database
- Azure Service Bus Queue
- Azure Functions
- Elastic Pool
- App Gateway
- DevOps
- Power BI
- Signal R Service
- App Insights