CASE STUDY:
How Zain Kuwait Accelerates Digital Transformation with APIs
Abstract

As the leading mobile operator in Kuwait, Zain has focused heavily on using APIs to accelerate innovation and development, both internally and through its commercial partners. In this session, Solutions Development Manager Mahmoud Abu-Ghali will shed light on how his group has leveraged both APIs and API Management to tear down silos, improve development, and rollout, reduce middleware costs, and enhance access to crucial services such as identity and billing.
45.3 million customers in 8 countries

**LEBANON**
Ownership: Management Contract
Customers: 2.4 m
Prepaid: 86%

**JORDAN**
Ownership: 96.52%
Revenues: $371 m
Customers: 4.2 m
Prepaid: 82%
Market Share: 36%

**SUDAN**
Ownership: 100%
Revenues: $315 m
Customers: 12.5 m
Prepaid: 95%
Market Share: 46%

**SOUTH SUDAN**
Ownership: 100%
Customers: 493K
Prepaid: 98%

**IRAQ**
Ownership: 76%
Revenues: $811 m
Customers: 13.7 m
Prepaid: 99%
Market Share: 40%

**KUWAIT**
Ownership: 100%
Revenues: $819 m
Customers: 2.5 m
Prepaid: 68%
Market Share: 36%

**BAHRAIN**
Ownership: 55%
Revenues: $146 m
Customers: 725K
Prepaid: 75%

**SAUDI ARABIA**
Ownership: 37.05%
Revenues: $1.5 b
Customers: 8.3 m
Prepaid: 70%

*exclusive of Morocco, in which Zain has a 15.5% ownership in the mobile operator “INWI”*
Zain Kuwait

- Healthy Q3 performance:
  - Revenues are up 6% and Net Income up 10%
  - Customer base stood at 2.5 million
  - Strong concentration on cost optimization initiatives
  - Data revenues (excluding SMS & VAS) formed 32% of total revenues
Our digital transformation journey covers capabilities across 4 core areas

**Digital CeX Capabilities**
- Attract
- Deliver
- Offer
- Support
- Enablers

**Analytics Capabilities**
- Personalization
- Optimization
- Monetization
- Enablers

**Technology Capabilities**
- User & mobile centricity
- IT architecture flexibility, scalability, and security
- Agile development
- Network quality and digital readiness

**Operating Model & Culture Capabilities**
- Organization
- Digital talent management
- Processes automation and simplification
- Culture
Our SOA methodology utilized TM Forum standards since inception

1. As-Is Architecture Assessment
2. To-Be Architecture Modeling
3. Service Identification (Group and ranking)
4. Semantic Information Model Definition (CDM)
5. Service Specification (Design)
6. Service Realization (Develop)
7. Application Architecture (SOA Solutions)
8. Governance (Update service inventory)
Zain Kuwait has followed TMF’s eTOM for API’s exposure
<table>
<thead>
<tr>
<th>Zain API Name</th>
<th>Released</th>
<th>TMF API Name</th>
<th>Released</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Profile</td>
<td>1.0 (Nov 2013)</td>
<td>Customer Management (TMF629)</td>
<td>2.0 (Apr 2016)</td>
</tr>
<tr>
<td>Payment and Payment Information</td>
<td>1.0 (Nov 2013)</td>
<td>Payment Management (TMF670)</td>
<td>Apr 2017</td>
</tr>
<tr>
<td>Prepaid Balance</td>
<td>1.0 (Nov 2013)</td>
<td>Prepay Balance Management (TMF654)</td>
<td>Sep 2016</td>
</tr>
<tr>
<td>Postpaid Balance and Postpaid Billing</td>
<td>1.0 (Nov 2013)</td>
<td>Billing Management (TMF636) and Account Management (TMF666)</td>
<td>Apr 2013, Apr 2017</td>
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<tr>
<td>Usage Management</td>
<td>1.0 (Feb 2014)</td>
<td>Usage Management (TMF635)</td>
<td>Jun 2014</td>
</tr>
<tr>
<td>Customer Complaint</td>
<td>1.0 (Nov 2013)</td>
<td>Trouble Ticket (TMF621)</td>
<td>Jul 2013</td>
</tr>
<tr>
<td>Service Order</td>
<td>1.0 (Nov 2013)</td>
<td>Service Ordering (TMF641)</td>
<td>1.0 (Nov 2015)</td>
</tr>
</tbody>
</table>
API’s foster unified experience across digital channels
Use Case: International Credit Transfer

Thanks to:

- Prepaid Balance API
- Prepaid Charge API
- Prepaid Refund API
Use Case: Routers Data Package Activation

Thanks to:

✓ Usage API
✓ Service Order API
✓ Authentication API
Use Case: Redirect Capabilities Through OAuth

- Access Code Flow and Implicit Flow OAuth schemes support authentication through sites hosted externally to API Gateway
- Through this capability, we authenticate our subscribers and gain approvals using an OAuth 2.0 token
- A new and easy integration approach for Direct Carrier Billing (DOB)
Our Chatbot is based on Microservices

Channels
- Web & App Chat
- Skype
- Facebook
- Telegram

Abstraction Layer (Message Routing)

Bot Engine (Orchestrator)

Microsoft Cognitive Services (LUIS)
- Intents & Entities (NLP)
- FAQ (Question & Answer)

Translation Service
Search Service
Logging Service

Dialog Engine
State Service
Chat Service
Real Agent Live Chat System (Avaya)

Zain API's
Zain CMS
Chatbot

**Bot:** Hi! Zain bot at your service. (MOCK API Version)

**How can I help you?** type (help) for a list of commands.

**Check these out:**
- My Services
- Add Service
- Check Balance
- Check Bill Details
- Check Usage
- Branch Location
- Product
- Roaming Rates

**User: help**

**Add/Remove Services**

**User: addservice**

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Monthly</th>
<th>Weekly</th>
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</thead>
<tbody>
<tr>
<td>Missed Call alerts</td>
<td>KD 15.5</td>
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<tr>
<td>Roaming</td>
<td>KD 7 per week</td>
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</tbody>
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**User: balance**

**Total Amount Due:**

**$32.7**

15 Days until your next bill

**User: branch**

**Hawaii Branch**

- **Working Hours:**
  - Saturday-Thursday: from 08:00 am - 10:00 pm
- **Location:**
  - Map: [Google Maps](https://www.google.com/maps)
  - Contact: +123456789

**User: branch**

**Data Usage:**

- **66.97 GB**
  - Remaining out of 250 GB
  - Local - SMS
  - Zain Employee Services
  - 222 Count

- **Remaining out of 3000 Count**
Zain Kuwait API’s Partners Network

<table>
<thead>
<tr>
<th>Local Apps/Portals/POS</th>
<th>Banking</th>
<th>International</th>
<th>Zain Routers</th>
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</thead>
<tbody>
<tr>
<td>MOBILE 2000</td>
<td>iCards</td>
<td>SLA</td>
<td>NETGEAR</td>
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<td>HUAWEI</td>
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Thank you

Mahmoud Abu-Ghali
Solutions Development Manager, Zain Kuwait