mashreq

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Rise every day

Welcome to the February edition of our department newsletter, where we highlight the latest updates, achievements, and initiatives shaping our collective journey towards excellence.
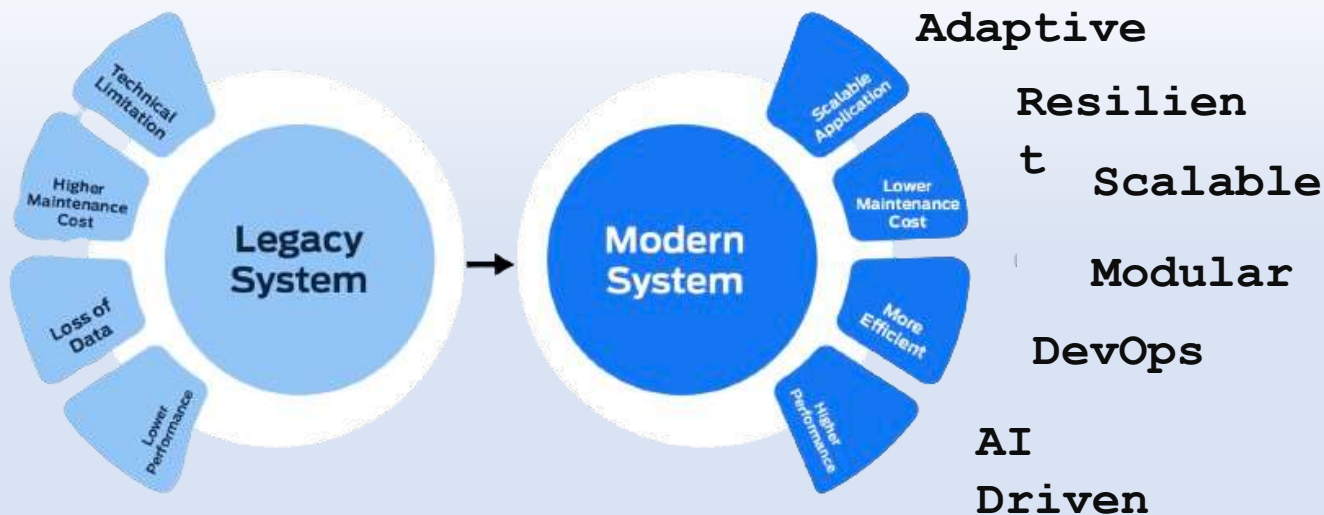
Get ready to explore some of our modernization initiatives, an inspiring success story , latest insights shaping our Payments and Digital landscape and discover invaluable insights to stay ahead in today's ever-evolving tech environment!

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→   Modernization Initiatives'24

→   Learnings from Industry: Migrating a Monolith Architecture towards Microservices

→   Upcoming Milestones & Team Connects

PAYMENTS & DIGITAL SERVICES

Platform Modernizations

Legacy System → Modern System

Technical Limitation

Higher Maintenance Cost

Loss of Data

Lower Performance

Scalable Application

Lower Maintenance Cost

More Efficient

Higher Performance

Adaptive

Resilient

Scalable

Modular

DevOps

AI Driven

February Insights

As February draws to a close, we reflect on a month filled with notable accomplishments - here is a quick peek of the important deliveries.

Key implementations in Feb'24

Sherlock Customer Channel **Integration for OBRFI** (Other Bank Request For Information) implementation resulted in reduced number of calls made to the call center and provides auto-response to the queries raised by customers from other banks.

Braavos FTC reconciliation (UAE and IBG Operations) where the process of sundry GL (General Ledger) bookings for the receivables from another Bank(tracking, reconciliation and follow-up of receivables)is automated . Post go-live benefits include sending claims without delay and faster recoveries with reduction in write-off.

We successfully implemented the **Hardware Security Module(HSM)** in Bahrain, which was a part of Central Bank of Bahrain's initiative to enhance the security of the Central Bank RTGS Network.

As part of regulatory compliance guidelines, all **Cheque payments** pertaining to **Bank Sedrat Iran** will henceforth be screened and stopped by ECCS(Electronic Cheque Clearing System) for Qatar

Fusion-Maker activity automation (Eighth phase) where the fusion process bots prioritizes the transactions resulting in reduction of processing time.

Owners Association enhancement facilitates charge reversal along with audit trail and reserve fund percentage update based on account class.

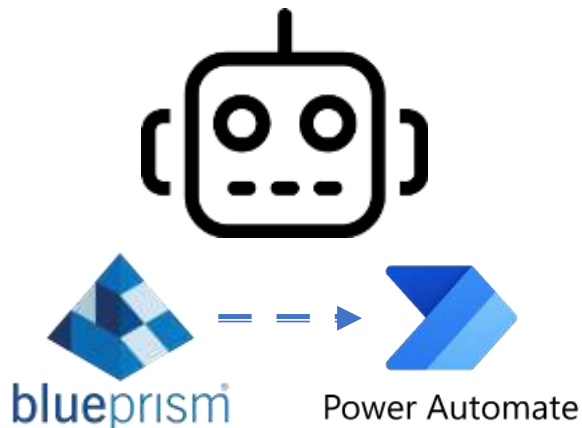Here's a glimpse of Pakistan Neo Bank, Egypt Sphynx and Oman Programs

- Pakistan Neo Bank - Development and SIT installation of Payment Systems is in full swing and 140 out of 166 APIs build completed. Integration tests to commence by Mar'24

- Sphynx – Getting Ready for customer launch

- Oman – Business Requirement Documentation has been signed for Payment's applications and resource onboarding is underway. Initial Architecture has been presented

Regulatory and Digital Updates

- SWIFT ISO20022 HK Interbank Clearing Ltd., (ICL) –Testing on track as mandated by HKICL and Mashreq Hong Kong will participate in the community DR of HKICL in Mar'24

- Workflow Modernization – Platform Obsolescence – User Testing underway for Letter Generation, Transaction Monitoring System, Qatar Court Case

- Last lap of testing in progress for White Label Remittance phase 1,2 and 3: Quick remittance to Axis Bank, Federal Bank, Faysal and NIUM (instarem)

- Enterprise Tech Advantage program kick started, Vendor Assessment in progress.

- IAM - Gap assessment and vendor onboarding for scoping in progress

February in Numbers : Transaction Volumes

1.58 M	1.2 M	0.68 M	0.09 M	7.97 M
Swift	LCY	NPSS	Cheques	Recons

Modernization Initiatives'24

blueprism --- ▶ Power Automate

Transform

Build

Evolve

Operate

Transition

Digital Workers Transformation

Get ready for some exciting changes! We're moving our BOT Processes from Blue Prism to Power Automate. Power Automate is like a reliable cousin to Blue Prism, offering us lots of benefits and cost savings. Plus, being part of the Microsoft family gives us even more perks. Stay tuned for these updates as we make our work smoother and more efficient together!

Legacy Services Rewrite

This initiative involves migrating our utility platform from traditional bare metal servers to a dynamic cloud-native architecture, aligned with Mashreq's MOFT framework guidelines. The Digital Platform Services team will upgrade Java services to JDK 17 and implement an Azure Kubernetes setup for hosting Java microservices. Benefits include enhanced scalability, service resilience, maintenance ease, and the establishment of detailed performance dashboards through monitoring tools.

Workflow Modernization

Exciting news awaits as we embark on a journey of transformation! Our enhancement plan unfolds in two key phases. First, we're bidding farewell to outdated IBM BAW on legacy infrastructure, transitioning to the latest version on a more advanced BAW / BAW Lite Platform, promising increased efficiency. Second, we're modernizing our workflows by moving legacy BAW processes to a Microservice-based Architecture, offering greater flexibility and resilience. These changes also mean less reliance on proprietary products, stronger systems, and a significant reduction in development effort. Join us as we embrace these advancements together!

February in Numbers : Transaction Volumes

142 M	5.2 M	0.2 M	1.01 M	4 K
Middleware	API Connect	RPA	EDMS	BAW

Learnings from Industry

Migrating a Monolithic Architecture towards Microservices

Airbnb, a renowned online marketplace for lodging and travel experiences, embarked on a significant journey from a monolithic architecture to a microservices-based system – continue reading to know further!

The first version of their web application was a monolithic application, built using Ruby-on-Rails and was internally known as the monorail.

The problems started as Airbnb's engineering team grew rapidly which meant developers were adding new code as well as changing existing code within the monolithic application.

Over time, the code base started to get more tightly coupled and ownership of data became unclear. To alleviate these pain points, Airbnb embarked on a migration journey to move from monolithic to a Service-Oriented Architecture or SOA.

The team achieved this by having the service write to a shadow database and then issue a read request to both the production database and the shadow one and compare the results. Airbnb used open-source tools as part of the new architecture.

They developed Spinaltap, which they have open-sourced, to listen to changes in databases and put them onto a Kafka queue.

Airbnb ensured standardization of best practices in coding their services.

The team built their architecture in such a way that
• All client requests go through an API gateway which routes to the relevant service.
• Every service is built, deployed and scaled independently.
• While initially run on EC2 instances in AWS, they moved to a Kubernetes cluster to simplify scaling needs.
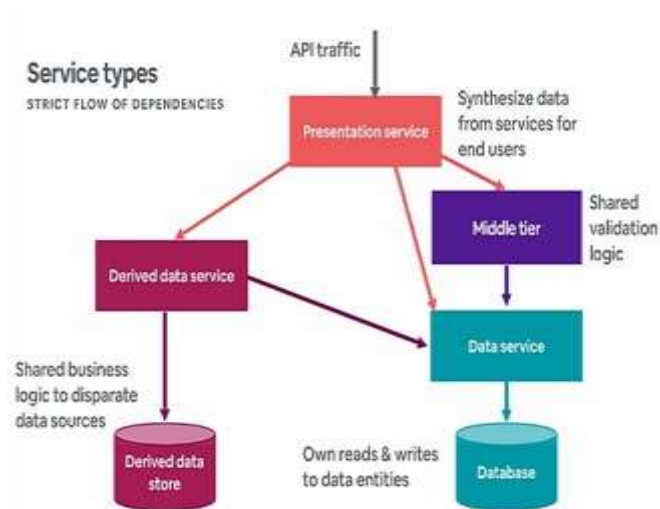
To ensure a standard approach to building services, Airbnb defined a set of tenets to design the architecture and services, as well as a service interaction design. These were created up front before the execution phase of the migration

To avoid changing every database query within the monolith, Airbnb created a custom ActiveRecord adapter that effectively diverts database calls to the new service

In summary, Airbnb's migration to microservices involved careful planning, gradual changes, and a focus on maintaining stability while evolving their architecture. The journey taught them valuable lessons that continue to shape their technology landscape.

Did you know?

Airbnb is operating in 200+ countries and 4 million hosts and have welcomed over 1.5 billion guests across the globe and the company's annual revenue currently stands at a whopping 8.4 billion USD

Upcoming Milestones

Implementation of below initiatives and DR schedules will keep us on our toes in March

DR is scheduled for below applications on March-09th and March-10th

TLM(Transaction Lifecycle Management)
Cross Border Payment Application - SWIFT

Critical Deliverables in Mar'24

- Dexter 2.0 Inward Cheque Clearing
- Egypt ACH (Automated Clearing House)
- Payment Tracker 2.0
- Quality Check automation for FTC
- Fusion Phase II: Maker activity automation in payment screening
- White Label Remittance phase 1 ,2 & 3
- Eagle Eye Compiler Phase 3 – Additional Enhancements and Expansion
- IAM- Comarch and IAM -Helix integration

Star Performers of Feb'24

Karthik Arumugam
iValue Nominee

Bhargav Samala

Vikash Chandra

Veeresh Vemula

SPOT Awardees

Muhammad Anwar

Ashutosh Tiwari

Aarthy A

Venkata Siva