

sumerge

A JOURNEY BENEFITING AN ENTIRE KINGDOM

GOSI accelerates digital transformation through
microservices and API management



We partnered with the General Organization for Social Insurance (GOSI) – previously Public Pension Authority (PPA) – to help them to achieve their goals and milestones towards digital transformation. We met with Tariq Alburaykan, the Integration Services Unit Manager at GOSI, to gain a more in-depth view from his perspective into the project, GOSI's journey, and its outcomes.

Alburaykan began by giving a brief history regarding GOSI's Digital Transformation Initiative. GOSI had a vision for an aggressive and innovative digital transformation strategy which was not possible to implement with their existing legacy system. GOSI's middleware and API platform at the time were too complex to maintain, had performance and stability issues, and could not cater for GOSI's current and future APIs and integration requirements.

As such, GOSI's aggressive digital transformation roadmap was blocked due to the legacy system currently

in place from which arose the need to modernize.

It was through an assessment of the situation and a deep understanding of GOSI's innovative digital strategy that it became clear to Sumerge that GOSI was looking for a solution unlike any other available on the market.

This is when Sumerge proposed a modern platform based on an API first strategy, running containers based on microservices architecture using the IBM Cloud Pak for Integration and relying on DevOps practices.

“Our team, coupled up with our strategic partner, Sumerge, managed to work as a single harmonious team to seamlessly achieve GOSI's business needs.” said Alburaykan.

The result was a complete success where GOSI was able to provide pensioners with top notch services while having almost no downtime.

10x

Increase in
transactions per
second

192M

Transactions per
month

Alburaykan further stated that the challenge had been doubled due to parallel running initiatives related to core pension migration, multiplying pensioner digital services and G2G/ G2B services

THE ENGINES BEHIND THE ROAR

Our approach to this project was direct and staggering. We had decided to migrate the system to a **Microservices Architecture** running on containers using **IBM Cloud Pak** for Integration running on **Red Hat Open Shift**.

The microservices architecture enabled us to break down the large legacy system into smaller domain based microservices running on separate containers. Which sped up implementing new features and deploying to production by 5 times, resulting in a quick time to market.

All the new components had automated DevOps pipelines ensuring both quality and speed. We exposed the separate containers as **REST APIs** to run on Red Hat Open Shift.

This was a low-risk **agile phased approach** where the two systems coexisted together migrating components in sprints every two weeks. We moved the components that had scalability issues and caused performance bottlenecks by offloading the legacy system to a modern scalable platform. Each microservice can now scale independently based on its load at runtime and there is no need to scale the entire system to ensure a **performance boost**.

Our API First strategy exposed all the pension services as APIs that could be consumed by digital channels and external organizations. This allowed innovation on digital channels, the ability to build services rapidly and enabled data exchange with external organizations in addition to implementing API management strategy and technologies thus enabling API lifecycle management, security, discovery, and monitoring.

We implemented **G2G integration services** with **60+ external entities** in

a brief period thereby achieving the highest rank of G2G maturity across the Saudi Government's ranking.

Through Event Driven Architecture we set up the foundation for data and events streaming in GOSI to enable data driven services and near real-time actions thus improving customer experience and automated business processes.

“

It was through a lot of hard work, dedication and technical innovation that we were able to launch more than 160 services to our pensioners, managed the core pension migration and launched tens of G2G/ G2B services!

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Tarek Alburaykan - Integration Services Unit Manager at GOSI

Through **Event Driven Architecture** we set up the foundation for **data and events streaming** in GOSI to enable data driven services and near real-time actions thus improving customer experience and automated business processes.

ACHIEVEMENTS UNLOCKED!

Many achievements were accomplished through the hard work and dedication of Sumerge and GOSI. Starting with increasing the capacity and speed of the build and deployment of services that significantly boosted the time to market with increased stability and scalability allowing the system to run **500 transactions per second**, up from just 50 transactions per second.

Coupled with the Microservices Architecture adoption, where IBM Cloud Pak for Integration was set up to run on Red Hat OpenShift, we introduced an **event-based data pipeline** platform implementing near real-time data pipelines on

Apache Kafka for the customer 360 Master Data Management (MDM). Furthermore, we built more than 265 integration services running on the new platform and processing more than **192 million transactions** monthly.

Proactive monitoring and tracking on the whole platform including an event-based monitoring solution ensuring a smooth robust integrated services for 60+ external entities.

Furthermore, we have built and trained independent teams for GOSI working on the same framework ensuring a successful Hybrid-Teams model thus giving GOSI all the freedom to move forward with its in-house development capabilities.

60+

External entities
integrated

265

Integration
services

About The General Organization for Social Insurance

GOSI is a governmental entity that is independent financially and administratively and provides social protection and insurance coverage in the Kingdom of Saudi Arabia. It covers the Saudi civil and military employees, the private sector workers and workers employed on item of wages in public sector. It also implements the social insurance law, its branches, its executive regulations, and the civil and military pension laws in the Kingdom of Saudi Arabia.

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Tarek Alburaykan - Integration Services Unit Manager at GOSI