

Azure Apps

Success Story

Mining Giant Integration Platform – Success Story

Business Context

In a bid to improving Supply Chain Performance and ensuring beyond-par experience for the key personas (Maintenance Planner, WH officer, Parts Buyer, 3PL Officer) , it was imperative for the mining group to look at a Connected Enterprise solution.

Key Processes / Business capabilities Involved : **Mobile Plant Management | Manage Spares & Rotables**

Key Challenges

Lack of Single View of the end-to-end inbound Supply chain

Lack of visibility into the last mile logistics and warehouse

Lack of synchronization between disparate systems (internal & external)

Lack of certainty in spares and equipment ETAs



API Factory Model set-up, as part of the Integration Competency Center (ICC)



Close alignment with customer's integration standards, guidelines and governance framework



End-to-end cloud native integration capability using Azure iPaaS (LA, Functions, APIM, ASE, etc)



Enabling multiple Integration patterns including – Request-Response, Batch, Proxy, Webhook, Event-Driven, Pub-Sub, (time-based, source triggered)



Standardized & Unified Engineering templates & Integration patterns & processes. 10+ Reusable integration assets

Tech Stack:

Azure iPaaS, .Net Core, SoupUI, draw.io, Azure DevOps, JMeter, Postman, Azure Test Plans

Execution Approach:

6-Week Discovery & Assessment, followed by ramping up a team of cross-skilled resources

15+ Heterogenous Upstream and Downstream Systems: SAP, FileShare, PostgreSQL, Oracle, OSISoft, WeatherZone, PDS, BLASTIQ, Track'em, Palantir, Intelli Permit, Prometheus



Unified Dashboard for tracking the movement of all spare parts and greater certainty of spares and equipment ETAs, resulted in an **increase in employee satisfaction by ~17%** in the first three months.



Standardizations & reusability led to velocity of delivering **40+ API Designs in 3 months**



Spare parts were delivered to the right users on-time for **~94% of the times.**



Reduce waste in in-bound supply chain by **~23%** in the first six months

Multinational Automaker's Global Retail **Integration Platform**

GRIP

- ❖ One Consumer Profile across all dealers
- ❖ Clear Understanding of Consumer Behavior & Needs
- ❖ Ability to communicate based on Consumer Preference & Insights
- ❖ Increase Data Quality of the consumer Information
- ❖ Full Transparency of Activities across the consumer life cycle
- ❖ Flexibility in integrating with Multiple Sources of Data
- ❖ Centralized Access Control & Threat Protection

HCL'S SOLUTION



- ❖ HCL implemented the API layer to expose the e-commerce middleware layer services for digital channels
- ❖ The solution also catered to multiple geographies
- ❖ Information tracking and end-to-end services management enabled at every stage across all services provided by the solution resulting in better end user experience
- ❖ Centrally hosted consumer data base for store & retrieval process to avoid latency
- ❖ Azure iPAAS Implementation for flow orchestration

TOOLS AND TECHNOLOGIES USED

- ❖ Azure Public Cloud
- ❖ Swagger, JSON
- ❖ OAUTH 2.0
- ❖ Azure Active Directory
- ❖ Azure Service Bus, Azure Policies
- ❖ Maven, Jenkins (deployment automation)
- ❖ .NET Web Services, Azure Document DB

BUSINESS VALUE DELIVERED



- ❖ The solution laid the foundations for an API framework that is now extendable to other markets
- ❖ Centralized access for consumer profile & opportunities among dealers across regions
- ❖ Highly secured environment against threats, vulnerabilities
- ❖ Globally accessible and centrally controlled solution leveraging azure public cloud
- ❖ Easy to Notify, Monitor & Monetize API access by dealer systems
- ❖ Pluggable & Dynamic Integration Architecture using Azure Logic APPs

Modern Native applications with Azure Kubernetes Service

Background

- ❖ **Customer's Paperless** is a Cloud Native solution for hosting GCS , C3 Mediation Layer and WMS API Layer solutions to digitalize the conventional ways of handling the deliveries in and out of the DC (distribution Centre) of Coles Super Market Australia.
- ❖ .NET Core 3.1, Angular 9 and HTML 5 are being used as main technology within Application . 9 Apps built on Angular and total 24 Microservices being used in overall solution. APIM is being used for API which are exposed out of their containers. Kubernetes and Docker is being used for hosting and building platform which is integrated with Azure Dev Ops and Argo CD.GCS helps in digitalizing delivery check-in and check-out process within DC . Overall solution is supporting KIOSK , IPAD and Laptop / desktop.

Problem Statement

- ❖ Manual paperwork and overhead on manpower instead.
- ❖ Relying on On-premise data. Scattered data in many applications and no central control.
- ❖ Integration with third party API without secure connections.
- ❖ Manual error handling and human error prone.
- ❖ No security or encryption used.
- ❖ Self-checkin and check-out process missing for driver and centralized control was missing .
- ❖ Logging , Monitoring and reporting was missing from overall process.

Solution

- ❖ HCL provided Microservices cloud native based solution to achieve not only for the cost benefits as well as business objectives, Also it had digitalized the overall check-in and check-out process.
- ❖ HCL not only recommended Azure DevOps, Docker and AKS , Argo CD , Microservice architecture but implemented and delivered within timeline with zero compromise on quality.

TIMELINE

It was a **one-year** duration project

BENEFITS

- ❖ Digitalization of the Self- Checkin and Checkout process for driver like secure Airport checkin process.
- ❖ Scalable solution to cope up incoming demand traffic
- ❖ Better monitoring & logging using Azure Log Analytics and Azure Monitor, Application Insights .
- ❖ Container image scanning to overcome the security glitches
- ❖ Faster Go to market by implementing CICD pipelines using Azure DEVOPS , Argo CD .
- ❖ Kubernetes secured platform used for hosting and key Vault , SSO , SSL implemented to enhance security and encryption used for driver related PII data.

Modern Integration Solution for **National Sports Entity**

CONTEXT

- ❖ Unstable APIs which went down during opening games of the summer.
- ❖ API's were unable to handle more than eight live games concurrently.
- ❖ Cricket receives official scores on their applications from Opta, API's with Opta were tightly coupled went down or were unresponsive if no data was received from Opta.
- ❖ API objects were bulky which which slowed down page load times, hence the app store score for their cricket live App was 2.6.
- ❖ All API's polled information instead of pushing out information as and when it was available.

TOOLS AND TECHNOLOGIES USED

- ❖ Azure DevOps,
- ❖ Akamai, Azure Monitor, .Net Core, Docker, App services, Migration to AKS in progress,
- ❖ Launch Darkly,
- ❖ Cosmos DB, Azure SQL, Azure Service Bus, Blob Storage, Azure Functions

HCL'S SOLUTION



- ❖ Event driven composable architecture to consume stats & feeds from providers
- ❖ Using Akamai to cache archived data especially data of completed matches to reduce the number of calls.
- ❖ Restructuring the match stats database & using cosmos DB to hold live matches
- ❖ Develop a core set of API's and use BFF pattern for channel specific requirements.
- ❖ Implement feature flags to roll out change/support canary deployments
- ❖ Migrate all the API's from V1 to V2 for better performance & reliability

BUSINESS VALUE DELIVERED



- ❖ Agile delivery based on Spotify Squad framework with 5% effort reduction YoY
- ❖ 25-30% roll-out time reduction using HCL's Advantage Experience solution offering
- ❖ 15% increase in user satisfaction

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