



# Success Stories: Google Cloud Platform Solutions

## 2022

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New York USA

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# Cross–Cloud Migration

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## The Challenge

Migration of large, complex enterprise software and databases from Azure to GCP:

- 300 VMs
- 20 TB in HA SQL Cluster
- Multiple lines of business

## Outcomes

- Increased cost efficiency
- Cut costs nearly in half, from \$2.5M to \$1.3M
- Enhanced performance
- Maximized value from new GCP features

## DataArt's approach and why it worked

### Holistic analysis

Leveraging our industry, technical, and business expertise to identify GCP as an appropriate provider for the client's objectives and constraints.

### Early hypothesis testing

We created a POC to objectively evaluate GCP functionality and proof technology selection.

### Continuous stakeholder alignment

We identified goals, managed risks, and achieved consensus across IT, security, operations, and billing teams to establish long-term partnerships with customer and GCP's technical account manager.

### Value optimization

By following GCP best practices for governance and architecture to go beyond a "lift and shift" migration, we automated infrastructure, leveraged GKE to simplify K8S management, and harnessed CloudEndure to expedite VM migration.

# Scalable Data Platform for E-Commerce

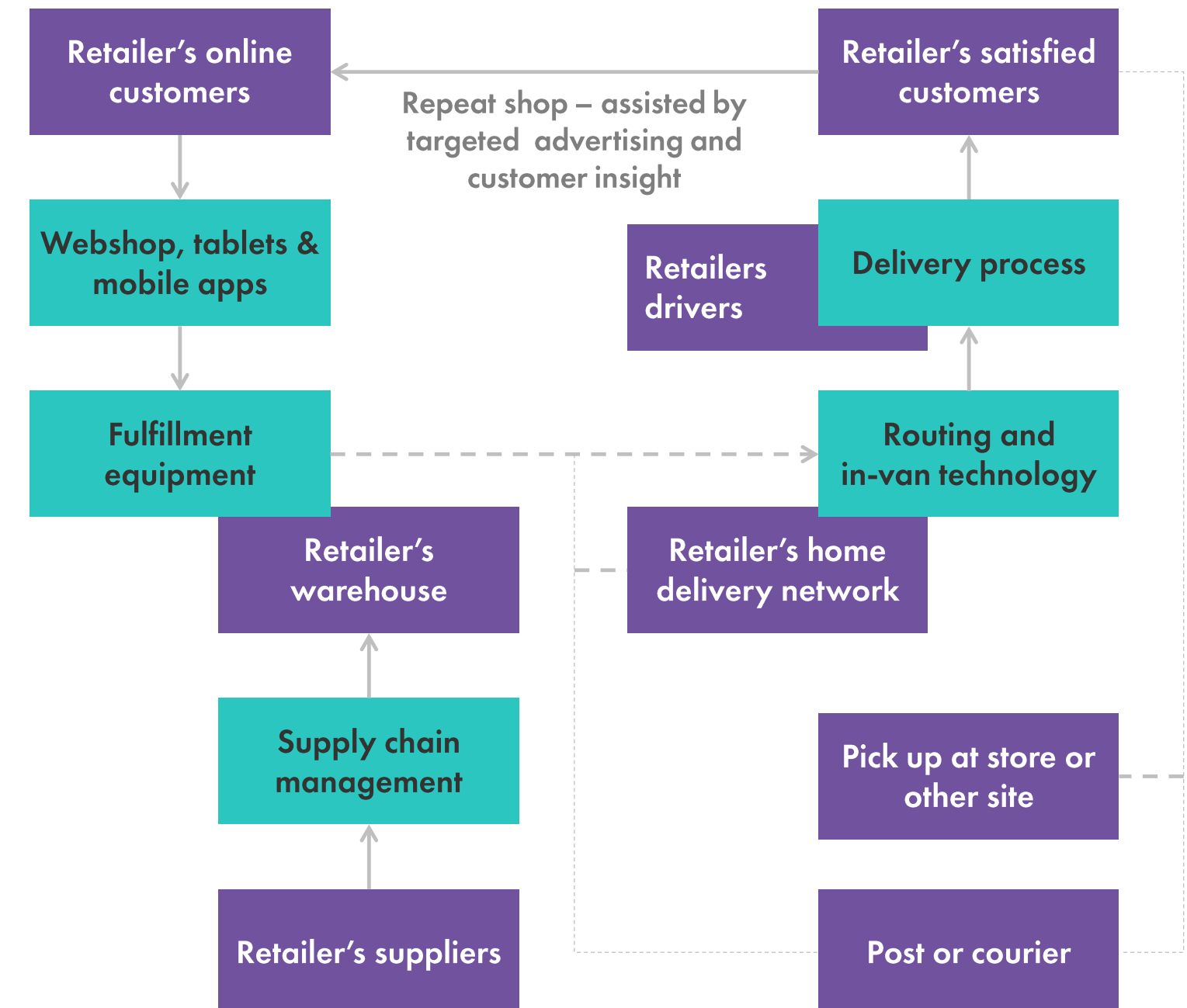


The client, an online grocery specializing in home delivery, aims to revolutionize the way people shop by giving them a uniquely innovative and greener alternative to traditional grocery shopping.

DataArt improved different parts of the data analytics platform delivery: from ETL processes implementation to a design of a data warehouse in Google Data Lake.

## Highlights

- Getting data from 800+ applications
- Supported 200+ Tableau reports
- Scalable architecture. High availability and load balancing
- Strong data analytics and visualization capabilities
- A mix of latest data technologies with classic data tech stack to gain advantages of both worlds: Oracle data warehouse, Google Data Lake, cloud dataflow, etc.



# Metro: Largest B2B Online Marketplace in Europe

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## Client

METRO Markets GmbH is responsible for the development and operation of a B2B online marketplace designed for HoReCa customers.

## Challenge

The challenge had two aspects: adoption and improvement of the initial code base from a different vendor and strict timelines. DataArt faced the challenge and was asked to help with future development of the platform, setup CI/CD and establish rapid development to make the release on time.

## Solution

Initial codebase was an on-prem monolith. DataArt decided to re-architect and enhance the solution by using microservices and migrate it to GCP using best-in-class cloud services: GKE with Helm, GCS, Cloud SQL and Memorystore. The team also leverages Stackdriver and Grafana to start adopting SRE practices.

The solution was completed on time and had no-downtime deployment through Jenkins, fully automated infrastructure with Terraform and robust architecture.

[More information](#)

# Employee Benefits System Development with Google Cloud

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## Client

Our client is a social security and Medicare startup company that provides employees benefits management service.

## Challenge

The customer operates in a highly regulated industry, so the solution was required to be compliant with HIPAA and PHI privacy standards. DataArt team has been working simultaneously on development of both mobile and web app versions. The solution required reliable builds and deployment procedures with no downtime to deliver multiple product options to users.

## Solution

To meet the challenge, the solution is built using best in class GCP services. Containerized application is running in App Engine flex and uses Cloud Storage and containerized database. To ensure rapid development, the team relies on CI/CD with Cloud Build and Cloud Functions. Stackdriver takes care of metrics and centralized logging.

The solution was released on time and provides an outstanding user experience. The development process was enabled with DevOps best practices, helping to save time on integration and delivery and providing a great foundation for ongoing implementation of new features and integrations.

# Application Transformation and Migration to GCP

## Client

A US-based predictive brand tech company.

## Challenge

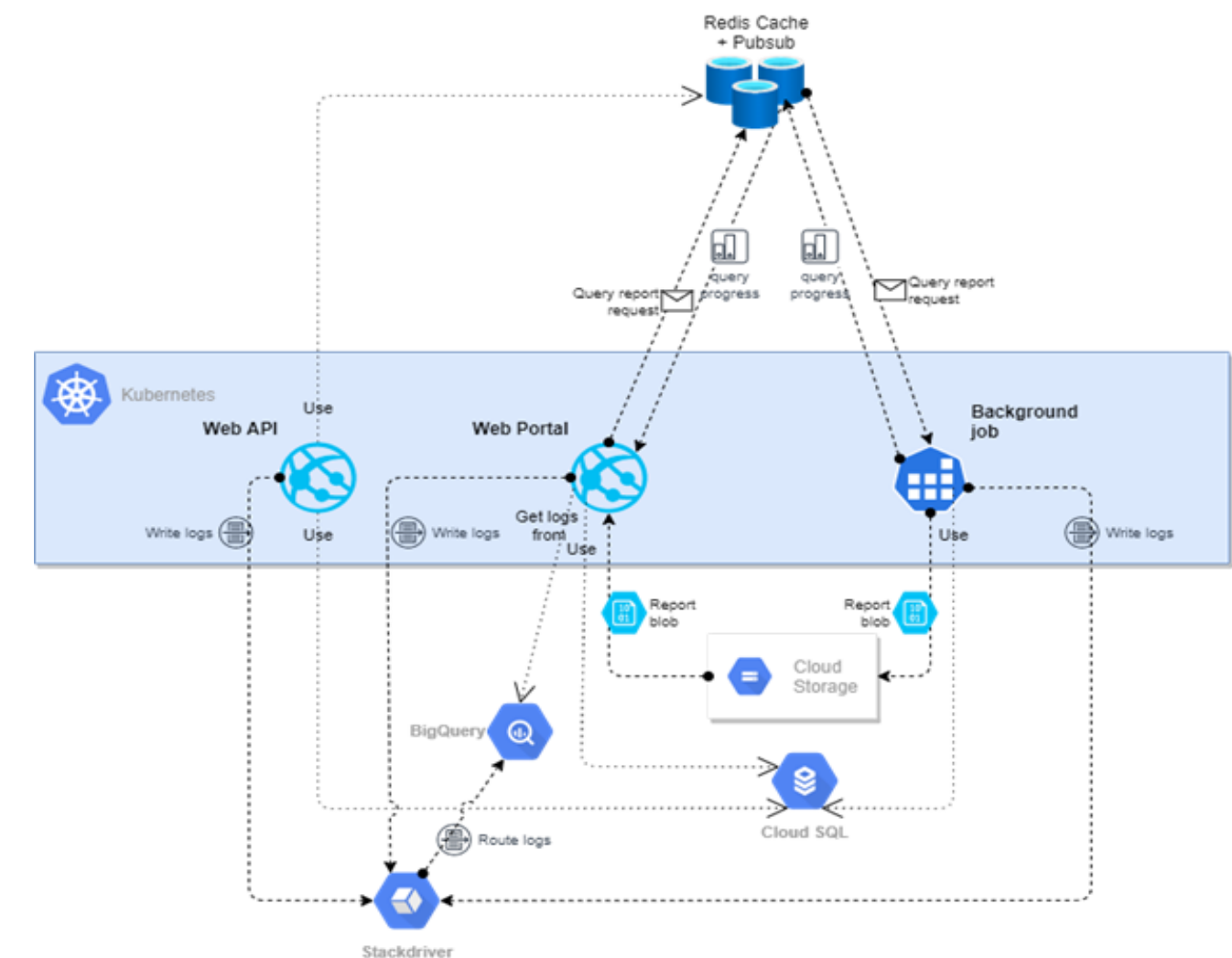
There were several applications that had to be migrated, and one of the challenges was that the solution was an ASP.NET MVC application, hosted with Azure native services (App Service, Service Bus and others). Migration and modernization had to include a path to migrate from these Microsoft specific technologies to GCP native.

## Solution

DataArt created a plan with multiple milestones, identifying intermittent stable stages where the system is in operational state. ASP.NET MVC was migrated to ASP.NET Core, applications were containerized, covered with E2E automated tests. Incompatible services were replaced with Redis Pub/Sub, Cloud Storage, Operation suite and Stackdriver, BigQuery, Cloud SQL and GKE.

## Business value

It was a successful migration from Azure native to containerized, cross-platform GCP compatible solution. It allowed for certain license cost saving and performance optimization. Transformation project allowed to modernize the technology stack, improve scaling, observability and agility in development.



# Structures Inspection Platform & Marketplace

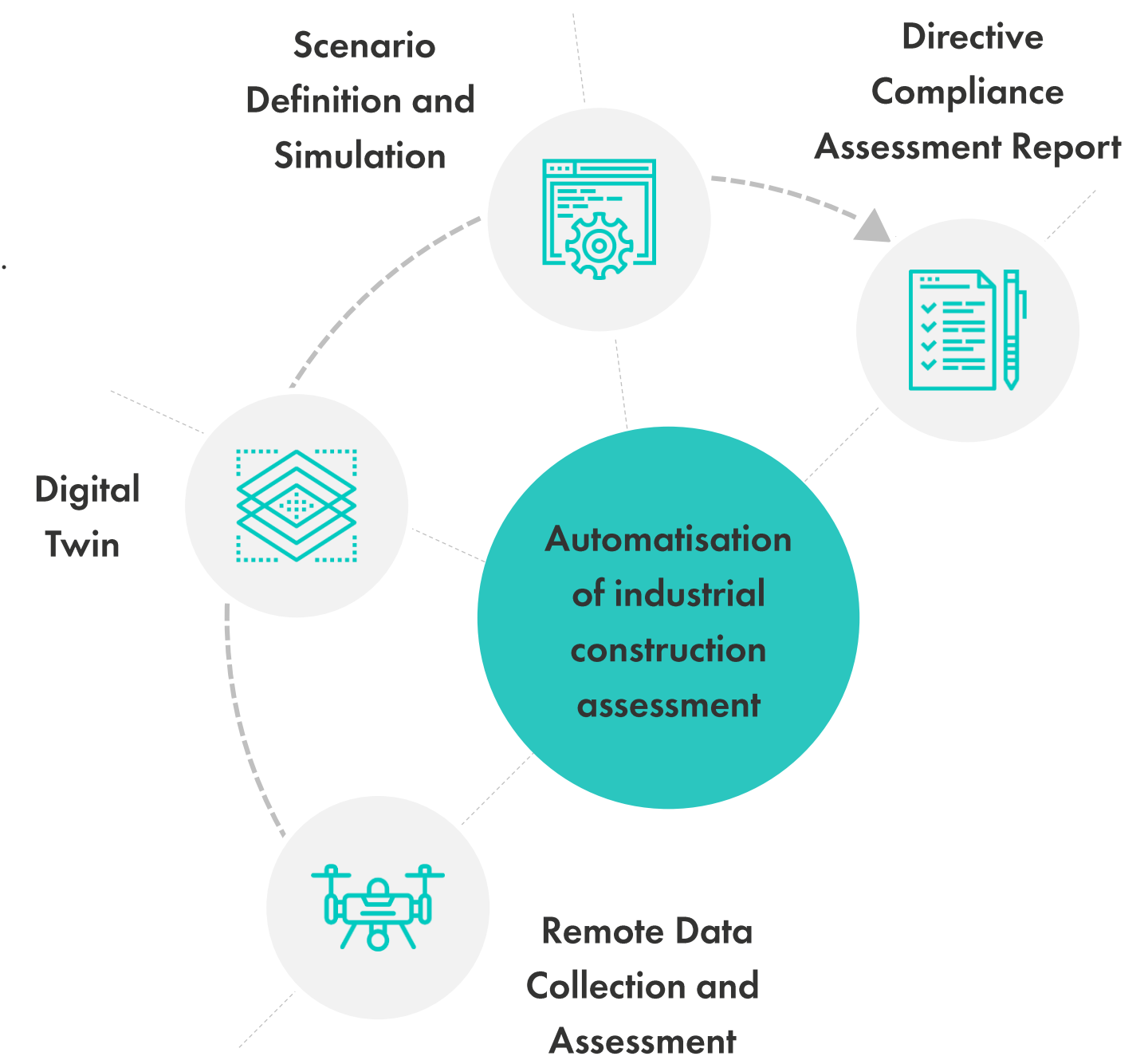


The client is an international industrial group. They innovate operations by developing a digital twin software for asset management, safety monitoring, and maintenance.

The solution helps to automate inspections of infrastructural objects by generating a 3D model based on drone-captured photos and by automatic detection of damages and issues. It is developed as a SaaS platform aimed to fulfill the needs of different market players involved in the inspection process. It includes both specific technical integrations and end-to-end business scenarios.

## Solution Highlights

- More efficient and more economic way for object assessment
- Automatic damage detection powered by AI technologies with thousands of images, fully transparent, with documented historical data
- Marketplace functionality streamlines business processes and helps Inspection participants to cooperate daily
- Web UI supports full-functional 3D-view, thus audit experts can manage Inspections online from any device, anywhere
- Minimal city traffic interference
- Multi-component cloud-based architecture addresses a wide range of scalability for high-load calculations, supporting structures from several meters to many kilometers in size
- Technology stack includes Python, JavaScript, Google Cloud, Celery Tasks Queue, PostgreSQL, Agisoft Metashape



# Cloud Migration and Payments Integration 1/2



The client provides mobile payment and financial services across Asian markets. The client's ultimate goal is to migrate from on-prem infrastructure to cloud, which will enable the expansion to the new markets.



## Industry

Digital banking

## Solution

DataArt was involved in the client's migration effort from on-prem server infrastructure to cloud. The client's on-premise servers were based in Southeast Asia. The company wanted to branch out to different regions.

Because specific laws and regulations on the financial services infrastructure vary significantly from one region to another, the easiest way to branch out was to run the infrastructure in a cloud. After thorough analysis, Google Cloud Platform was chosen as the preferred cloud provider.



## Team

3 Engineers, 2 QA Experts

## New Features

Apart from migrating the client's infrastructure to cloud, DataArt refactored the previously implemented architecture and developed a set of new features for:

- bill payments
- cash top up
- credit card top up
- auto top up.



## Services

Cloud Migration, Banking Services, Payment Expertise, QA Automation



## Duration

1,5 Years

# Cloud Migration and Payments Integration 2/2



DataArt successfully integrated the client's API, previously used mainly on the application side. Now the integration is centered on the back-end, which allows to concentrate on the payments business logic, making the process more transparent and flexible.



## Security

All the information processed in the client's database – transaction information, payments, loyalty points – is audited and screened by the third parties. DataArt team ensured that all the client's operations comply with the major regulation policies and local regulatory bodies.



## Security Features

- Account takeover prevention
- 3-D secure protocols
- All transactions are monitored and screened by the third-party



## Business Benefits

- Accelerated business entry into new markets
- Enhanced product value proposition with new features
- Risk mitigation with stronger user data security
- Improved scalability assured faster growth rate
- Overall user loyalty increased due to better customer experience.

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