

# Secure Landing Zone for seamless connectivity in the telco business



## CHALLENGES

Developing an automated solution for Deutsche Telekom AG's (DTAG) diverse affiliate needs was a significant challenge. The project required creating a flexible, standardized framework while managing complex support and onboarding processes. Additionally, it had to meet DTAG's strict Privacy and Security Assessment (PSA) requirements, balancing advanced automation with user-friendly interfaces.



## BENEFITS

The Google Cloud Landing Zone simplifies account management via a self-service portal integrating DTAG Active Directory and identity provisioning. It offers comprehensive oversight with central logging, CI/CD, billing, and security. The foundation supports BI and data-driven needs with high automation for account and project creation. Automation, and seamless integration into DTIT processes, including automated cost distribution, are the key benefits.



## GOOGLE CLOUD SOLUTIONS

### Foundation Services

- Compute Engine
- Cloud Storage
- Cloud Run
- Cloud Run Functions
- Cloud Build

### Monitoring & Logging

- Cloud Monitoring
- Cloud Logging
- Cloud Audit Logs

### Networking

- Cloud Interconnect
- Cloud VPN
- VPC Networks
- Cloud DNS

### Security

- Security Command Center
- Cloud Identity-Aware Proxy
- VPC Service Controls

### Access Control

- Identity and Access Management (IAM)
- Cloud Identity
- Organization Policies

### Billing

- Cloud Billing
- Looker Studio
- BigQuery

# Revolutionizing a major streaming platform



## CHALLENGES

The customer faced two main challenges. First, their existing cloud infrastructure lacked a standardized and secure foundation, resulting in inconsistencies and risks. Second, while the Landing Zone Foundation provided a solid baseline, they needed advanced features to fully leverage their cloud environment, accommodate complex use cases, optimize performance, and ensure high availability.



## BENEFITS

The Google Cloud Landing Zone provided the customer a secure, efficient, and scalable cloud. Enhanced security, compliance, and consistency were achieved. The advanced features further improved scalability, performance, resilience, and cost efficiency. As a result, the customer can handle increased workloads and complex use cases while maintaining optimal performance and minimizing downtime, ensuring readiness for future demands.



## GOOGLE CLOUD SOLUTIONS

### Data Analytics & Data Warehouse

- Pub/Sub
- Cloud Storage

### Networking

- Hybrid Connectivity (Partner Interconnect)
- VPC
- Cloud DNS
- Network Intelligence Center

### Monitoring & Logging

- Cloud Logging
- Cloud Monitoring
- Cloud Audit Logs

### Infrastructure Automation

- Cloud Run Functions

### Identity Management

- Cloud Identity
- Cloud IAM

### Security

- Cloud Firewall
- Cloud Resource Manager
- Cloud Security Command Center

# Digitalization and advanced security for health data



## CHALLENGES

The University Hospital Schleswig-Holstein (UKSH) had an ambitious digitalization plan. They were seeking a powerful solution to support advanced use cases and meet the extreme demands of data protection, especially for health data. Their goals included improving the quality of care, reducing the workload on medical staff, and cutting costs.



## BENEFITS

The Sovereign Cloud solution ensures the highest level of data protection, which is crucial for handling sensitive patient information. Leveraging advanced technologies like AI for MRI evaluation and tumor detection improves diagnostic accuracy and patient care, while digitalization efforts streamline operations, reducing the workload on medical staff and cutting overall healthcare costs.



## GOOGLE CLOUD SOLUTIONS

- Compute Engine
- Google Kubernetes Engine
- Cloud Storage
- Cloud SQL for PostgreSQL
- Cloud VPN
- Cloud Partner Interconnect
- Artifact Registry
- Cloud Build
- Vertex AI
- Document AI
- Gemini API

# Data strategy modernization



## CHALLENGES

Modernizing the customer's data strategy involved developing a new data platform that served as a central source of truth. The goal was to establish a unified data platform with integrated data governance, defining the entire architecture. This included integration with the corporate network and compliance frameworks, as well as onboarding various value streams and application teams.



## BENEFITS

The Unified Data Platform centralizes data as a single source of truth, simplifying governance and integration with corporate networks. Enhanced scalability is achieved by using Google Cloud to decouple dependencies, boosting scalability and fostering innovation. Additionally, it facilitates quick onboarding and easy integration, enabling swift utilization of ML and GenAI capabilities.



## GOOGLE CLOUD SOLUTIONS

### Compute & Network

- Google Compute Engine
- Google Kubernetes Engine
- Cloud Run
- Cloud Run Functions
- Pub/Sub

### Security

- Cloud IAM
- Secret Manager
- VPC Service Controls

### Data Analytics & Data Warehouse

- BigQuery
- DataProc
- Dataflow
- Data Catalog
- BigTable
- Vertex AI

### Database & Storage

- Cloud SQL
- Cloud Spanner
- Cloud Storage
- Fliestore

### Orchestration

- Cloud Build
- Eventarc
- Artifact Registry
- Cloud Composer
- Cloud Scheduler

# Accelerated cost optimization using Google Cloud best practices



## CHALLENGES

How to supercharge the Google Cloud environment and cut costs with immediate effect? T-Systems needed to analyze over a hundred service metrics of a variety of running Google Cloud projects and their service dependencies to identify multiple cost-saving approaches.



## BENEFITS

By optimizing the Google Cloud environment, including enhanced monitoring and the removal of non-essential services, more than 25% cost savings per month can be achieved. Implementing best practices for cost-saving on Google Cloud, such as enabling committed use discounts for GKE and Cloud SQL, along with thorough requirements analysis and rightsizing, further contributes to these savings.



## GOOGLE CLOUD SOLUTIONS

- Resource Manager
- IAM
- Cloud SQL
- GKE
- Cloud Logging
- Cloud Monitoring
- Container Registry
- Compute Engine
- Cloud Storage



# Individual Landing Zone



## CHALLENGES

To meet the different demands coming up from various geographies of the customer's units, including the customer's group-wide compliance and governance policies, a fully automated solution was required. This solution also needed to guarantee the provisioning of all shared and global services.



## BENEFITS

T-Systems' Google Cloud experts build a fully automated Landing Zone in an agile manner while respecting all professional as well as cultural aspects. The new solution consist of a secure environment including an established Partner interconnect and general network design, encryption management, a designed IAM and organizational structure, monitoring and logging and guidelines for privacy and data protection allow the customer to start security assessments.



## GOOGLE CLOUD SOLUTIONS

### Compute

- Compute Engine

### Data Analytics & Data

#### Warehouse

- Pub/Sub
- BigQuery

### Monitoring & Logging

- Cloud Logging
- Cloud Monitoring

### Identity Management

- Cloud Identity
- GCDS
- Cloud IAM

### Networking

- Partner Interconnects
- Cloud Router
- VPC
- Cloud NAT
- Cloud DNS

### Infrastructure

#### Automation

- Cloud Build
- Cloud Run
- Cloud Run Functions
- Source Repository
- Cloud Firestone

### Security

- Cloud KMS
- Secret Manager
- Cloud Resource Manager

# Security with automation-first



## CHALLENGES

The customer faced the challenge to secure all systems and services running on Google Cloud. For monitoring and to prevent vulnerabilities, internal and external resources needed to be verified continuously.



## BENEFITS

With the T-Systems solution, new resources are automatically identified and labeled with the correct asset information to the security scanner. The sources of errors are reduced, and the solution can be extended with further features on demand.



## GOOGLE CLOUD SOLUTIONS

- Cloud Scheduler
- Cloud Build
- Cloud Source Repositories
- Secret Manager

# Infrastructure modernization with cost optimization



## CHALLENGES

A new customized solution, adapted to the new requirements of the market, needed to replace the old monolith infrastructure for a streaming platform. This took a lot of efforts to maintain, including an on-premises hosted content management system. The transformed solution need to keep operating costs as efficient as possible.



## BENEFITS

The new solution, based on event-driven cloud native API-first structure using Google technologies, brings in scalability and reduces running cost and operating time through automated processes. The customer's platform now becomes a competitive one with increased reliability and improved usability.



## GOOGLE CLOUD SOLUTIONS

- Cloud Engine
- Kubernetes Engine
- Cloud Filestore
- Cloud SQL
- Cloud Storage
- Firebase
- Stackdriver