



## CASE STUDY

# UNMASKING PAYROLL FRAUD IN A GLOBAL WORKPLACE

A global pharmaceutical retailer uncovered and eliminated payroll fraud across a workforce of over 300,000 employees using KPI DataBridge Suite and Pay Fraud Analytics. The result: a 1,000% projected ROI in the first year, rapid cost recovery within weeks, and a scalable, secure fraud detection framework that freed HR teams from time-consuming manual analysis.

This case proves that modern analytics can turn payroll fraud detection from a reactive chore into a strategic advantage.

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# Case Study: Unmasking Payroll Fraud in a Global Workforce

A leading pharmaceutical retailer was grappling with suspected payroll fraud among its large employee base. Leveraging **KPI DataBridge Suite**, the organization uncovered ghosting patterns, delivering a projected 1,000% ROI in year one.

Faced with growing concerns of payroll fraud, this Fortune 500 pharmaceutical retailer partnered with KPI Partners to modernize their fraud detection practices. The organization needed to replace inefficient manual investigations with a scalable, secure, and automated system capable of integrating disparate HR and access data sources.

The deployment of Pay Fraud Analytics via the KPI DataBridge Suite enabled the company to transition from fragmented, error-prone workflows to real-time, actionable insights — resulting in rapid ROI and operational transparency.

## Business Drivers

**Fraudulent Pay Practices:** Ghost employees were suspected of drawing salaries without proof of presence or access.

**Inefficient Manual Processes:** More than 40 hours per month were spent on inconclusive, manual investigations.

**Siloed Systems:** HR records, badge logs, system access data, and timesheets were fragmented across multiple platforms.

**Compliance & Security Pressure:** Strict governance requirements necessitated secure handling of sensitive employee data.

## At A Glance

**Client:** Leading Pharmaceutical Retailer  
**Industry:** Pharmaceutical & Healthcare  
**Location:** United States  
**Revenue:** Multi-billion USD

## Results

**ROI**  
**1000%**

Detected ghosting fraud patterns provided financial recoveries exceeding the implementation investment tenfold in year one.

**Payback Period**  
**1 mo.**

Rapid identification of fraud resulted in immediate financial savings, covering project costs within weeks.

**Monitoring**  
**100K+**

Scalable architecture allowed comprehensive analysis across all employee records without sacrificing performance.

**Resources Added**  
**Zero**

Business users accessed clear, automated fraud insights without additional technical training or specialized resources.

**Manual Analysis**  
**90%**

A 90% reduction in manual analysis hours freed HR and compliance teams from repetitive data processing, allowing them to focus on higher-value activities.

**Encryption**  
**-----**

All sensitive employee data was encrypted in transit and at rest, maintaining compliance and data trust.



## Solution

KPI Partners implemented Pay Fraud Analytics on **Google BigQuery** and **Google Composer**, enabling secure, cloud-based integration of HR, timesheet, badge access, and login data. The accelerator used advanced identity matching and behavior modeling to identify ghosting patterns.

- Automated ingestion and correlation of cross-system identity data
- End-to-end encryption in transit and at rest
- Cloud-agnostic framework, compatible with Google Cloud Platform (GCP), Amazon Web Services (AWS), and Microsoft Azure
- Auto-generated fraud alerts and reports for business users
- Completed implementation in 5 months

## Technology

- Google BigQuery
- Google Composer
- Spark
- KPI DataBridge Suite
- GCP
- AWS
- Azure
- Tableau

## Next Steps

Following the success of this initiative, the client is exploring additional use cases for workforce analytics and fraud detection. Pay Fraud Analytics is now being evaluated for expanded deployment across other operational risk areas, including vendor fraud, overtime abuse, and compliance monitoring.

***“This solution didn’t just catch fraud — it changed the way we think about operational risk and workforce accountability.”***

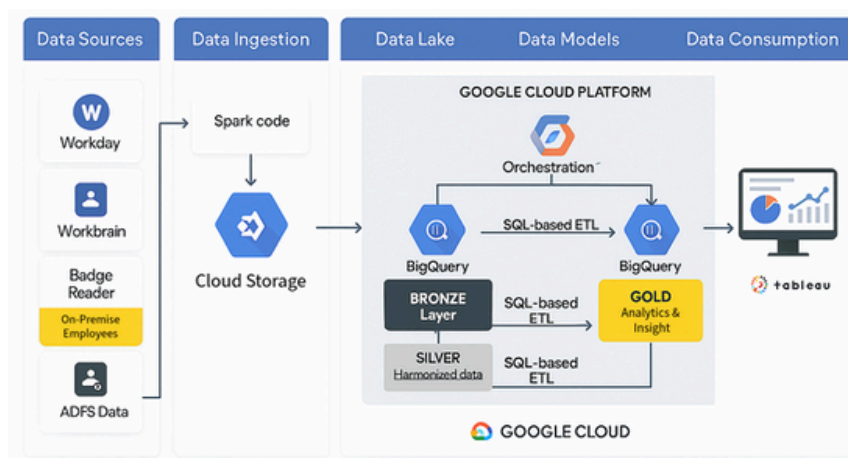
— Senior HR Compliance Leader

## Key Outcomes

- The organization transitioned from reactive fraud detection to a proactive, sustainable model.
- Business leaders gained immediate, trusted insight into anomalies without burdening IT or requiring deep analytics skills.
- Trust was restored across departments through unified, transparent reporting.

## Why KPI?

- **Analytics & Insight Accelerator**, part of the KPI DataBridge Suite
- Proven expertise in workforce analytics and fraud detection
- Flexibility to deliver cloud-agnostic solutions across AWS, Azure, and GCP
- Deep understanding of compliance-sensitive architectures in healthcare



## About KPI Partners

KPI Partners is a global strategic partner for Analytics and Digital Transformation solutions, delivering advanced capabilities in Data Science, GenAI, AI/ML, Cloud Databases, Data Engineering, Analytics & Visualization, and DevOps/DevSecOps/MLOps.

Founded in 2006 and headquartered in Newark, California, KPI Partners supports a wide range of clients, including several Fortune 500 companies across industries such as high-tech, retail, CPG, financial services, insurance, manufacturing, and life sciences. Recognized by Gartner, the company has completed over 1000 successful projects for more than 300 clients.

With a global team of 600+ consultants located across North America, Latin America, and India, KPI Partners offers deep industry expertise and broad delivery capabilities. Offices are located in Silicon Valley (HQ), Boston, New York, Atlanta, Los Angeles, Guadalajara (Mexico), Bangalore, Hyderabad, and Pune.

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