



CASE STUDIES

**Driving Business Impact:
Real-World Applications
of Real-Time Data & AI**

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Introduction

Driving Business Impact: Real-World Applications of Real-Time Data & AI

Businesses across industries are leveraging real-time data and AI to drive innovation, enhance efficiency, and deliver superior customer experiences. This ebook showcases how companies like UPS, Macy's, Kramp, and Discovery Health have harnessed the power of Striim's real-time data integration platform to overcome their unique challenges and achieve remarkable results in AI, data, and beyond.

Through in-depth case studies, we delve into how these organizations transformed their operations – ranging from securing package deliveries

with AI and streamlining inventory to accelerating Machine Learning (ML) analytics and improving patient outcomes by reducing latency. Each chapter highlights the challenges faced, the solutions implemented, and the tangible business value achieved through real-time data and advanced AI capabilities. Whether you're looking to optimize logistics, enhance customer engagement, or scale your digital transformation efforts, these real-world examples will offer valuable insights into how modern data strategies can propel your business forward.





CHAPTER 1

AI-Secured Package Delivery Reduces Losses

In this first chapter, we will explore how UPS tackled the challenge of rising package theft by integrating Striim's real-time data streaming with Google BigQuery's advanced analytics. This solution enabled UPS to enhance delivery security, optimize logistics, and improve customer trust, all while reducing costs through real-time data insights and AI-driven risk management.



AI-Secured Package Delivery Reduces Losses



The Challenge

The surge in package theft due to increased online shopping outpaced traditional security measures, exposing significant operational vulnerabilities. The vast amount of data from rising package deliveries overwhelmed existing systems, underscoring an urgent need for advanced data management. Additionally, the lack of real-time data processing hindered UPS Capital's risk management and rapid response capabilities, affecting operational efficiency, consumer trust, and financial performance. This emphasized the critical need for a sophisticated solution to address the complexities of modern package delivery and logistics.

“At UPS, we’re reshaping the shipping landscape by prioritizing lower premiums and improved convenience for our customers. Opting for high-confidence shipping addresses not only slashes costs but also assures customers of dependable and secure deliveries, empowering them to shop online with confidence and ease. Striim and Google Cloud have jointly enabled us to enhance the customer experience with AI and ML.”

Pinaki Mitra
Vice President, Data Science
& Machine Learning at UPS Capital

UPS at a glance

Headquarters

Atlanta, GA, USA

Industry

Financial Services, Logistics

Parent Company

UPS (United Parcel Service)

Global Reach

Operates in over 40 countries

Continents

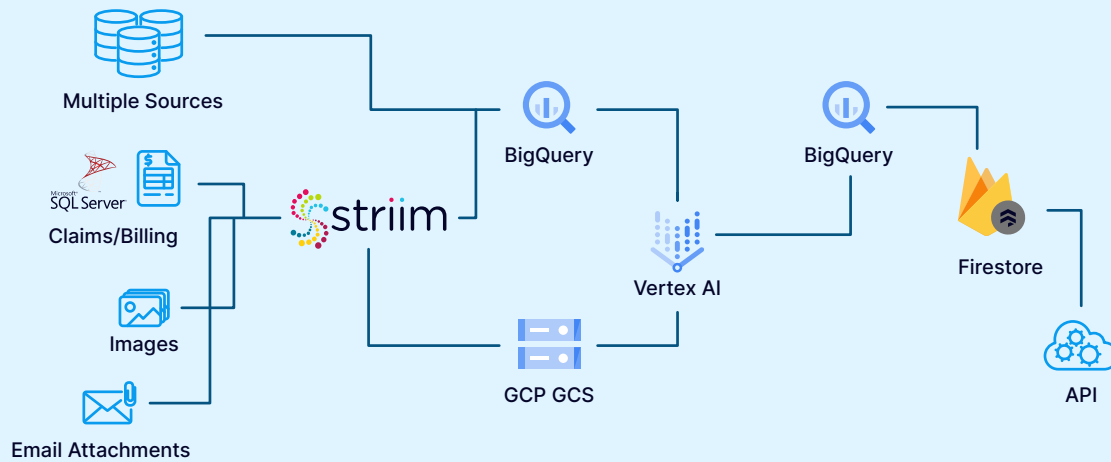
5 (North America, South America, Europe, Asia, and Australia)

Use Cases:

- Risk Management
- Real-time Data Integration
- Proactive Fraud Prevention
- Enhanced Customer Experience through Predictive Analytics



UPS Capital DeliveryDefense™ and Claims Investigation



The Solution

In response, UPS Capital integrated Striim’s real-time data streaming technology with Google BigQuery’s analytics capabilities to enhance delivery security. Striim’s platform enabled the immediate ingestion and integration of data from various sources, facilitating real-time risk assessments and proactive decision-making. This seamless data flow into Google BigQuery allowed for advanced analytics, leveraging AI and machine learning to predict potential delivery risks and optimize logistics strategies effectively.

Additionally, the innovative DeliveryDefense™ Address Confidence system utilized this integrated data to assign confidence scores to each

delivery location based on real-time and historical data, enhancing predictive accuracy. This system empowered businesses to proactively manage delivery risks by rerouting packages or adjusting delivery protocols based on the calculated confidence scores, thereby streamlining operations and enhancing security.

The Results

Improved Customer Experience: The integration of Striim not only secures deliveries but also optimizes routing and delivery strategies, resulting in heightened reliability. This reliability, in turn, boosts customer trust and satisfaction, as customers receive their packages safely and on time.



Cost-Savings: UPS achieved significant cost reductions by implementing advanced strategies to minimize losses from theft and optimize delivery routes, employing proactive risk management alongside sophisticated analytics and route optimization algorithms.

Advanced AI and ML Implementations:

Utilizing Striim in conjunction with Google Cloud technologies like BigQuery and Vertex AI, UPS can deploy complex machine learning models. These models are crucial for detecting routing anomalies and preventing shipping fraud, thereby enhancing the security and efficiency of the delivery network.

Improved Data Processing and Analytical Accuracy:

Striim's implementation of AI-driven innovations, such as embedding vectors into streaming data, markedly improves the efficiency and accuracy of data processing. This technology allows UPS to perform real-time analytics, yielding quicker and more accurate decision-making in logistics.

Upgraded Protection Against Evolving Threats:

Striim enables UPS to continuously adapt and enhance its defense models through ongoing analysis of real-time data and dynamic vector generation. This approach significantly strengthens UPS's capabilities to mitigate evolving threats such as package theft and delivery fraud.

UPS Capital Reaps Operational Rewards



280K+
Claims
paid annually



\$236B
Declared
value



690K
Shippers
protected





CHAPTER 2

Macy's: Streamlining Inventory for Seamless Shopping Experiences

Next, we explore how Macy's, a retail giant, overcame the challenges of maintaining a single source of truth across multiple databases, reducing high mainframe costs, and addressing inconsistent customer experiences between online and in-store channels. Discover how their migration to a modern cloud infrastructure enhanced both efficiency and profitability.



Streamlining Inventory for Seamless Shopping Experiences

The Challenge

As consumer expectations and market dynamics rapidly changed, Macy's faced several critical challenges that highlighted the need for platform modernization:

- Data Inconsistencies Across Databases:** Macy's operated with various databases, including DB2 on the mainframe and Oracle. This fragmented data environment led to inconsistencies and a lack of a unified data view, impacting decision-making and operational efficiency.
- High Maintenance and Licensing Costs:** The legacy mainframe systems were not only expensive to maintain but also required substantial licensing fees. These costs were eating into Macy's profitability, necessitating a move towards more cost-effective solutions.
- Speed to Market:** The dispersion of data across multiple systems hindered Macy's ability to develop and deploy applications swiftly. The time-consuming data consolidation processes delayed new initiatives, impacting Macy's agility in responding to market trends.



Macy's at a glance

Headquarters

New York, NY, USA

Industry

Retail

Parent Company

M (NYSE)

Global Reach

Operates in the United States with e-commerce available globally

Continents

1 (North America) with online reach extending globally

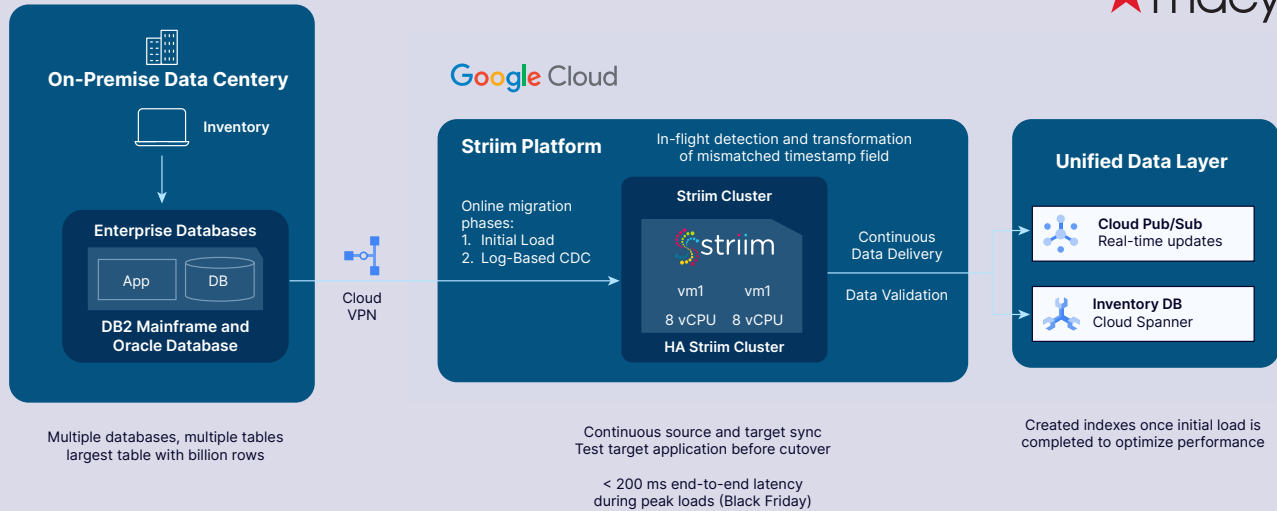
Use Cases:

- Real-time Inventory Management
- Unified Data Integration
- Enhanced Customer Experience
- Data-Driven Decision-Making
- Predictive Analytics



Macy's Streams Data from On-Premises Databases to the Cloud to Provide a Unified Customer Experience

7500 transactions/s at peak loads



- Inconsistent Customer Experiences:** Discrepancies in inventory data between online and in-store channels resulted in inconsistent customer experiences. Out-of-stock situations and inventory surpluses were common, especially during peak shopping periods, frustrating customers and affecting sales.
- Complexity in Migrating Legacy Systems:** The inability to sunset existing legacy systems added to the complexity of Macy's operations. Transitioning to a modern cloud infrastructure was crucial to reduce dependency on outdated technologies and streamline processes.

The Solution

Striim's comprehensive solution facilitated Macy's migration to a modern, cloud-based infrastructure by leveraging Google Cloud Platform (GCP) services such as Cloud Spanner, Pub/Sub, and BigQuery. By replicating data from mainframe and Oracle databases to GCP, Striim created a unified data source, eliminating inconsistencies and providing a reliable foundation for decision-making and analytics. Real-time data synchronization ensured consistent customer experiences across online and in-store channels, preventing out-of-stock scenarios and enabling efficient inventory management. Striim's architecture, featuring multiple

Virtual Machines (VMs), ensured high availability and minimized downtime, enhancing disaster recovery capabilities. Additionally, the flexibility of Google Cloud allowed Macy's to scale operations seamlessly during peak shopping periods like Black Friday and Cyber Monday, ensuring optimal performance and an exceptional user experience. By migrating data from costly mainframe systems to Google Cloud, Macy's significantly reduced maintenance and licensing expenses, leading to substantial cost savings and improved profitability.

“Striim helped us modernize our platforms and achieve real-time visibility, syncing our inventory data to prevent out-of-stock or surplus situations during peak holidays like Black Friday and Cyber Monday.”

Neel Chinta
IT Manager, Macy's

The Results

The collaboration between Macy's and Striim yielded remarkable results, underscoring the effectiveness of Striim's real-time data integration platform:

Improved Operational Efficiency:

Real-time data integration streamlined inventory and order management processes. This reduced the time and effort required for these tasks, allowing Macy's to focus more on strategic initiatives and business growth.

Significant Cost Savings: The transition to Google Cloud resulted in substantial cost reductions in maintenance and licensing fees. Macy's decreased dependence on expensive legacy systems, freeing up resources for other critical investments.

Seamless Customer Experience:

Consistent and real-time data flow across all channels ensured that customers enjoyed a uniform experience. This consistency prevented out-of-stock situations and managed inventory effectively, particularly during high-demand periods.

Faster Time to Market: With a unified data source in the cloud, Macy's accelerated application development and deployment. This agility enabled the company to quickly respond to market changes and customer needs, providing a competitive edge.

Support for Digital Transformation:

The successful implementation of real-time data pipelines and cloud migration supported Macy's broader digital transformation goals. This positioned Macy's to better compete in the rapidly evolving retail landscape, leveraging cutting-edge technology to enhance operations and customer engagement.

"Striim gives us a reliable single source of truth across domains and speeds our time to market delivering a cohesive experience across different systems. Striim's real-time platform scales to handle peak holiday workloads: streamlining our operations and maximizing online sales."

Neel Chinta
IT Manager, Macy's





CHAPTER 3

Kramp: Transforming Operations with Real-Time ML Analytics

In Chapter 3, we shift our focus to Kramp, a leader in agricultural supply. Discover how Kramp transitioned from a traditional, batch-load data warehousing model to a cloud-based infrastructure on Google Cloud, enabling near real-time analytics and enhancing their e-business platform.



Transforming Operations with Real-Time ML Analytics

Kramp, a stalwart in the distribution of agricultural spare parts and accessories across Europe, embarked on a transformative journey five years ago with a bold vision to overhaul its data management system. Since then Kramp has made significant strides in integrating advanced technology solutions to enhance their operational efficiencies and customer service.

The Challenge

Kramp began a significant transformation of its data management systems with a goal to shift their existing data warehouse to a cloud-based infrastructure on the GCP. This move aimed to boost decision-making and operational efficiency through the adoption of near real-time analytics. The transition involved moving from a traditional, batch-load dependent data warehousing approach to a more dynamic, cloud-based infrastructure, which encompassed their e-business platform and analytics powered by BigQuery. During this process, Kramp encountered challenges with their legacy data migration solution, particularly around product maturity and the high maintenance required, which compromised data quality. This prompted Kramp to seek out more reliable alternatives to meet their needs.



Kramp at a glance

Headquarters

Varsseveld, Netherlands

Industry

Agricultural Supply & Distribution

Global Reach

Operates in 24 countries across Europe

Continents

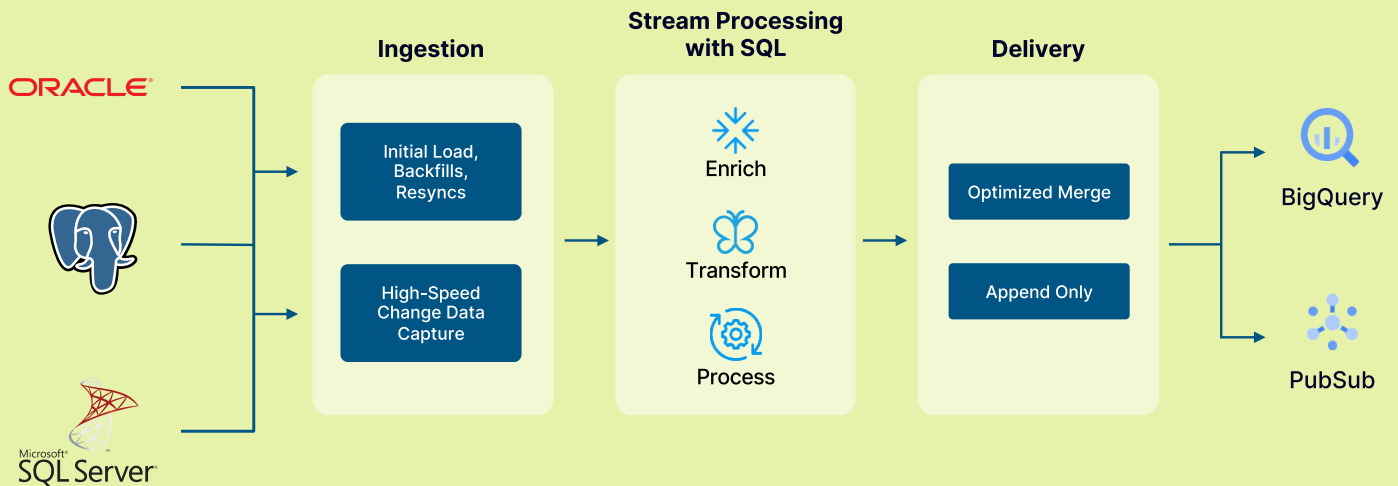
1 (Europe)

Use Cases:

- Real-time Data Integration
- Predictive Analytics for Order Management
- Machine Learning for Inventory Forecasting
- Improved Customer Communication and Transparency



Kramp Solution Architecture



The Solution

Kramp has chosen Striim for its powerful and mature real-time data integration capabilities, seamlessly linking various databases such as Oracle, Microsoft SQL Server, and PostgreSQL. This integration ensures continuous, high-quality data replication that is critical for analytics and enables access to a wide range of data for machine learning applications. Striim's platform provided a developer-friendly environment and stability across Kramp's data operations. It strengthened business operations, empowering sophisticated machine learning projects and immediate data analysis. The comprehensive support and extensive documentation from Striim further enabled Kramp to scale and maintain its systems with minimal overhead.

"We've been with Striim for three years now and are extremely pleased with the support they provide. Our architecture has evolved significantly during this time. Initially, we started with just one on-premise server with four cores. As our needs grew, we encountered capacity constraints, prompting us to invest in additional cores. About a year ago, we migrated from a single node to a two-node cluster. Through this growth, Striim has remained reliable and scalable."

Sergey Korolev
IT Solution Developer at Kramp



The Results

Boosted customer satisfaction:

Instant order status updates increased transparency and significantly reduced customer service interactions.

Accelerated order processing and cost-savings: Automation of order updates optimized workflows with minimal latency and a decrease in customer inquiries led to lower operational costs and heightened efficiency.

Elevated business performance: Access to fresh data improved KPIs like order processing and stock management for superior business outcomes.

Built trust and reliability: Stable and precise data integration enhanced trust with flawless data transfer accuracy.

“One of the most notable benefits we’ve experienced since integrating Striim into our operations has been the significant enhancement in how we communicate with our customers. The real-time updates on order status have not only improved transparency but also helped to reduce the number of customer service calls. This change has streamlined our operations, allowing us to allocate resources more efficiently and improve overall customer satisfaction.”

*Oliver Meisch
Manager Business
Intelligence at Kramp*





CHAPTER 4

Discovery Health: Cutting Data Latency to Seconds Improves Patient Outcomes

Our final case study centers on Discovery Health, a South African-born company that now serves over 40 million customers across 40 global markets. Facing challenges with data integration across diverse systems, Discovery Health leveraged Strim's Change Data Capture (CDC) technology to reduce data processing delays from 24 hours to seconds, enabling real-time decision-making that enhanced operational efficiency and improved health outcomes worldwide.



Cutting Data Latency to Seconds Improves Patient Outcomes

Since its inception in 1992, Discovery Health has remained steadfast in its core purpose: “to make people healthier and to enhance and protect their lives.” As a multifaceted financial services organization, it operates in various sectors including healthcare, life insurance, short-term insurance, long-term savings, banking, and wellness. Through its diversified portfolio, Discovery Health aims to provide comprehensive support and services to individuals and communities worldwide, fostering a culture of health and well-being.

The Challenge

The primary obstacle for Discovery Health was the sheer scale of data across disparate systems and technologies. This complexity led to significant delays in data processing, impacting their ability to make timely decisions and adversely affecting the customer experience. The integration of these various data sources was cumbersome, with daily ETL (Extract, Transform, Load) processes that delayed actionable insights for up to 24 hours. Such delays were untenable in a field where real-time data could mean the difference in enhancing health outcomes and operational efficiency.



Discovery Health at a glance

Headquarters

Sandton, South Africa

Industry

Healthcare and Financial Services

Global Reach

Operates in over 40 markets worldwide

Continents

4 (Africa, Asia, Europe, and North America)

Use Cases:

- Real-time Data Processing
- Predictive Analytics for Health Management
- Customer Engagement through Personalized Health Insights
- AI-Driven Risk Assessment and Decision Support



The Solution

In response to these challenges, Striim stepped in with its cutting-edge CDC technology, which revolutionized the way Discovery Health approached data integration. Transitioning from daily ETL processes, Striim's CDC technology facilitated seamless integration of disparate systems, reducing data processing delays from 24 hours to seconds. Endorsed by Oracle, Striim provided reliability and scalability while leveraging expertise in logical database replication. Through continuous improvement and optimization, Discovery Health streamlined its data infrastructure, empowering informed decision-making and enhancing customer experiences globally.

“We have a significant software portfolio and the ability to tie that into modern ML use cases where we need to do that is important for us. We are a highly data-driven organization and the ability to tie in predictive models or propensity models is really critical to our strategy. The objective with Striim and CDC usage was to simplify pipelines and minimize latency for real-time decision support.”

Nick Alexander
Senior System Architect at Discovery Health

The Results

Reduction in data processing delays from 24 hours to seconds:

Real-time decision-making allowed prompt responses to evolving market dynamics, such as changes in customer behavior or healthcare trends.

Enhanced operational efficiency and cost-savings: Real-time data processing capabilities streamlined workflows and minimized manual interventions, resulting in significant operational cost savings.

Personalized customer engagement: Predictive analytics helped incentivize healthier choices among members, leading to deeper engagement and loyalty.

Improved health outcomes: Real-time intelligence analyzed data to promote healthier lifestyles among members, encouraging active participation in wellness activities and ultimately increasing life expectancy and enhancing overall well-being.



Conclusion

As these case studies illustrate, the integration of real-time data and AI is no longer just a competitive advantage – it's a necessity for businesses aiming to thrive in today's dynamic markets.

From logistics to retail, agriculture, and healthcare, the ability to access, process, and act on data in real-time has redefined how organizations make decisions, engage with customers, and streamline operations.

UPS leveraged real-time insights to combat package theft, reducing losses and building stronger customer trust. Macy's overcame the complexities of legacy systems to deliver a seamless shopping experience, cutting costs and improving agility. Kramp's shift to real-time analytics empowered them to automate processes, improve customer satisfaction, and scale operations

efficiently. Discovery Health's journey from daily ETL processes to seconds-fast data processing showcased how real-time insights can drive better health outcomes and boost engagement.

Across all these examples, Striim's advanced data integration and real-time data and AI capabilities played a pivotal role, providing the backbone for reliable, scalable, and high-performance data pipelines. This eBook demonstrates the profound impact that real-time data and AI can have on transforming business operations, elevating customer experiences, and fostering long-term growth. As businesses continue to evolve, those that embrace real-time intelligence will be best positioned to navigate challenges and seize opportunities in an increasingly data-driven world.





About Striim

Striim provides the industry's leading real-time data streaming and integration engine, backed by a world-class executive team that previously built GoldenGate software—once the #1 change data capture tool, now Oracle GoldenGate. Our platform pioneers real-time data unification across clouds, applications, and databases, offering a fully managed SaaS solution optimized for the power and scalability of modern cloud data warehouses. With Striim, businesses can instantly transform relational and unstructured data into AI-ready vectors and insights, empowering swift, informed decision-making through advanced analytics and ML frameworks. Leveraging our expertise in real-time data integration, streaming analytics, and database replication, including industry-leading Oracle CDC technology, we ensure sub-second latency in processing over 100 billion daily events for ML analytics and proactive decision-making. Our customers, including industry leaders like American Airlines, Ford, UPS, and Macy's, benefit from strategic partnerships with major providers that enhance and support our product within their ecosystems.

Sign up for a demo to see how we can supercharge your cloud data.

Contact us at:

Tel: +1 650 241 0680

Web: www.striim.com