

Customer Case Study: Volt Active Data Powers Mahindra Comviva's Real-Time Telecom marketing platform: MobiLytx™

Overview

Mahindra Comviva, a global leader in telecom solutions, leverages Volt Active Data as the core data platform for its Mobilytx suite redefining real-time customer engagement for telecom operators. Volt's ultra-fast, stateful data processing enables Comviva to provide sub-millisecond decisioning and hyper-personalized experiences, delivering measurable business value to its clients. The outcome is enhanced digital agility, substantial revenue growth, and stronger customer loyalty across national networks

Business Challenge: High Concurrency Real-Time Engagement

The telecommunications and martech landscapes are undergoing rapid transformation, fueled by continuous innovation and evolving consumer demands. In this highly competitive environment, businesses face critical challenges.:

- **Billions of Daily Transactions:** Managing and processing over 1.5 billion daily events for more than 95 million subscribers demonstrates the immense scale required for real-time operations.
- **Micro-Moment Engagement:** Modern customers expect highly relevant and timely interactions. Whether it's a critical service notification during a data session or a personalized offer during a recharge, messages must be delivered within the crucial "ear-to-pocket" window, when customers are most attentive and receptive to action.
- **Data Complexity:** Effective personalization necessitates a deep understanding of each user's most recent behaviors, preferences, and real-time channel activity. Achieving this level of individualized engagement requires continuous, up-to-the-moment state management across vast and rapidly changing data streams.
- **Churn and Commoditization:** Without digital differentiation and real-time, contextual experiences, operators risk becoming interchangeable—driving high churn and eroding loyalty, especially among prepaid users.

Key Challenges Included:



Real-time Processing Demands:

Handling massive real-time concurrency and parallel processing.



System Integration Complexity:

Seamlessly integrating various legacy systems, network events, applications, and numerous digital touchpoints.



ACID Compliance and Offer Accuracy:

Ensuring ACID-compliant (accurate) processing to guarantee offer accuracy, campaign attribution, and customer trust without negatively impacting customer experience through excessive offers.



High Availability and Business Continuity:

Maintaining high availability and business continuity, crucial for meeting national-scale SLA expectations, as telecom services are expected to be continuously available.



Deployment Flexibility: Telcos demand solutions that deploy seamlessly across on-prem, cloud, and private cloud environments. They expect Kubernetes-ready architectures with automated, low-complexity management that ensure portability and scalability.

Solution: Mobilytix Platform Powered by Volt Active Data

Comviva's Mobilytix suite, built on Volt Active Data's fast data engine, delivers a next-generation platform for Customer Value Management (CVM) and marketing orchestration:

- **End-to-End Real-Time Data Flow:** Mobilytix ingests, processes, and acts on every network and customer event—usage, recharge, payments—using Volt's stateful in-memory speed layer.
- **Stateful Decisioning & Hyper-Personalization:** Volt enables Mobilytix to keep an always-current “digital twin” for each customer, empowering real-time segmentation, scoring, and offer orchestration by powering Comviva's Behavioural-DNA (BDNA™) engine that constitutes about 1600+ features and reflects the latest possible state for each customer, enabling use cases like micro-moment offer targeting.
- **Omni-Channel Orchestration:** Personalized triggers and actions are pushed instantly across SMS, USSD, app, and web channels—ensuring the right message, through the right channel, at the right moment.
- **Machine Learning Integration:** ML models, batch-trained on historical data, are deployed in-memory for instant personalization and “next best action” decisions as customer context shifts.
- **Scalable, Resilient Architecture:** Volt provides elastic scaling, synchronous replication, and seamless failover to guarantee always-on engagement, even under intense campaign loads or data center disasters.

Why Volt Active Data?

1 ACID Compliance for Offer and Loyalty Integrity

- Every marketing action—reward, top-up, campaign trigger—is processed with full transactional safety, delivering trust, consistency and operational resilience at scale. No double-offers, lost events, or state conflicts, even during network surges.
- Unlike eventually consistent or NoSQL platforms, Volt delivers strict per-event isolation and immediate context updates—critical for campaign fairness, and customer trust.

2 Real-Time & High-Scale Processing

- Proven in large scale deployments processing 1.5B+ daily events and supporting hundreds of millions of subscribers—delivering ultra-low latency and always-on reliability for real-time, mission-critical telecom operations.
- Volt clusters scale horizontally, with distributed in-memory architecture to handle nationwide digital touchpoints, while bearing node failures or surges with no disruption, helping Comviva be compliant with SLA's even for large deployments with over 100 Million subscribers.

3 Stateful Stream + Transaction Processing in One

- Volt fuses real-time event ingestion, context-rich decisioning, and durable transactional storage in a single, unified engine—eliminating overhead and complexity of multi-layer/middleware bridging.

4 Advanced Availability and Automatic Failover

- Volt's cross-data-center replication and auto-failover ensure zero data loss, zero downtime, and business continuity—even in the event of hardware, node, or full data center outages.

Business Outcomes: Mahindra Comviva and One of Indonesia's largest Telco operators success

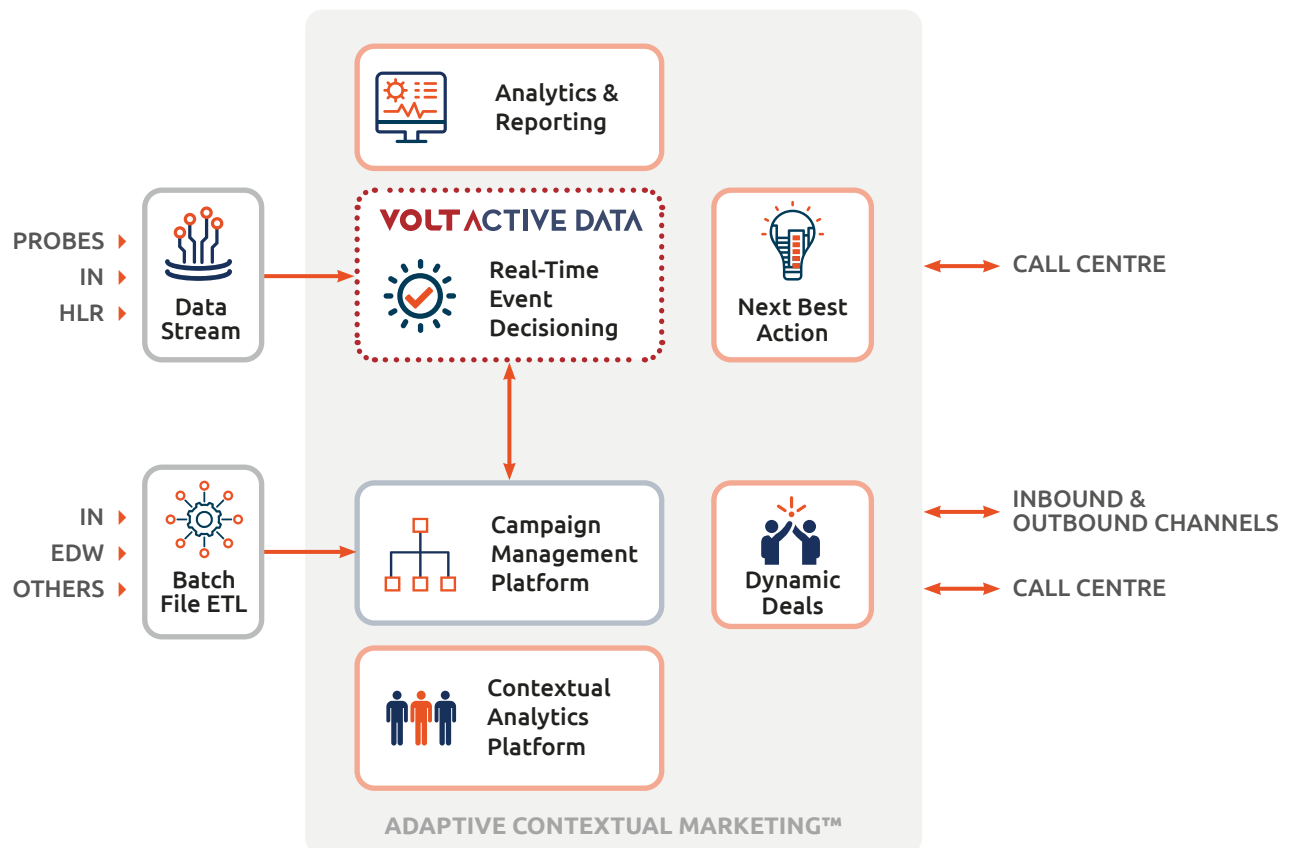
For Mahindra Comviva

- **Productization advantage:** Mobilytix, with Volt Active data, set a new industry benchmark for real-time martech, providing a market-proven differentiator across Comviva's global client base. As a result, Comviva could quickly expand its footprint, win new customers using this large scale deployment as a reference, and solidify its reputation as a leader in real-time customer engagement and customer value management solutions for the global telecom market.
- **Accelerated deployment and faster time-to-market:** Operator quickly integrated with legacy client systems thanks to modular, open APIs and robust transactional integrity. This reduced complexity and risk, enabling rapid launches of new engagement capabilities and delivering business value sooner.

A successful outcome for one of Comviva's Customers - One of the Largest Telco Operators in Indonesia

- **10X Revenue Increase on Campaigns:** achieved a tenfold uplift in targeted campaign revenue, with higher, sustainable monthly growth.
- **3.5X Digital Channel Revenue Growth:** New digitally-driven engagements rapidly increased revenue.
- **50% Reduction in High-Value Customer Churn:** Retention soared to record levels as loyalty actions became real-time and context-driven.
- **70%+ Rewards Adoption:** Massive uptick in loyalty program participation, with most points directly tied to paying actions.
- **Personalization at Population Scale:** 95M+ users now receive dynamic, tailored, real-time offers across multiple digital channels.

Technical Architecture: Key Components



LAYER	DESCRIPTION
Event Ingestion	Streams millions of events (usage, recharge, activity, payments) to Volt
Speed Layer (Volt)	Maintains customer state in memory, applies business & ML rules, executes offers
Personalization Engine	Decision engine computes and delivers omni-channel campaigns in <250ms
Integration APIs	Open, modular interfaces for legacy, digital, and network system connectivity
Historical Reporting	Events archived to relational/analytical stores for compliance & insight

Why Comviva Chose Volt Active Data

FEATURE/ADVANTAGE	VOLT ACTIVE DATA	LEGACY/NOSQL ALTERNATIVES
ACID Real-Time Processing	Yes	Often No
Stateful, In-Memory, Relational, SQL	Yes	Typically Stateless/ KV/ limited SQL support
Linear Scalability	Yes	Not Guaranteed
Real time ML inferencing	Yes (In-Stream)	Batch/External integrations
Always available with Auto Failover	Yes	Partial/None
Open Integration	Yes (APIs, supports Modular)	Rigid, Monolithic

Conclusion: Volt Active Data—The Powerhouse Behind Real-Time Martech

Volt Active Data powers Mahindra Comviva's Mobilityx platform serving as the "always-on engine" for telecom operators to meet real-time demands. It enables them to;

- **Seize Every Micro-moment:** Engage users with contextualized offers—when it matters most.
- **Act at National and Global Scale:** Serve hundreds of millions of users, billions of events, with uncompromising reliability.
- **Simplify Complexity:** Combine stream-processing, transactional integrity, and Real time ML decisioning—all in one platform.

For martech visionaries, telecoms, and digital customer leaders facing the next generation of engagement challenges, Volt Active Data delivers rapid, reliable, and future-proof value in an AI-first, always-consistent, real-time world.