

# Data-driven Innovation and Service Agility

#### THE KX ADVANTAGE

An analytics platform for ingesting, processing and analyzing streaming and historical data to improve operations and reduce costs though innovation and automation

#### **KEY FEATURES**

- Combining multiple data sources with historical data analytics at speed;
- One single, integrated platform for network and customer data analytics with an interactive development environment
- Analyzes network data 10s to 100s of times more quickly than alternatives for competitive advantage and lower TCO
- Scales to hundreds of millions of network elements, trillions of records, while maintaining performance
- Supports any state, event type, attribute, message, and frequency

Approaching big data as an enabler for innovation rather than a problem to solve is transforming the Telco world. It offers the ability to make decisions based on fact rather than intuition, to quantify rather than guess, to predict rather than react. That means issues like network capacity, performance and maintenance can be monitored accurately and responded to automatically, saving time, money and reputation.

KX helps make that happen. For example, by correlating data across the entire telecom ecosystem, including RAN. Open RAN, RIC and telemetry it can optimize network operations by modeling and evaluating "what-if" scenarios to assess the impact of configuration changes, service amendments, or evolving usage patterns. Other applications include:

- Improved RAN and Open RAN Performance
- Edge processing on MEC equipment
- Network Analytics for closed loop automation
- Optimized Service and Revenue Assurance

These insights are based on having a streaming analytics platform that provides full life-cycle data ingestion, analytics and visualization capabilities for processing events as they happen and, where necessary, blending them with historical data for context.

### Sample client success stories

- 40% average customer improvement in throughput on 4G
- 80% increase in throughput for targeted customers
- 97% reduction in hardware footprint by reducing an incumbent 80 node configuration to just two on KX

# FULL LIFE-CYCLE DATA INGESTION, PROCESSING, AND ANALYTICS

### DATA INGESTION AND INTEROPERABILITY

- Interoperability with multiple technologies, protocols and data formats for ease of integration
- Low footprint enables deployment across IoT, Mobile Edge Computing and private LTE networks.
- Native access to lower cost object storage
- Tiered storage and compression keeping all data on-line cost-effectively
- APIs for .NET, Java, C, C++, Python, R, ODBC, Matlab, and Excel

## DATA PROCESSING AND ANAYTICS

- Complex event processing engine for detecting anomalies, predictive analytics and machine learning
- Time-series optimised with relational data capability for context
- APIs for retrieving, aggregating, performing calculations on data
- Rich configurable visualizations
- AI/ML feature engineering, model training, real-time inferencing, model updating and tuning



# PERFORMANCE & SCALABILITY, AND DEVOPS

- · Horizontal scaling of nodes easily supporting TBs per day with no downtime
- Clustered nodes and sharded data feeds supports scaling ingestion and analytic performance
- Advanced query routing and load balancing while data is in the data stream and at rest
- Cloud-enabled with Docker/Kubernetes for deployment portability
- DevOps support for on-line changes (code, schema, API)
- On-line data migration across local storage, SAN, NAS and cloud to optimize performance and storage costs

### HIGH AVAIALBITY AND FAULT RESILIENCE

- Providing mission critical 24x7 operation with no downtime or data loss in servicing demanding query workloads
- High-availability, data replication, auto fail-over and fail-back, and synchronization for diverse deployments
- Advanced system and performance monitoring, query routing and load balancing