



it's about time

# Kx for Telco

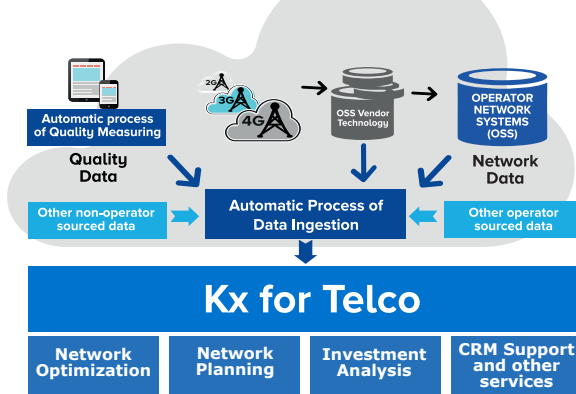
## Network Planning and Quality Services

As manufacturers continually improve the quality and capability of their handsets and devices, it becomes increasingly critical, and challenging, for communications service providers (CSPs) to provide supporting quality and capability in their networks. The Network Planning Services and Quality Services built on the Kx for Telco platform are designed to help CSPs with precisely these challenges by ingesting, storing and analyzing the vast amounts of data required to plan and respond to network conditions and make real-time decisions based on usage profiles.

Sample analytics include:

- Definition and detection of bad quality cells.
- Automatic diagnosis of cells based on quality modelling.
- Automated monitoring of standard operating profile to detect abnormal cell behaviour.
- Analysing network probe statistics to assess user quality.

## Multi-vendor, Multi-technology Mobile Access Network



- Performance Analytics
- Quality Driven Management
- Simulation and What-if Analytics
- Network Metrics
- Out of Range early warnings

Kx for Telco Network Planning and Quality Services take data from multiple sources and consolidate it into a high performance, in-memory kdb+ database that enables real-time analysis and decision making.

Centralized libraries perform real-time calculations on streaming and historical data to detect trends and patterns. Analytics can be performed at multiple aggregation levels from individual cells to the whole network. Dashboards provide easy access to results and support complex queries.

## Solution Benefits

**Ease of Use:** Easy to use pre-configured and customizable Dashboard views

**Low Cost:** Low footprint, commodity hardware, single stack solution

**Non-Intrusive:** No effect on existing network performance

**Flexible:** Can be deployed on premises or in the Cloud

## At a Glance



**Kx for Telco** is an integrated platform for ingesting, processing and analyzing massive amounts of real-time, streaming and historical data from networks, devices and other data sources to support network planning, service level management, fraud detection, billing and other services.

## The Kx Advantage

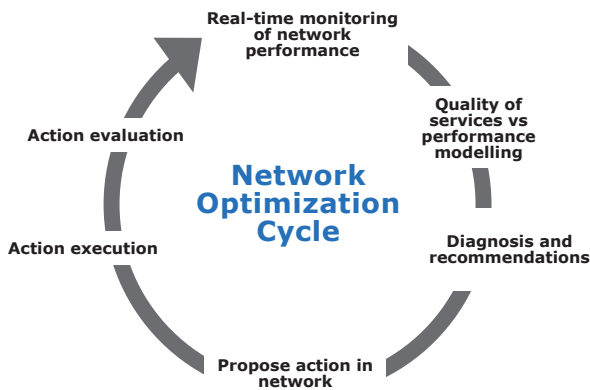
- One single, integrated platform for network and customer data analytics with an interactive development environment, not a collection of incompatible tools and loosely coupled projects
- Analyzes network data 10s to 100s of times more quickly than alternatives for competitive advantage and lower TCO
- Provides a customer service quality model for increased customer satisfaction and reduced customer churn
- Enables real-time state and performance information aggregation, propagation, complex event processing and alerting
- Ingests, validates, estimates, filters and cleanses streaming, real-time and batch data, using vector and parallelized algorithms
- Supports any state, event type, attribute, message, and frequency
- Scales to hundreds of millions of network elements, trillions of records, while maintaining performance
- Enterprise-grade reliability, redundancy, security, auditing, and compression

## Network Planning

Kx for Telco enables CSPs to proactively plan their network investment, develop build schedules, and introduce new technologies and services such as 5G and IoT by forecasting traffic loads and identifying quality targets based on the capture, storage, and analysis of streaming and historical data.

## Mobile Network Optimization

CSPs can analyze a wide range of cell tower metrics such as service traffic over time, session data, geolocation, cell configuration, interference, noise, and signal strength allowing mobile operators to make data-driven decisions to more efficiently manage their network. Analytics can be used to identify trouble spots and visualize various patterns in their network.



## Traffic Analysis

Includes powerful visualization and aggregation procedures in real-time that provide a unique and flexible view on all traffic components including data and voice in different access layers across all technologies. Traffic analysis can be performed at any aggregation level from individual cell to the whole network.

## About Kx

Kx has been the software leader for complex analytics on massive-scale streaming data for over two decades. The Kx technology is an established and trusted standard for trading, surveillance and research in financial services. Kx has emerged as the elegant, integrated solution to the analytic needs of the Pharma, Retail, Utilities and High Tech Manufacturing industries scaling effortlessly to the data challenges of the Internet of Things.

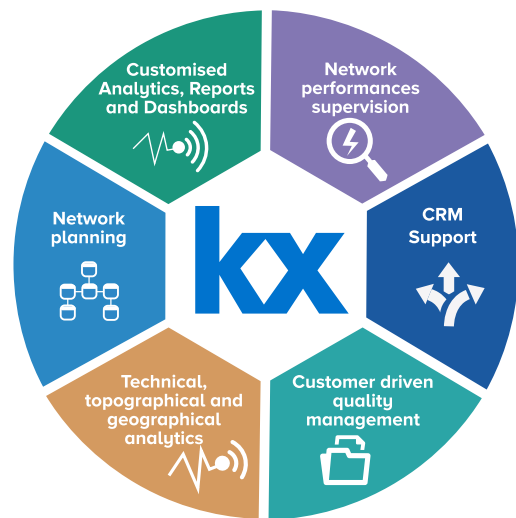
Kx is a division of First Derivatives plc. Listed on the London Stock Exchange [FDP:LN] First Derivatives is a specialist software and consulting organization with a uninterrupted track record of customer success and profitable growth since it was listed in 2002.

## Quality Services

Kx for Telco offers a novel approach to analyzing and quantifying the relationship between customer quality and network profile. Customer quality can be measured from proprietary quality probes in commercial smartphones or using measurements the operator may provide. The resulting modelling is then extended to provide a quality view across the entire network.

## Improving Customer Experience and Retention

Kx for Telco allows CSPs to build a model of customer quality for their network by consolidating and correlating data from a multitude of sources. Using the model, CSPs can evaluate customer satisfaction, reduce customer churn, improve service quality, and provide more attractive service offerings to increase customer loyalty and retention.



## For more information

Contact us at [sales@kx.com](mailto:sales@kx.com) or visit [www.kx.com](http://www.kx.com)

## Kx in Action

### Visualize and Explore Data

- Dashboards for Kx
- Analyst for Kx
- Control for Kx
- Streams for Kx

### Industry Solutions

- Finance
- Surveillance
- Algo
- Flow
- Pharma
- Utilities

### Head Office

3 Canal Quay,  
Newry,  
BT35 6BP  
N. Ireland  
+44 (0)283 025  
2242

### London

Cannon Green  
Building,  
1 Suffolk Lane,  
EC4R 0AY  
United Kingdom  
+44 (0)207 337  
1210

### Madrid

Avenida de la Industria, 32  
28108 Alcobendas  
Madrid, Spain  
+34 916624338

### New York

45 Broadway,  
NY 10006  
USA  
+1 (212) 447-6700

### Singapore

One Raffles Quay  
North Tower  
#30-03  
Singapore  
+65 6592 1960

### Sydney

22 Pitt Street,  
NSW 2000  
Australia  
+61 (02) 9236 700

### Toronto

31 Lakeshore Road  
East, Suite 201  
Mississauga, On,  
L5G 4V5  
Canada  
+1 289 329 0636

### Tokyo

Sanno Park Tower,  
2-11-1 Nagata-cho,  
Chiyoda-ku,  
100-6162  
Japan  
+81 (0)36 205 3494