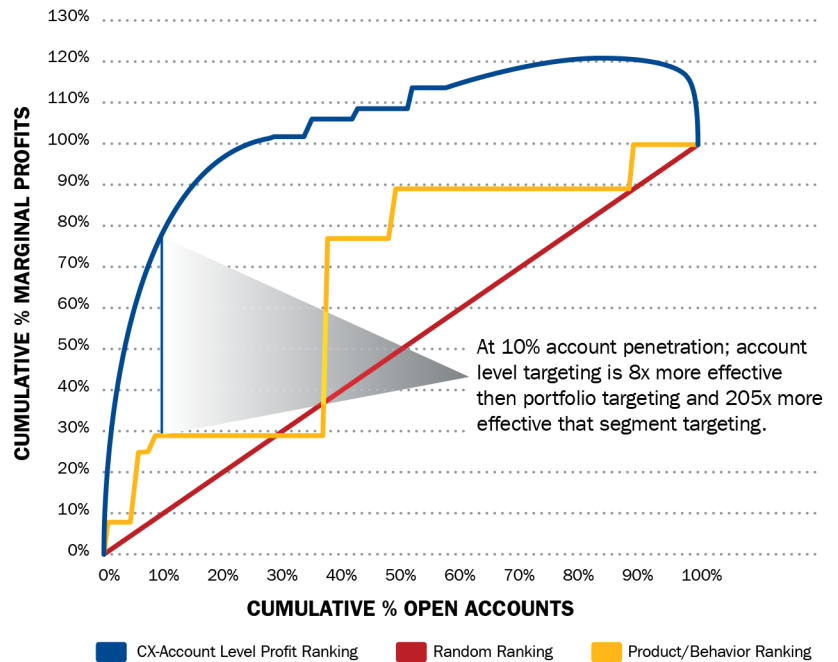


CX-Analytics Account Level Profit[®]

Profit optimization for financial account portfolios

- Account-level performance and reporting data repository
- Profit analysis engine based on transaction level data
- Single version of the truth – reconciled to the general ledger
- Risk and marketing program tracking
- High performance business intelligence tools for analysts



Powerful insight into the profit performance of your business, leading to improved portfolio performance

CX-Account Level Profit (CX-ALP) is a software platform that empowers business managers with active intelligence for profitability management and optimization of financial services portfolios. As a proprietary profit management system for lending and cards, the platform captures hundreds of activity drivers from transaction data and produces a detailed profit description for each account and customer. This transaction-level data is captured from all available product support systems and is analyzed, enabling the identification and elimination of unprofitable activities, development of targeted portfolio strategies and assessment and assignment of risk costs on dormant and non-delinquent accounts.

COMPREHENSIVE PERFORMANCE INSIGHT

CX-ALP enables tracking of marginal revenue and costs, enabling you to target accounts based on incremental value instead of average values for a whole

campaign. This change in methodology can save 20-30% direct marketing costs without reducing campaign results. In addition, the solution identifies individual accounts with negative marginal contribution to profit and analyzes the key contributing factors. This enables the building of targeted portfolio strategies based on specific unprofitable activity for a group of customers or accounts instead of broad portfolio-wide campaigns.

SINGLE VERSION OF THE TRUTH

CX-ALP provides a single version of the truth with standardized calculations and reporting as well as reconciliation to the general ledger and product billing system. CX-Analytics Account Level Profit supports a broad range of lending portfolios including cards, consumer closed-end loans, consumer revolving credit lines, consumer credit cards and commercial credit cards.

KEY BENEFITS

- ✓ **Single, Complete Version of the Truth** – Relevant data from all product systems is captured in the account-level data repository
- ✓ **Automated portfolio and program or strategy tracking for Risk and Marketing** utilizing standardized portfolio measures and pre-defined profit-based report templates
- ✓ **Profit Improvement Strategies** are delivered out-of-the-box from the profit analysis engine
- ✓ **Powerful in-memory reporting and analysis tool** supports near-instant response times and drill-down to account-level data
- ✓ **Pre-defined report templates** with pre-configured with standard drill-down filter dimensions
- ✓ **Seamless implementation and limited internal IT resource requirements** as solution can be delivered on private cloud environment



Functional Components of the Solution

CX-ALP is based on sophisticated analytic server software and a state-of-the-art data model, delivering in-depth analytics, interactive data exploration and analysis.



PROFITABILITY ANALYSIS

CX-ALP supports optimization of portfolio profitability by delivering detailed analysis of profitable and unprofitable accounts. Each account record is compared to a target account profile with similar use characteristics. CX-Analytics works with each client to develop a set of P&L reports and analysis templates, designed to be deployed across multiple functional departments. The templates cover cohort, time series and snap-shot reporting with three levels of detail. Key analysis outputs include:

- **Marginal Profitable Account Analysis**
- **Unprofitable Account Analysis**
- **Breakeven Activity Identification**
- **Profit Bridge Analysis**
- **What-if Scenario Testing**
- **Portfolio, Snapshot and Cohort Profit Tracking**



PROGRAM TRACKING FOR RISK AND MARKETING

CX-ALP can automate performance tracking of risk and marketing programs and ongoing decision strategies. When program and strategy campaign data are available, standardized profit-based performance tracking is generated monthly for all active strategies and campaigns. Eliminate questions about tracking data accuracy or definitions and free analyst time from production of tracking reports to focusing on profit improvement strategy development. Examples of tracking capabilities:

- **Credit Limit Management**
- **New Customer Marketing**
- **Existing Customer Marketing**
- **Call Center Sales Campaigns**
- **Authorization Strategy**
- **Fraud Strategy**

ANALYTIC DATA SERVER

The CX-ALP Server consolidates the data from multiple sources into the account-level database to deliver a complete data picture to business users. The server compresses data and holds it in memory, where it is available for immediate exploration by multiple users. With the ability to make aggregate calculations on the fly, users can uncover insights to solve business problems.

- **In-memory analytics**
- **Enables instant response times**
- **Handles client/server communication**

ACCOUNT-LEVEL DATABASE

CX-ALP aggregates data from product and billing systems, as well as various ancillary systems including risk, underwriting, fraud and operational, and transforms this data into an organized and granular set of analytic tables. CX-ALP manages the execution and maintenance of these transformations, and includes a data dictionary which CX-Analytics or business users can populate and maintain.

- **Automated reconciliation to the General Ledger and operational systems**
- **Allocate the cost data which is not available in operational systems across accounts**
- **Full picture of profitability at the account level**



INTERACTIVE VISUAL ANALYSIS

Utilizing leading technology tools for interactive data exploration, CX-ALP combines powerful in-memory analytics with an easy-to-use interface that consolidates relevant data from multiple sources in a single application. The ability to visualize data with engaging graphics and dynamic applications and dashboards allows users to uncover hidden trends and analyze data to drive innovative decisions.

- **Instant results**
- **Big-picture views of data**
- **See new relationships across your data**
- **High quality support and updates managed by CX-Analytics**



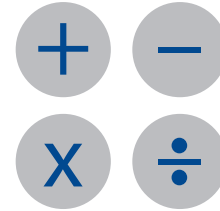
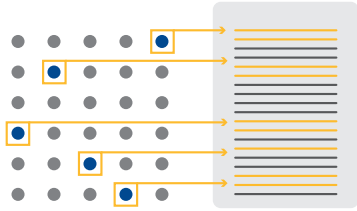
EXPERT ADVISORY SERVICES

CX-ALP is delivered with a package of expert advisory services designed to insure the benefits of the solution are realized. The principals at CX-Analytics have decades of portfolio and operations management experience with financial institutions in North America, Asia and Europe. Clients have a choice of support bundle hours to meet their specific requirements. Options for on-demand services include:

- **In-depth performance analysis**
- **Strategy recommendations**
- **New report templates**
- **Changes to data model**
- **Technical enhancements**
- **On-site presentations and interactive discussion**
- **Training**

Key Benefits

Drive new profit and growth strategies using quantitative insights and optimization tools in CX-ALP.



OPTIMIZE PORTFOLIO MANAGEMENT STRATEGIES

IMPROVE TARGETING PRECISION

CX-ALP allows you to track marginal revenue and costs, enabling you to target accounts based on incremental value instead of average values for a whole campaign. This change methodology can save 20-30% of direct marketing costs without reducing campaign results.

TAKE ACTION ON UNPROFITABLE ACCOUNTS

CX-ALP identifies individual accounts with negative marginal contribution to profit and analyzes the key contributing factors. This enables the building of targeted portfolio strategies based on specific unprofitable activity for a group of customer or accounts instead of broad portfolio-wide campaigns.

ASSESS AND ASSIGN RISK COSTS ON DORMANT AND NON-DELINQUENT ACCOUNTS

Utilizing the transaction and account level data in CX-ALP enables you to assess and assign risk costs on the dormant and non-delinquent accounts in your portfolio. With this knowledge, risk and profit mitigation strategies can be initiated on the riskiest accounts well before they become delinquent. The product also provides highly granular summaries of transaction data allowing a client to assign risk based on any transaction category code supporting within the billing system.

SINGLE VERSION OF THE TRUTH

BUSINESS TERMS PRECISELY DEFINED AT A DETAILED TECHNICAL LEVEL

Typically common business terms lack an agreed business and technical definition or definitions are created on-the-fly by programmers and analysts. Imprecise definitions can yield very different results at the portfolio and account level. CX-Analytics consults with your organization to agree on a standard business-level definition for all key metrics used within your management information. We then create specific technical definitions and validate the calculations.

RECONCILIATION TO THE GENERAL LEDGER

Every field within CX-ALP is reconciled to the financial accounting general ledger. By tying data in the analytic warehouse to the financial general ledger, key fields are audited with each load so no missing or erroneous data goes undetected. All discrepancies are investigated, documented and either corrected or accepted.

RECONCILIATION TO PRODUCT BILLING SYSTEM

The product is consistent with the corresponding product billing and transaction systems. CX-Analytics compares key metrics from production system reports, including items such as balance by category, active accounts, delinquent accounts and balances, transaction numbers and volumes and all account status codes and scores.



REGULATORY COMPLIANCE OF ANALYTIC DATA

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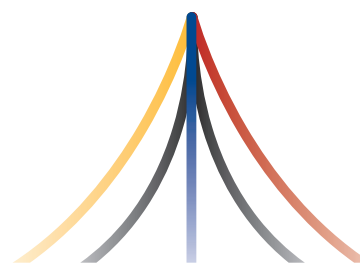
The design of CX-ALP incorporates the fundamental principles supporting regulatory compliance with Basel II and Sarbanes-Oxley. It provides a clear view from the highest level general ledger reports down to each individual account.

MULTIPLE SYSTEMS COMBINED INTO SINGLE, STANDARDIZED ANALYTIC DATA REPOSITORY

CX-ALP reconciles data from each system using the common business terms and metrics into a single data model. All of the business metrics are standardized and validated to the general ledger and to the precise technical definitions. The result is a homogeneous set of management information for each account.

CONSISTENCY IN BUSINESS VIEW OF PERFORMANCE

CX-Analytics develops standard P&L report templates to ensure business view of performance is consistent. The P&L reports from each region can be produced in the same format with the same measures. CX-Analytics can also develop customized business report templates as an optional service based on any data contained in CX-ALP. The precise, granular nature of CX-ALP accuracy results in a seamless view of a client's financial performance.



INCREASE AGILITY WITH ACCOUNT-LEVEL DATA

DISCOVER ROOT CAUSE OF PERFORMANCE

CX-ALP transforms detailed account and transaction data into precise profit information and activity drivers at an account level. With this information, you can discover the precise root cause of changes in performance and focus on determining actions that will make a bottom-line difference.

FOCUS ON MARGINAL PROFIT

Business reporting and analysis of portfolio segments is based on full, accurate P&L results instead of approximations and averages. CX-ALP calculates costs and revenues at the account level based on transaction level detail, providing a true measure of marginal profit for each account each month.

GAIN INSIGHTS WITH IN-MEMORY DATA EXPLORATION

CX-ALP creates a fast user experience using in-memory processing, increasing response times and enabling users to make calculations on the fly. The CX-ALP engine also maintains the associations in the data automatically, unlike traditional BI queries and cubes. With consolidated data from multiple sources, users can explore and interact with dynamic data to solve business problems in new ways.

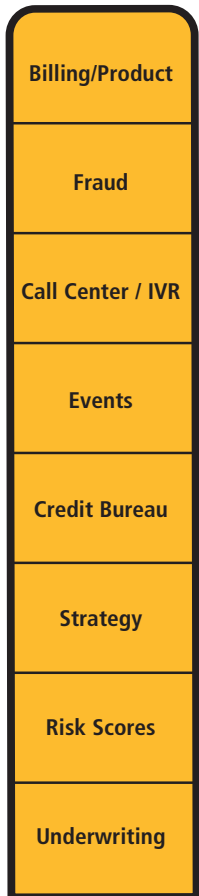
CUSTOMER AND ACCOUNT LEVEL DECISIONS

The full set of CX-ALP data elements are generated at the account level monthly for each product portfolio. CX-Analytics can link or summarize output for a single customer view across multiple products.

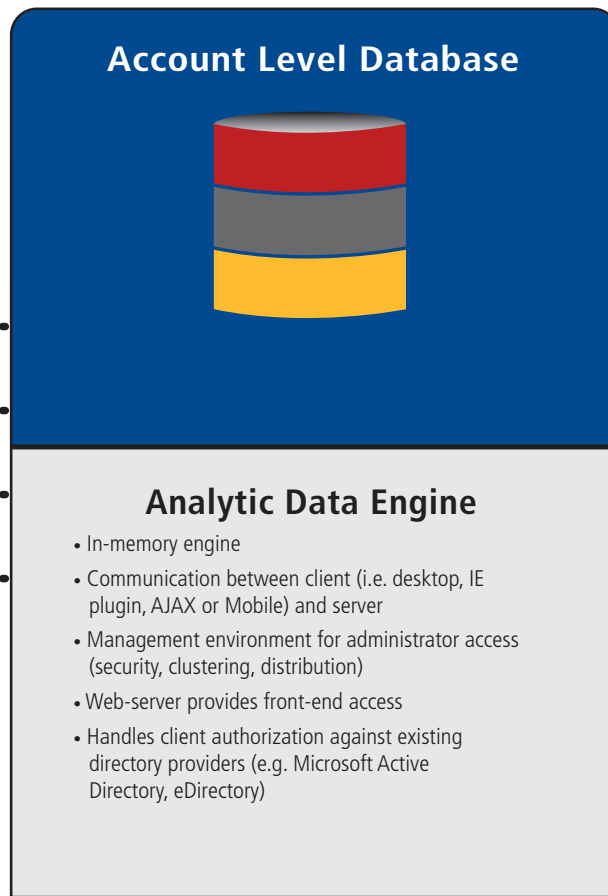
Technical Infrastructure

The Analytic Data Engine is optimized for parallel processing to scale as your organization and data grow. It can be used on commodity hardware or installed on a public or private cloud environment.

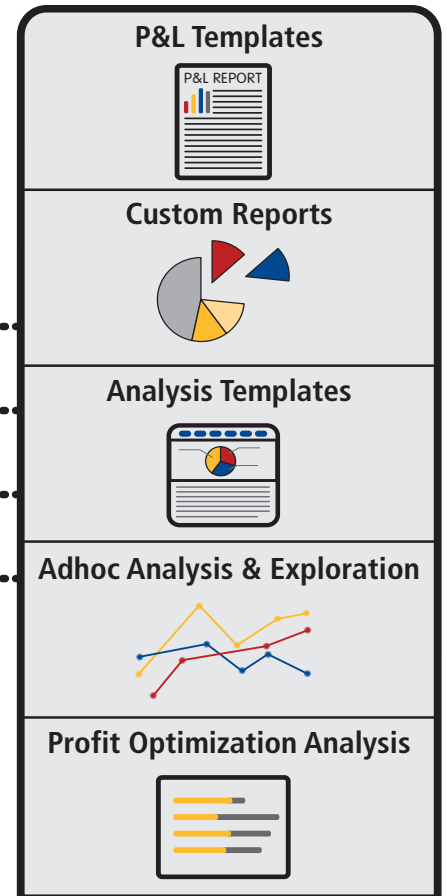
OPERATIONAL & EXTERNAL DATA SOURCES



CX-ALP SERVER



REPORTS & DATA EXPLORATION



USER LEVELS SUPPORTED

BUSINESS USER

Interact with ALP through the front-end of the application, exploring and interacting with data in self-service mode.

BUSINESS ANALYST/BI DEVELOPER

Interact with ALP by extracting data from source systems, creating data models and transforming the data.

IT PROFESSIONALS

IT Professionals, ranging from enterprise architect to data analysts, can focus on data security, data and application provisioning, data governance and system maintenance.

Empowering Firms to Compete on Analytics

Our products and services include:

- CX-Management Analytics for Collections, a comprehensive reporting and analysis software system for financial account collections
- Portfolio profit forecasting models including both program-based NPV models and portfolio planning models
- Analytic Diagnostic, expert design and implementation of an analytic warehouse and business user tools
- Consulting Services, inventory and assessment of your operation for identification of definitive opportunities for improvement



Profit Optimization = f (current value, potential value, strategy, execution)

About the Company

CX-Analytics specializes in the science of creating business intelligence from complex data and processes through its specialized analytic software applications and expert advisory services. CX-Analytics staff brings decades of experience and a track record of success in the cards and loans industry. Our clients include global financial organizations with diverse commercial and consumer account portfolios. CX-Analytics partners with SAS, TSYS and CGI.

CX-Analytics is a privately held company, founded in 2007 by Keith Coulter. Before founding CX-Analytics, Mr. Coulter served as Managing Director of the UK cards and loan business for Barclays Bank. Prior roles include senior positions at Citicorp, The Associates, and AmeriCredit in North America, Asia and Europe. His work in building and leading analytic data-driven strategies has been noted by Tom Davenport in *Competing on Analytics*, SAS Enterprise Intelligence Award (2004), Information Management - Best CRM Project (2003), Information Management - Best Business

Intelligence Project (2003) and Best New Credit Card Product of the Year (2007).

CX-Analytics has implemented analytic software covering a range of operational processes with multiple clients and large financial institutions. Previous engagements range from the successful delivery of a scalable, SAS-based data warehouse and reporting environment for a large financial services company in the UK, to the reengineering of the management information delivery processes at a major conglomerate. CX-Analytics clients report extensive adoption of the software for self-service analysis and receive analytic services and consulting as part of each engagement, which guarantees bottom-line improvement and value delivered in excess of implementation cost.

CX-Analytics has offices in Franklin, Tennessee and in Bangkok, Thailand.

OUR CLIENTS INCLUDE

- Nationwide Building Society
- Dell Financial Service
- John Deere Financial
- First Hawaiian Bank
- GE Money





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