Creating One Customer Journey Ecosystem that Meets All Banking Needs

Banking convergence has become a centralizing theme for serving both customers and regulators. The ability to aggregate and analyze customer data in one place rather than in silos empowers banks to apply forensic and predictive analytics with a lens across the entire institution.
Executive Summary

In the banking industry, initiatives to map the customer journey are usually an either/or endeavor: They focus on either social harvesting or attrition at risk, for example, or maybe campaign discovery, or perhaps compliance – the point is, there’s usually no cohesive strategy for all. For instance, the sales and marketing function might pursue customer journey analytics in order to fuel location-based offerings or next-best actions. Meanwhile, the support organization might try something similar, but with the intent of aligning customer transactions with the least expensive channel, thus reducing costs.

The either/or siloed approach, however, is unnecessary and wasteful. The fact is, the pool of information used for all customer journey endeavors should be one and the same. And – given the challenge of consolidating, combining and analyzing data from all the internal and external sources available – a single source of data should be used by all areas of the banking organization to achieve both cost and revenue goals.

The objective, then, should be to develop an integrated, enterprise-wide customer journey analytics ecosystem, in which internal and external data is continuously analyzed, delivering insights to all banking business units and stakeholders, across marketing, compliance, call center operations and digital services. The centralized environment need not be “yet another data warehouse” but rather a key data operational store, with varying amounts of refreshing and expiring data. This single data store would fulfill the needs of multiple business pursuits, including total client visualization, campaign discovery, cost reduction, revenue optimization, client churn, client acquisition and predictive analytics.
Extending beyond the customer journey, it quickly becomes clear that, using this data, banks could be well on their way to activating more robust analytics for other consolidated enterprise functions, as well, such as anti-money laundering, risk data aggregation, counterparty exposure and predictive fraud analytics.

This white paper discusses how banks can meet a wide range of goals across business functions by developing a single, integrated, enterprise-wide customer journey ecosystem.
The Power in the White Space

The need for a centralized customer journey analytics ecosystem is rooted in the accelerating digitization of the banking world, thanks to customers' increasingly digital interactions and transactions. Every action that customers take online — whether engaging with the bank, posting on social media, downloading an app, even walking down the street with a geolocation-enabled smartphone — creates a digital identity for that individual, what we call a customer Code Halo™. Businesses across industries are harnessing customer Code Halos (as well as product, enterprise and employee Code Halos) to derive insights that they can turn into both revenue-boosting innovations and cost-cutting initiatives.

By combining KLIs with KOIs, the bank might notice an 18% increase in mobile use among customers aged 65 and older over the last 12 months.

Banks are similarly working to become more customer-centric by focusing on the customer journey. (For more on this topic, see our white papers, “Digital Banking: Enhancing Customer Experience; Generating Long-Term Loyalty” and “For Effective Digital Banking Channels, Put Customers First.”) To that end, five major channels of digital information have emerged that can generate valuable insights when individually analyzed (see Figure 1, next page). Furthermore, when these information streams are combined into a cross-pollinated ecosystem, they offer even more powerful analytics capabilities in the whitespace between them.

The sources of digital information include:

- **Key operational indicators (KOI):** Transactions gleaned from all the cross-digital channels of activity between customers and the bank (i.e., mobile, ATM, Web, IVR, etc.).
- **Key lifestyle indicators (KLI):** Indicators describing propensities to spend and act based on analysis of all transactions across all accounts and data siloes, both operational and geographical (i.e., car lease payments to Ford, green fees to Bermuda, student loan payments, final mortgage payments, ATM fees on a cruise ship, etc.).
- **Key market data indicators (KMI):** Data harvested from public or “pay” Web sites (i.e., FICO credit score, criminal records, court reports, bankruptcy databases, etc.).
- **Key social indicators (KSI):** Information, sentiment, volume and velocity data harvested from social media sites such as Twitter, Facebook, etc.
- **Key financial indicators (KFI):** Consistently updated calculated values indicating various financial risk or portfolio/holding metrics. Frequently integrates data from other “key” sources and may run autonomously in the background for real-time profiling.

By aggregating and combining these data types in one ecosystem — KOIs, KLIs, KMIs, KSIs and KFIs and applying analytics, banks can develop a holistic view of the customer journey, from which all bank stakeholders can then benefit, whether their intent is to cut costs or boost revenues.

Cost-Cutting Opportunities

For instance, by combining KLIs with KOIs, the bank might notice an 18% increase in mobile use among customers aged 65 and older over the last 12 months. This signals an opportunity to launch a mobile marketing campaign targeting this demographic to encourage them to utilize the mobile channel for their banking needs to reduce operational expenses.

Or, by combining KLIs and KOIs, the bank could detect an increasing trend among high net worth customers to go directly to a service representative rather than using mobile or Web capabilities. This would signal that the bank’s digital capabilities were insufficient or that something else was causing cost inefficiency and diminished customer satisfaction.
Furthermore, because digital channels operate in isolation in most banks, organizations generally have no insight into how each channel is operating in relation to the others. Are frustrated customers leaving the Web site and calling the branch? Are mobile deposit customers experiencing technical problems and driving to a branch or the ATM? Without a holistic view of each channel, most banks would never discover these key customer insights.

We use the term “digital leakage” when a low-value, low-complexity transaction that could be handled digitally ends up involving human interaction (see Figure 2, next page). Every time a customer starts a transaction on a digital channel and then finds it necessary to talk to a live service representative – due to a technology failure, frustration with the interface, etc. – it results in higher costs to the bank. A rule of thumb is that it costs $8 to $10 to service every call made to the bank. At hundreds of thousands of calls per month, and a digital leakage rate of 25%, that could add up to $2 million per month in added expense, not to mention the resulting customer dissatisfaction. (For more on digital leakage, see our white paper, “Digital Banking: Enhancing Customer Experience; Generating Long-Term Loyalty.”)

By aggregating information throughout the digital customer journey, however, banks can detect patterns and trends that reveal where the digital experience is breaking down, and take action to fix it.

**Boosting Revenues through Customer Insights**

Meanwhile, by analyzing the same pool of data, banks can also develop insights that lead to new types of products and services that boost revenues. For instance, they can combine KLIs and KOIs with customer account data to predict what the customer might be interested in purchasing in the near-term, and respond with relevant offers at just the right time. If the bank sees a longtime customer’s paycheck deposits have notably increased recently, it could take that as an opportunity to offer a high-profile credit card. If another customer is paying multiple student loans at one time, that might indicate a positive response to an offer for student loan consolidation.

Another example is combining KLIs and KSIs to create “next best action” offers and design products or services that are personalized, localized and contextualized. For example, a bank can detect whether someone is planning a vacation or researching Web sites for a new set of

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**Key Data Types**

![Figure 1](image-url)

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golf clubs. Using that insight, it could offer a credit card with special offers for vacations or big purchases. Or it could note that a customer toward the end of his car loan is spending time on the Web looking at new cars and insert an ad onto Cars.com for special financing rates. This is the essence of “Code Halo thinking” — deriving insights (and revenues) from the collision of multiple Code Halos. (For more on Code Halo thinking, see our book, Code Halos: How the Digital Lives of People, Things and Organizations are Changing the Rules of Business.

The key for all of these cost-cutting and revenue-optimizing endeavors is that the data points – the KOs, KLIs, KMIs, KSIs and KFIs – all come from a single, integrated data ecosystem and can be used by any of the bank’s business units that would benefit from a holistic customer view, whether it’s sales/marketing, compliance, customer service or digital services.

Creating the Ecosystem

Large cross-silo enterprise data projects are fraught with political and logistical hurdles, as well as technological ones. The most significant technical issue in these projects is not the analytics but the data. Challenges include data quality, lineage, normalization and aggregation; additionally, securing stakeholder coordination across discrete units requires massive corporate overhead.

For this reason, we recommend using a pre-wired, pre-integrated analytical ecosystem that pulls only key data from silos, and shares data and analytics across the functional infrastructure. Such a system should use compliant industry ontologies at its core to mitigate much of the heavy lifting involved and expedite the design, implementation and integration of the ecosystem, especially if it’s provided as a drop-in appliance.

Note: This figure is constructed from Cognizant survey data and depicts banking lines of business. Bubble size represents average call volume. Toward the top of the figure are lines of business with a higher propensity of calls, which should easily be replaced by digital self-service functionality. Toward the bottom are the more “complex” calls requiring human interaction because they are high-value sales or relationship-based. The bottom axis shows the degree to which “digital leakage” is likely occurring — that is, they add no value by nature of the call channel itself, and in a perfect world, they would be largely replaced by digital self-service. There is an order of magnitude of savings of $15 to $1 in human-assisted vs. digital self-service.

Figure 2
Monolithic vendor solutions that are not modular, do not allow interchange of key components with legacy investments or best-of-breed, off-the-shelf solutions will quickly become a functional burden as market and regulatory requirements evolve and grow rapidly.

To realize the full benefits of an integrated customer journey ecosystem, the environment should include the following elements:

- **The ability to extract and feed data to solutions:** In addition to extract, transform and load (ETL) procedures, data also needs to be cleansed and corrected before it is considered usable. When all the bank’s stakeholders work from a single data pool, this time-consuming job can be done once, and then data can be fed to multiple systems.
- **Total client visualization:** This ensures that all client activities with the banking institution are in one place for a full analytics view.
- **An enterprise approach to both data and functionality:** The ecosystem should deliver not just an enterprise view of data but also enterprise functionality across the customer journey.
- **Predictive analytics:** That same enterprise approach is required to properly feed the analytics engine.
- **Normalized enterprise data across data silos:** Numerous data types (structured, unstructured and semi-structured) need to be rationalized across the organization.
- **Added power in the “white space”:** This is the ability to combine the five key data sources (KLI, KOI, KSI, KMI and KFI) to find meaning and create new capabilities through predictive analytics.
- **Analytics democratization:** Analytics should be available to a wide population of employees, not just a small group of highly trained – and high-cost – experts. The system needs to enable non-quant business users to analyze data using conventional automation and visualization tools and capabilities.
- **Automated campaign insights:** For insights to be available when needed, the system should enable non-stop analytics, which is the ability to continuously and autonomously churn through data to detect changes in KLI, KOI, KSI, KMI and KFI to identify statistical outlying activity and trending data. Such insights and market indicators can enable the marketing function to identify highly successful campaigns that will result in new revenue opportunities.
- **Visual campaign modeling:** This capability enables marketers to visually identify characteristics of data sets without the need for coding.
- **Cross-pollination to partners:** This is the ability to expose the data and analytics from one channel or area of the total customer journey to another, thereby increasing the capabilities of each beyond what they could achieve when operating in isolation.
Challenges to Overcome

In order to develop an integrated ecosystem for customer journey analytics, banks will need to overcome several challenges, ranging from technology to cultural mindset shifts:

- **Organizational and technology silos**: Banks have traditionally stored customer information by account type (checking account, savings account, mortgage loans, etc.), which resulted in a pervasive siloed organizational mindset. Changing this mindset requires commitment from top banking leaders and a structured approach to organizational change management. (For more on this topic, see our white paper “Digital Banking: Time to Rebuild Your Organization.”)

- **Shortage of analytics talent**: The skills needed to work with sophisticated analytics are in short supply. Banks need to seek solutions that enable business analysts and other non-quantitative employees to work with data and analytics using visual tools without needing specialized skills, thereby democratizing analytics by pushing them down from the expensive quant layer to the business user layers.

- **Customer concerns about privacy/security**: As banks strive to use more customer data, they will need to provide clear assurance that they will not misuse the data or violate customer privacy. This can be done through anonymizing algorithms, opt-in/opt-out technologies and other means.

Moving Forward

All business functions in the bank can benefit from applying analytics to a holistic view of customers, across digital channels and organizational silos (see Figure 3, previous page). Rather than embarking on separate initiatives that meet the goals of only one or two business units, banks should develop a single ecosystem for customer journey analytics. In order to get started, banks can do the following:

- **Create an integrated customer journey committee** of senior staff members, representing each of the operational and geographical siloes.

- **Build an institutional customer journey mission statement** that represents the needs of the overall bank, while serving the individual needs of the silos.

- **Task your chief data officer with creating a convergence environment**, in which key data from across the enterprise is made available to a centralized customer journey analytics environment.

- **Expose that data** to the four functional customer journey servicing solutions: digital experience, marketing and campaigns, customer service, and analytics.

- **Cross-pollinate that data** across each functional solution to create powerful capabilities in the white space between them.

- **Leverage all that data into other solution silos**, such as anti-money laundering and risk data aggregation. It’s already there – use it again rather than creating another silo.

- **Apply predictive analytics** across the convergence environment to identify new campaign and product possibilities, lower customer churn and enhance the customer experience.

The ability to cross-pollinate data and analytics between functional systems’ components is critical for generating powerful customer insights across the enterprise and delivering a much more capable, economical, scalable and effective ecosystem.
Footnote


About the Author

Fred Cohen is Head of Banking and Financial Services Analytics for the Emerging Business Accelerator at Cognizant. He has been active in the financial services industry for 25 years, working in strategy and solutions positions with such firms as Lehman Brothers, Thomson Financial, State Street, iGATE and Mu Sigma. A frequent speaker and moderator, Fred has ideated and brought to market hundreds of millions of dollars in disruptive solutions to the financial services markets. He is an 11-year decorated veteran of the U.S. Air Force. Fred can be reached at Fred.Cohen@cognizant.com.
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