

Facilitating the Digital Transformation in Banking

Banks are Leveraging Data Virtualization to Enable Greater Agility in Responding to Customer Needs

The banking industry is undergoing a massive transformation, driven by the need to provide advanced customer service. In a study of 107 global financial services decision makers, Forrester found that improving the customer experience was the top business requirement that drove the companies' transformation needs, followed by the need to integrate channels and the need to provide innovative new products and services.

Such a transformation is not trivial, as it affects the entire institution, on many levels. It will necessitate advancements in one or more of the following ten capabilities, and most assuredly, others as well:

1. Risk reporting and analytics
2. Liquidity management
3. Client reporting and customer relationship management (CRM)
4. Customer propensity and upselling
5. Multichannel usage integration and analytics
6. Social media integration
7. Personalized marketing campaigns
8. Personalized Pricing
9. Fraud detection
10. Mergers, migration, consolidation, and modernization

Data virtualization is a flexible technology that facilitates digital transformation. In this brief, we illustrate how data virtualization can help to transform a banking institution with respect to facilitating the development of improvements across each of these capabilities. We close with four case studies of banks leveraging data virtualization to enable digital transformation.

What is Data Virtualization?

Data virtualization is a data consolidation and integration technology. But whereas most data integration solutions move a copy of the data to a new, consolidated source, data virtualization offers a completely different approach.

Rather than moving the data, data virtualization provides a view of the data, leaving the source data exactly where it is. This means that companies do not have to pay the costs of moving and housing the data, and yet they still gain the benefit of data integration.

Because data virtualization accommodates existing infrastructure in its existing state, it is relatively easy to implement, compared with other solutions. And because it provides data in real time, from a variety of systems that are normally very time consuming to integrate, such as transactional processing systems and cloud-based storage systems, it can support a wide variety of uses.



SOLUTION

Data Virtualization for the Banking Industry

Ten Critical Capabilities Banks Should Consider



1. Risk Reporting and Analytics

For regulatory reporting, including the reporting of risk and performance numbers, banks often struggle with integrating disparate sources to obtain a single view of the risk data, a view that reconciles any differences that might arise. The primary difficulty in this struggle is the time it takes to create such reports, multiplied across the areas of risk that are pertinent to the bank, such as market, credit, counter-party, or operational risk. Similarly, banks are often called upon to satisfy Basel III requirements, which can be particularly challenging when banks are undergoing mergers and consolidations.

For such initiatives, data virtualization is a natural fit, as data can be consolidated, in real time, across myriad disparate sources, to satisfy the needs of any report. With data virtualization, data is no longer the bottleneck; stakeholders can produce detailed, reliable, integrated reports, with point-and-click ease, as if all of the data were formatted and stored on their own laptops. In addition, because all of the relevant data passes through data virtualization as a separate layer, data virtualization can also perform data quality checks as it consolidates the data and makes it available to consumers.



2. Liquidity Management

To more effectively manage liquidity across a financial organization's disparate departments and holdings, banks need ready access to aggregated liquidity positions focused on such domains as currency, geography, or applicable products. They then need to run these numbers against standard ratios such as the net stable funding ratio (NSFR) and the liquidity coverage ratio (LCR) in a timely manner, to gain a granular, dynamic view into the organization's liquidity.

To facilitate such efforts, data virtualization can unify views of each department's holdings, for a true aggregated view into risk, capturing highly granular developments, to support weekly or monthly reports supplemented with real-time changes. It can integrate information from other sources, as well, such as external sources for market intelligence or identifying emerging needs, or an organization's own ERP systems, to track orders and accounts receivable and payable data, to better predict the organization's cash needs.



3. Client Reporting and CRM

These are two different, but related activities. In preparing reports for clients, banks are trying to provide powerful functionality to customers, to earn their loyalty, such as enabling them to perform what-if scenarios using a simple web browser. Similarly, banks need to carefully manage each customer relationship (CRM). For enabling client-initiated reports and enabling reports about clients, both activities require data to be integrated in real time.

For such activities, data virtualization establishes data-as-a-service, a service that can be readily consumed by applications, or by internal experts or external clients, in a self-serve manner. This enables a variety of client applications, such as an aggregated view into events and conferences, for an interactive broker, or enabling clients to invest hypothetical amounts, to measure the performance of different instruments. On the CRM side, it enables companies to more effectively analyze customer spending patterns.



4. Customer Propensity Analysis and Upselling

If banks could better understand what their customers wanted, or how customers would be likely to engage with them, they would be better able to offer them new products and services that meet their needs. In today's customer-centric market environment, this means empowering representatives at the point of customer contact, with the correct customer profile, enhanced with the most relevant, up-to-date information, offers, and scripts.

To support such initiatives, data virtualization provides representatives with a real-time view into the customer's activities, a detailed understanding of what the customer needs, and an offer for a product that could meet those needs.



5. Multichannel Usage Integration and Analytics

Customers interact with their banks online, in person, on the phone, and increasingly, in other channels as well, such as text and even social media. Unfortunately, it is challenging to maintain consistent information across disparate channels, and customers experience such discrepancies as lapses in the seamless customer experience that they have come to expect. To provide this seamless experience, banks need to provide better integration between channels, so that they can analyze their efforts across all channels in a concerted fashion.

Data virtualization creates a real-time, dynamic view into all applicable communication channels, and makes this view readily available to analysts, to ensure that each customer's experience is consistent across the channels.



6. Social Media Integration

Banks and other financial institutions are increasingly interested in enriching their understanding of customers with additional data points drawn from their customers' interactions and relationships on social media platforms. But to effectively capitalize on social media data, banks need to be able to quickly integrate it with other sources of data, such as the sales data stored in CRM applications.

Data virtualization forms the bridge that seamlessly connects both sources of data, and makes the integrated data instantly available for analysis.



7. Personalized Marketing Campaigns

One important aspect of customer service is proactively targeting specific customer segments with specific products. To do so, and do so effectively, banks often need to integrate third-party data with a view in the spending patterns of particular customer segments, which can be gleaned from records of customer transactions. For example, banks may offer a promotion to users of a particular phone, or preferred members of a particular rewards club.

Once again, data virtualization can enable such campaigns by making it extremely easy, and quick, to report on third-party data in concert with dynamically changing transactional data.



8. Personalized Pricing

When it comes to pricing, all customers want preferential treatment, but when banks recognize a long-standing, loyal customer, they know that such treatment can enrich the customer relationship for the bank's benefit as well as for the benefit of the customer. However, personalized pricing requires a real-time, 360° view of the customer, including usage and referrals, as well as a view into all his or her interactions.

Data virtualization, once again, provides this critical view, and makes it available to representatives in real time, to enable better, more informed pricing decisions. Most importantly, data virtualization makes it possible to automate many of the functions of personalized pricing by maintaining a detailed profile on each customer that accounts for the customer's usage, referrals, and other information, so that a customer's preferential status will be automatically known by all representatives. Data virtualization also enables predictive pricing interventions. For example, if a customer inquires about paying off his entire loan, there is a good chance that the customer is planning to move elsewhere, and data virtualization enables banks to act on this information.



9. Fraud Detection

To more effectively detect fraudulent activity, and be compliant with regulations like the anti-money laundering (AML) rules in connection with the Bank Secrecy act, banks need to be able to distinguish normal activity from fraudulent activity, based on a detailed history of customer behavior, including payment patterns.

Data virtualization can aid fraud detection in three ways:

- By creating consolidated data views that expose patterns that could be easily missed.
- By providing companies with rich user profiles, to be used as context to support the real-time identification of fraudulent activity online.
- By facilitating the creation of audit or compliance reports, detailing which individuals have access to which data.



10. Mergers, Migration, Consolidation, and Modernization

This last group of initiatives are not particular to banks, but because they greatly impact all of the above initiatives, they deserve special mention here. Whenever there is a change to the infrastructure, data becomes more difficult to integrate, and it takes more time to do so, negatively affecting stakeholders' ability to leverage the data for informed, profitable decisions.

During such activities, the benefit of data virtualization is that it not only greatly diminishes the impact of such activities, but consumers of the data often do not even realize that there has been a change. This is because data virtualization automates access to the data sources, and, as mentioned above, creates a view into the data that makes users feel as though the data was in a single place. Behind the scenes, a variety of sources are accessed, but the user doesn't need to know or care about such details. During a systems migration, users might be accessing both the old and new sources simultaneously, and be gradually moved to the new system, without the users' knowledge.

Data Virtualization Benefits

By leveraging data virtualization, banking institutions can gain:



A highly detailed, 360-degree view into customers' changing needs and behaviors.



Improved client reports, that integrate data from multiple sources.



Timely financial intelligence, to make better, more informed pricing decisions.



A unified, real-time view of risk across the entire organization.



More effective fraud detection, with a view into real-time and historical transactions.