



**AYASDI**

**Transforming the Client  
Experience at the Private Bank  
using Machine Intelligence**

## Delivering a Transformative Client Experience: A Strategic Priority

Private banks strive to deliver superior client service through innovative and precisely targeted offerings. Creating a “one bank” experience is a strategic priority as it can empower wealth managers with deeper insights that can help them forge long-term relationships with clients.

However, wealth managers are increasingly challenged with achieving a trusted advisor status with their private clients. Banks are in dire need of sophisticated solutions that will equip wealth managers with a deeper understanding of what clients really value, and when they are most likely to engage. Advanced analytics solutions that can help them glean high-value, timely insights from the wealth of information at their disposal to deliver a transformative client experience are critical. The front-runners in banking recognize that information about transactions and clients is just as important as the transactions themselves. As conventional business differentiators erode, banks need to rapidly arm their wealth managers with differentiated, data-driven insights that will help them effectively compete to attract and retain clients and drive greater revenue.

“Credit Suisse intends to lead our industry in understanding complex datasets. We evaluate employing the world’s most advanced analytic technologies, to gain the greatest possible advantage for our clients. At today’s accelerated pace of business, rapidly uncovering subtle signals across our massive data sources, would help us to deliver superior results for our clients.”

- *Marco Abele, Head of Digital Private Banking, Credit Suisse*

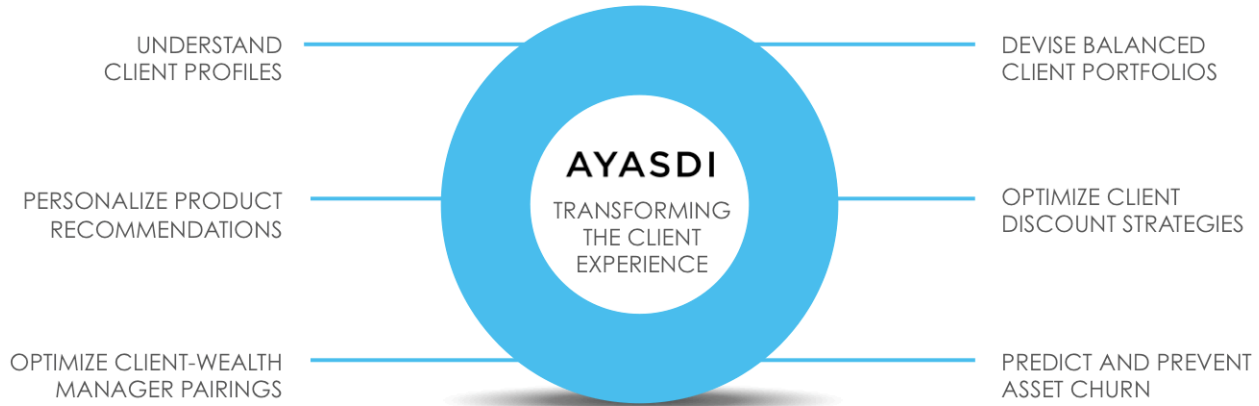
## The Challenges with Delivering a Personalized Client Experience

Banks require holistic client profiles to be able to deliver personalized service. There is a tremendous opportunity to create more precise profiles by correlating and analyzing the massive amounts of client, product, and market-related data at their disposal. However, conventional approaches that rely on business intuition, spreadsheets, statistical tools, and standard machine learning techniques cannot keep pace with evolving client behavior, products, market conditions, and regulations, as well as the growing complexity of the data. While these approaches can surface the macro-trends in client preferences, they fail to uncover the more subtle relationships that exist between a bank’s clients and its products. It is impossible for a bank to deliver personalized recommendations without a deep understanding of the precise characteristics of its customers. Advanced analytics solutions that precisely segment clients and surface their key characteristics can help wealth managers deliver relevant, data-driven product recommendations that result in higher-value relationships.

## Transforming the Client Experience using Machine Intelligence

Machine intelligence software represents advancements in analytics that can help private banks create more holistic, behavior-based client profiles. Ayasdi’s machine intelligence software uses topological data analysis and a broad range of machine learning, geometric, and statistical algorithms to rapidly correlate and analyze client, product, and market-related data. It is highly adept at analyzing highly complex data and uncovering

subtle, precise client sub-segments. It surfaces the key characteristics of each segment to help the bank develop more targeted client profiles and predictive models. These profiles and models can be continuously updated as new data arrives.



**Figure 1: Using Machine Intelligence to Transform the Private Banking Client Experience**

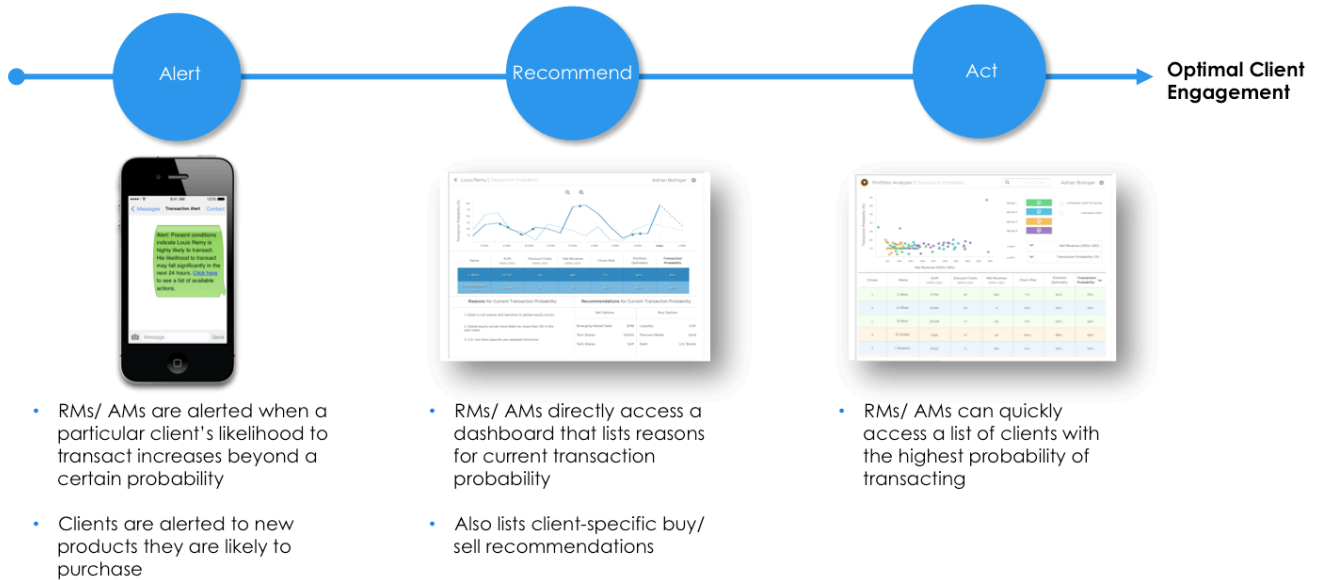
Using Ayasdi's machine intelligence software, wealth managers gain a better understanding of their clients' needs. Increased automation improves a wealth manager's efficiency. It reduces client advisory efforts and increases client coverage. Data-driven, real-time recommendations, alerts, and notifications that take in to account evolving market conditions result in a superior client experience and more transaction volumes and fees to the bank. The software can also be used as the foundation for a data-driven and unbiased relationship manager performance benchmarking system as it can help precisely segment the best and worst performing managers and surface optimal client-relationship manager pairings. It can help predict and prevent asset churn by analyzing asset transfers and client attributes to gain a precise understanding of the probability and volume of assets at risk of exiting the bank. The private bank is then in a better position to devise remediation techniques to curb asset drawdowns. With richer client profiles, wealth managers can compose optimal portfolios under specific market conditions, thereby delivering better client service.

### UNDERSTANDING CLIENT PROFILES

Most private banks use traditional metrics such as assets under management (AUM) and revenue generated to segment clients. However, this approach does not provide their wealth managers with a way to deliver personalized treatment to their clients. It does not give them the necessary context and insight into a client's behavior to appropriately identify opportunities for sales.

Using Ayasdi's software, banks can precisely segment their clients, predict the likelihood of clients transacting in specific products, and optimize client engagements through targeted recommendations. Ayasdi's machine intelligence software uncovers these precise client sub-segments by correlating and analyzing account information and product consumption data. It helps wealth managers evaluate the specific needs and preferences of each segment and then devise customized engagement strategies to

attract and retain clients. Applications can be designed to alert managers when a client’s likelihood to transact in a specific banking product exceeds a certain probability.



**Figure 2: The Future of the Private Bank: Predicting and Acting on Transaction Probability**

It can also be used to alert clients to new products that they might be interested in purchasing. Wealth managers are better equipped to engage effectively with clients with a rank-ordered list of products that specific clients are likely to purchase. These applications can also provide them with rank-ordered lists of clients that are likely to purchase a specific product. It significantly increases a wealth manager’s efficiency and the likelihood of transactions as well as fees to the bank.

**PERSONALIZING PRODUCT RECOMMENDATIONS**

Devising product recommendation strategies has typically been a highly manual process that involves trying to uncover the relationships between client attributes and product-related data.

Ayasdi’s machine intelligence software can quickly correlate client profile information, transaction history, and market conditions information to provide wealth managers with deep insight into their clients’ behavior, and their likelihood to purchase other bank products, under specific market conditions. It can arm wealth managers with emerging investment trends that are most relevant to specific clients, based on their transaction history (e.g., buying/ selling of specific products) and the market conditions that they are likely to transact in (e.g., specific index movements and volatilities), to drive greater transaction volumes and fees.

**OPTIMIZING CLIENT-WEALTH MANAGER PAIRINGS**

Most banks do not have a systematic way of identifying and proliferating relationship management best practices. The current approach to pairing clients with wealth managers is typically based on AUM.

Ayasdi's machine intelligence software can form the basis of a data-driven and unbiased wealth manager performance management system. By correlating and analyzing historical key performance indicator (KPI) data with wealth manager and client characteristics, it can predict wealth manager performance. It can precisely segment the best and worst performing wealth managers, recommend optimal client-manager pairings, and dynamically alert team leads to alternatives when there is a need to transition client coverage. It also helps with the efficient identification and replication of best practices across the company. It sets the stage for a data-driven method for matching wealth managers (e.g., based on psychological traits, interests, location, and education) with specific clients (e.g., based on interests and preferences).

### **DEVISING OPTIMAL CLIENT PORTFOLIOS**

Wealth managers can benefit from a consolidated view of client portfolios and the ability to pinpoint those that are performing sub-optimally. Ayasdi's machine intelligence software can be used to correlate and analyze clients' investment preferences, their security selections, trading behavior, and psychological assessments to create richer profiles. By creating dynamic client profiles, wealth managers are in a better position to compose optimal portfolios based on specific market conditions, thereby delivering better client service. Applications can be designed to provide wealth managers with the ability to make data-driven product recommendations. They can also increase their understanding of the likelihood of a specific client completing a transaction to trade back towards a target portfolio. Team leads and executives can be proactively notified when a specific client's portfolio composition exceeds or falls below a pre-defined critical threshold.

Providing wealth managers with the necessary insights to create optimal, client-specific portfolios improves their productivity and their ability to retain clients. Optimal portfolio holdings also result in longer-term asset growth and higher expected returns from long-term capital management revenue streams.

### **OPTIMIZING CLIENT DISCOUNT STRATEGIES**

Private banks could benefit from an objective, data-driven approach to creating client discount strategies and models that accurately predict the impact of discounting on future revenues and client engagement.

Ayasdi's machine intelligence software correlates and analyzes the impact of discounting strategies on client revenues and engagement metrics, by products over time. It helps the private bank increase its margins by reducing discounting where client revenues do not justify such discount deployments. By using a data-driven approach to arriving at the justification for discount deployments, wealth managers will be able to spend less time on discount review and approval and more time on client service activities.

The discount optimization model can also serve as the foundation for a dynamic pricing application that delivers client-specific pricing recommendations for a particular product. It could also be used to provide the necessary insight to drive a dynamic pricing intervention model. For instance, if a particular discount deployment is not resulting in the predicted levels of client engagement, the application could automatically generate the necessary pricing recommendations and a suggested sequence of client interventions to help grow future revenues and client engagement levels. The model could be expanded to take into consideration the impact of market conditions on predicted future revenues and client engagement levels,

as a result of specific discount deployments. Capabilities could also be built into the application to alert wealth managers to specific changes in market conditions based on market regimes that are likely to impact the discount deployment's performance.

### **PREDICTING AND PREVENTING ASSET CHURN**

Asset transfers typically signal the potential for client churn. Ayasdi's machine intelligence software can correlate and analyze asset transfers and client attributes to provide private banks with a precise understanding of the probability and volume of assets at risk of exiting the bank. Applications can be designed to alert executives when the asset transfer risk for a particular client exceeds a specified threshold for predicted loss. It could also dynamically monitor market conditions to assess when assets are at the highest risk of transfer, as a result of moves in market prices and portfolio valuations. The insights can also improve a wealth manager's productivity. A rank-ordered list of clients with the highest likelihood of churning helps wealth managers focus their efforts on creating prescriptive asset retention campaigns targeting at-risk, high-value clients.

## **Summary**

Delivering a superior, personalized client experience is a strategic priority for private banks. Machine intelligence software represents an innovative, new approach to helping banks create more holistic, behavior-based client profiles to meet that goal. Ayasdi's software brings together a broad range of machine learning, geometric, and statistical algorithms with topological data analysis to rapidly correlate and analyze client, product, and market-related data. It uncovers subtle, precise client sub-segments from highly complex data. The underlying attributes that describe each segment inform the development of precise client profiles as well as predictive models that can be dynamically updated.

Using Ayasdi's software, private banks can create models that help precisely segment their clients, predict the likelihood of clients transacting in specific products, and optimize client engagements through targeted recommendations. They can precisely segment their best and worst performing wealth managers and identify optimal client-manager pairings. They can create models that inform the composition of optimal portfolios based on specific market conditions and that accurately predict the impact of discounting on future revenues and client engagement. They can also develop models that accurately predict asset churn and devise targeted retention strategies. Ayasdi's software can empower wealth managers with data-driven insights that help them personalize product recommendations to client, thereby driving greater client engagement and revenue.

# AYASDI

## ABOUT AYASDI

Ayasdi is on a mission to make the world's complex data useful by automating and accelerating insight discovery. The company's Machine Intelligence software leverages Topological Data Analysis (TDA), to simplify the extraction of knowledge from even the most complex data sets confronting organizations today. Developed by Stanford computational mathematicians, Ayasdi's approach combines machine learning algorithms, abundant compute power and topological summaries to revolutionize the process for converting data into business impact. Ayasdi is funded by leading venture capitalists including Kleiner Perkins, Khosla Ventures, Institutional Venture Partners, Citi Ventures, and FLOODGATE. The company counts many of the Fortune 500 as clients.

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