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The analytics-enabled collections model



How machine learning can improve pricing performance



Combating payments fraud and enhancing customer experience



Using data to unlock the potential of an SME and mid-corporate franchise



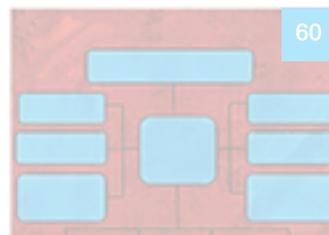
Hidden figures: The quiet discipline of managing people using data



Using analytics to increase satisfaction, efficiency, and revenue in customer service



Designing a data transformation that delivers value right from the start



Building an effective analytics organization



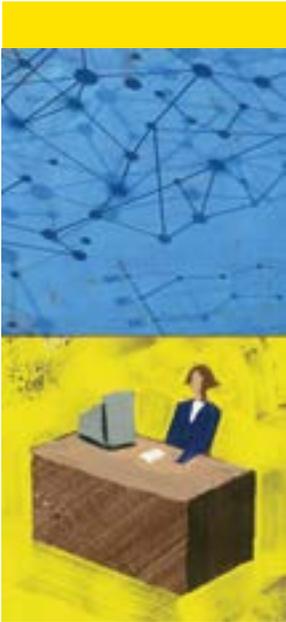
"All in the mind": Harnessing psychology and analytics to counter bias and reduce risk



Mapping AI techniques to problem types



Data sheet: Advanced analytics



Using analytics to increase satisfaction, efficiency, and revenue in customer service

As payments providers around the globe cope with increasing pressure on revenues and margins, customer service is increasingly becoming an important asset for driving top- and bottom-line performance, and improving the customer experience. While most banks, card companies, and other payments providers have implemented various degrees of customer service transformation by using advanced analytics, the discipline has yet to be fully leveraged in this regard. To realize the full potential of today's analytical capabilities financial institutions will need to possess, acquire, or develop the relevant capabilities and use them to customize and enhance a wide range of customer interactions.

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Payments providers that adopt advanced analytics to develop broad integrated approaches are seeing significant improvement: customer satisfaction scores rose 5 to 10 percent and operating costs declined 15 to 20 percent when they used analytics to eliminate cross-channel leakage and migrate more customer interactions into self-serve channels. Analytics also enabled these firms to improve customer retention and revenues by 10 percent or more, by enhancing the customer journey and improving cross-selling.

The future of customer service

Customer service is shifting dramatically, from phone and branch-centric models to an omnichannel interaction dynamic in which customers move seamlessly among service channels, including mobile, phone, chat, and online. A McKinsey survey in 2015 showed digital channels accounted for 30 percent of customer interactions. We expect this share will approach 50 percent by 2020. And of this, 26 percent will be exclusively digital with no branch interaction.

Payments customers expect high-quality service across channels, similar to what

they enjoy at other financial institutions and leading service providers, like Amazon and Zappos. To deliver this level of service, payments firms need to optimize customer and prospect telecommunications and deliver seamless omnichannel interactions.

Building an omnichannel customer service model

Traditionally, financial institutions have tried to optimize customer service within channel silos, including call centers, online, and mobile. The key to delivering a high-quality omnichannel experience is adopting a broad customer journey approach that integrates customer interactions across digital and traditional channels. Several institutions have already embarked on such a model. A global life insurer, for example, recently developed a five-year plan to migrate nearly half of its customer journeys into self-serve channels. However, too often such changes are viewed as one-time efforts rather than as a large-scale transformation. Designing a comprehensive, ongoing program is key to sustaining omnichannel service improvements.

Investing in the talent to transform

A key part of transforming the customer experience is migrating basic transactions to self-service channels, and complex transactions to agent-assisted channels. While most organizations invest in ongoing agent training and capability building, transforming the customer experience demands a more substantial investment in talent. It requires investing in technology that enables customer service professionals to have more effective interactions with customers. For example:

- Real-time coaching software, such as Cogito, provides live feedback about customers to agents during customer calls, so agents can tailor the discussion to customer needs.
- Applications such as Verint use speech analytics that foster more personalized interactions with customers.

To provide more personalized customer service, financial institutions must rethink how they interact with customers and prospects. Analytics can personalize customer experience by, for example, identifying the next-best action or product offering. (See “Using data to unlock the potential of an SME and mid-corporate franchise,” page 28.)

Investments in technology are, of course, critical to transforming the customer experience. Two investment types in particular are key: developing the agility to rapidly build, pilot, and launch a broad transformation; and robotics or artificial intelligence (AI) to reduce manual workloads, improve cycle times, and minimize back office errors. McKinsey research shows that 65 percent of back-office tasks at contact centers, and 30 to 50 percent of front-line calls, can now be automated.

Six hallmarks of analytics success

Financial institutions that are successfully using advanced analytics to enhance the customer experience share six common hallmarks (Exhibit 1).

1. Migrating customers to digital channels

Given customers' preference for omni-channel service, there are two important questions financial institutions must address: First, how do they create seamless transactions for digital natives, who prefer digital-only service? Second, in serving less digitally inclined customers, how can financial institutions use tools like journey analytics to prevent the use of multiple channels for the same query? The main challenge for customer service organizations is to identify the most appropriate transactions for migration and ensuring they are completed satisfactorily in digital channels whenever possible. Payments leaders in digital migration are achieving 20 to 30 percent reductions in call volume and successfully enhancing the customer experience. Some industry leaders are also developing a 360-degree, multitouch, multichannel view of customer interactions using journey analytics; but this requires robust integrated datasets that can capture customer interactions across channels.

2. Improving behavioral routing and IVR containment

Financial institutions have been using interactive voice response (IVR) technology for several decades, but few have optimized these capabilities. Doing so requires more than investing in additional VR capabilities. Financial institutions can apply advanced analytics or AI-based technologies to improve behavioral routing and IVR containment:

- Using analytics to identify reasons for call transfers can help increase the number of interactions contained within the IVR environment. Deeper analysis of calls can classify customers into clusters based on value, behavior, and tenure, speeding up IVR service and streamlining unnecessary trees.
- Matching agents to callers based on personality (using technologies like Afiniti and

Mattersight) can meaningfully improve customer experience and call efficiency.

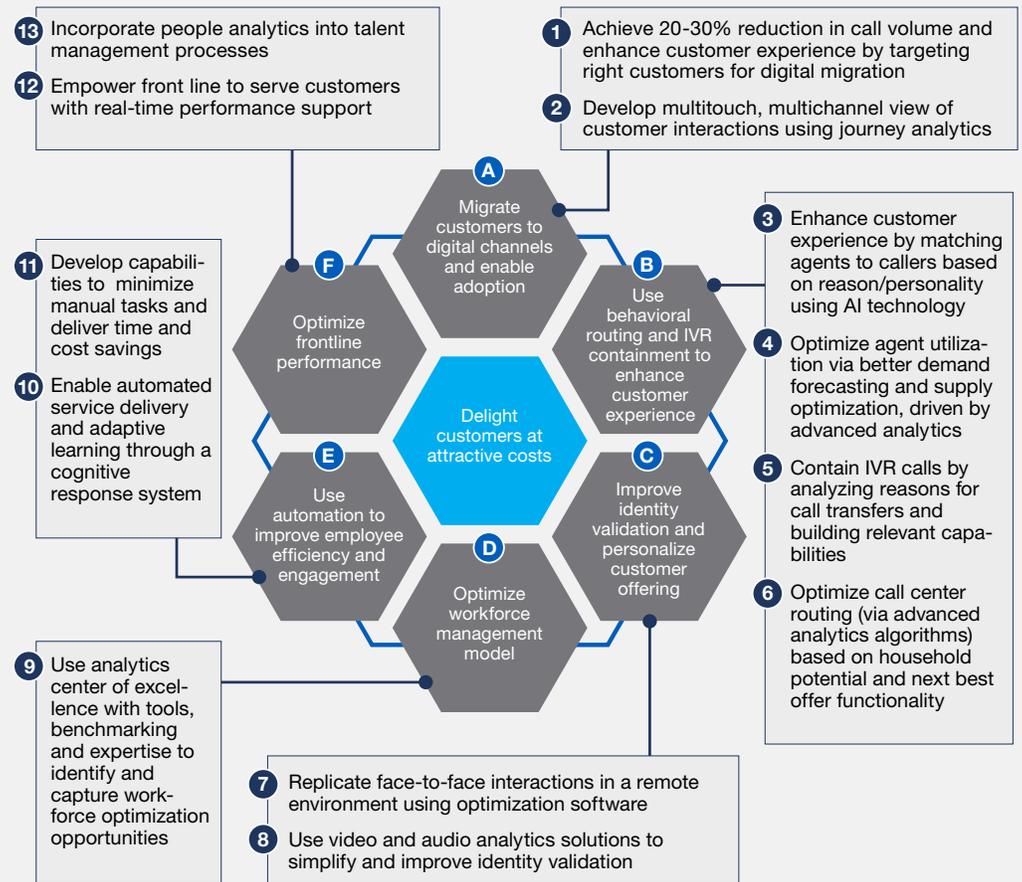
- Directing calls from high-potential customers to agents trained to present tailored products (using algorithms based on the customer’s needs) can boost productivity.

3. Strengthen identity validation and personalize product offerings

The layering of analytics on video and audio

Exhibit 1

Analytics use cases in customer care center around six core imperatives.



Source: McKinsey Analytics

channels can improve identity validation and personalize the product offering. Examples include:

- Replicating face-to-face interactions in a remote environment using optimization software enables more personalized and secure interaction.
- Identity validation can be simplified and improved with features like facial recognition (online identification) and voice recognition (in app account access).

4. Optimize the workforce management model

Most financial institutions have established internal analytics centers staffed with experts working to capture workforce optimization opportunities. Yet, most workforce management practices are rooted in backward-looking general demand-supply matching, assuming some average service level for a day. However, customer research reveals that assumptions of averages fall short. There are three important challenges for each financial institution:

- How can they effectively manage the tails that drive customer satisfaction or dissatisfaction?
- How can they use machine learning to manage resiliency and drive the next level of predictive modeling on demand (e.g., impact of hurricanes)?
- How can analytics centers use real-time simulation tools to create efficiencies in workforce management?

5. Automate to improve employee efficiency and engagement

Thus far, automation has not been systematically applied in the customer service environment. In customer care, AI can be used to

automate services by supporting customers with virtual agents, and contact center agents through real-time interaction tools (e.g., automated knowledge management systems) and back-end automation (e.g., robotic process automation). Virtual agents can solve customer requests by using natural language processing technology, and get smarter over time through machine learning. For example, programs like IPSoft's Amelia can play the role of any customer service agent by rapidly absorbing call logs, recognizing emotional context, and interacting with customers, thereby saving costs and lifting both revenue and customer experience. With large tech players moving into the digital assistant arena, we expect things to evolve quickly in this area.

6. Optimize frontline performance through analytics in recruiting

Recruiting processes for customer service organizations are seldom informed by what makes agents successful. Leading firms take an approach called people analytics methodology, which reverse engineers the process, starting with the best customer service agents and identifying common traits that makes them successful. They then apply these insights at the top of the recruiting funnel in selecting candidates. By applying people analytics in this way, financial institutions can improve talent management in customer experience as well as in the wider organization.

Case example I: Improving digital channel experience and digital adoption

Recently, a North American bank used journey analytics to accelerate digital adoption across its customer base. Using analytics and design thinking to address digital adoption levers across customer journeys (rapid digitization, containment, signature moments, customer targeting), the bank achieved a gain

of more than 20 percentage points in digital engagement. The initiative included the following elements:

- **Journey level scan:** Using interaction data and analytics from all channels (digital, call, branch, email/text, ATM), the bank prioritized about 15 core customer journeys and more than 40 sub-journeys for digitization,
- **Quantified journey redesign:** The bank then redesigned each core journey using analytics-based Quantified Experience Design (QED),¹ leading to an increase in digital engagement of 10 to 15 percentage points, and similar improvements in customer experience measures. Analytics drills targeted key drivers of customer experience and other cross-cutting themes.
- **Real-time customer nudging:** The bank introduced a customer targeting process based on customer behaviors and journeys to accelerate digital adoption, which generated a 5- to 10-percentage-point increase in product adoption
- **Journey tracking:** The bank transitioned from an overall customer experience-based performance measurement system to one based on operating drivers for each journey and channel, to track improvements and re-orient program
- **Capability building:** Using journey analytics and QED, the bank designed and launched a capability-building program for more than 800 contact center agents.

Case example II: Enhanced contact management

A credit card company was struggling to migrate customers to its self-serve channels despite having invested in natural-language

speech IVR. Consequently, it devised a three-pronged approach to accelerate migration, which focused on resolving (and containing) a higher percentage of calls within their IVR, and delivered a differentiated experience along the customer journey:

1. To better understand its customers' behavior, the company analyzed five million customer calls. With these findings, they classified customers into eight archetypes based their value, behavior, and length of time as customers.
2. Management also used brainstorming techniques to develop and refine several initiatives based on feasibility, potential economic impact, and customer experience improvement. This generated 48 prioritized initiatives that spanned VR (e.g., capture additional information and make it less easy for customers to “rep out”), routing (e.g., adapt service standards to match expectations of different customers), and post-VR (e.g., focus on education and self-service awareness for disengaged customers).
3. The company also surveyed 1,500 employees, conducted focus groups that engaged managers, and surveyed more than 1,000 customers to explore tactics for increasing IVR containment and digital engagement.

Through these efforts, the credit card provider identified 200 to 500 bps in potential improvement in the containment rate (Exhibit 2). The VR enhancements and post-VR agent initiatives also led to a 5 to 10 percent reduction in costs or incremental annualized savings.

Case example III: Demand forecasting

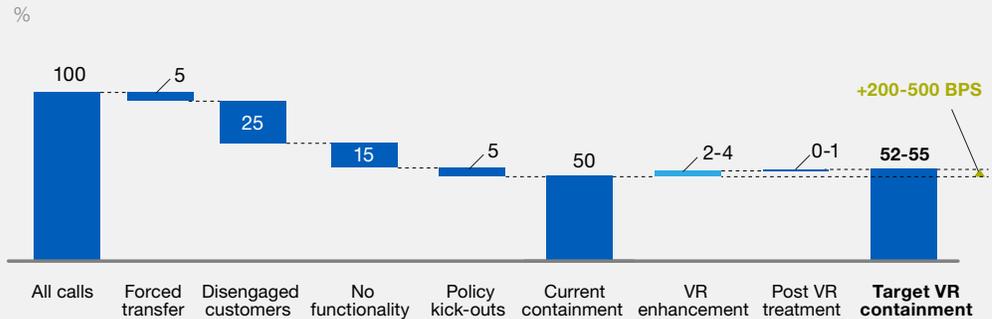
The call center head of a large UK-based bank

¹ QED is a data and design methodology that helps executives prioritize and implement customer journey designs, and helps designers focus on features that will maximize value for customers. For more insight visit: www.mckinsey.com/business-functions/digital-mckinsey/our-insights/digital-blog/design-meet-data-unlocking-design-roi.

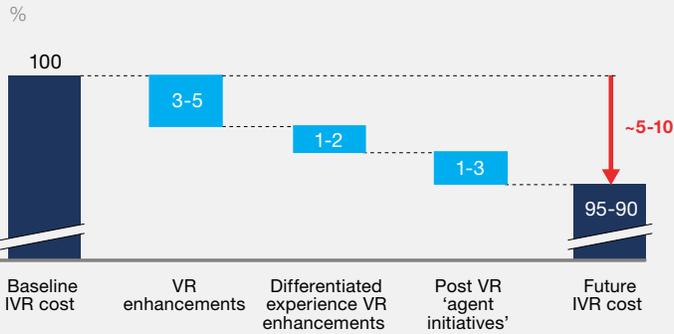
Exhibit 2

VR containment and differentiated customer experience led to 200-500 bps containment increases and annual cost savings of 5-10%.

Containment potential



Saving potential



NOTE: 100M calls into the client VR per year
Source: McKinsey Analytics

turned to analytics to optimize agent utilization by automating demand forecasting, as part of a larger analytics-driven transformation at the institution. The approach incorporated the following elements:

- **Creation of a robust integrated dataset** that is foundational for the analytics exercise, by combining five different data sources—data for more than ten million customers, call data, agent data, bank data related to IT outages, and other external data (e.g., weather)
- **Development of two sets of random forest machine learning models** to continuously learn thresholds and forecast both number of calls and average handling time, on a monthly basis (4 to 16 months ahead and updated monthly) and a 30-minute level basis (8 to 10 weeks ahead and updated daily)

- **Bayesian techniques** to capture most recent dynamics for extrapolation, non-linear regression models for forecasting, and more than a hundred features to capture different levels of seasonality.

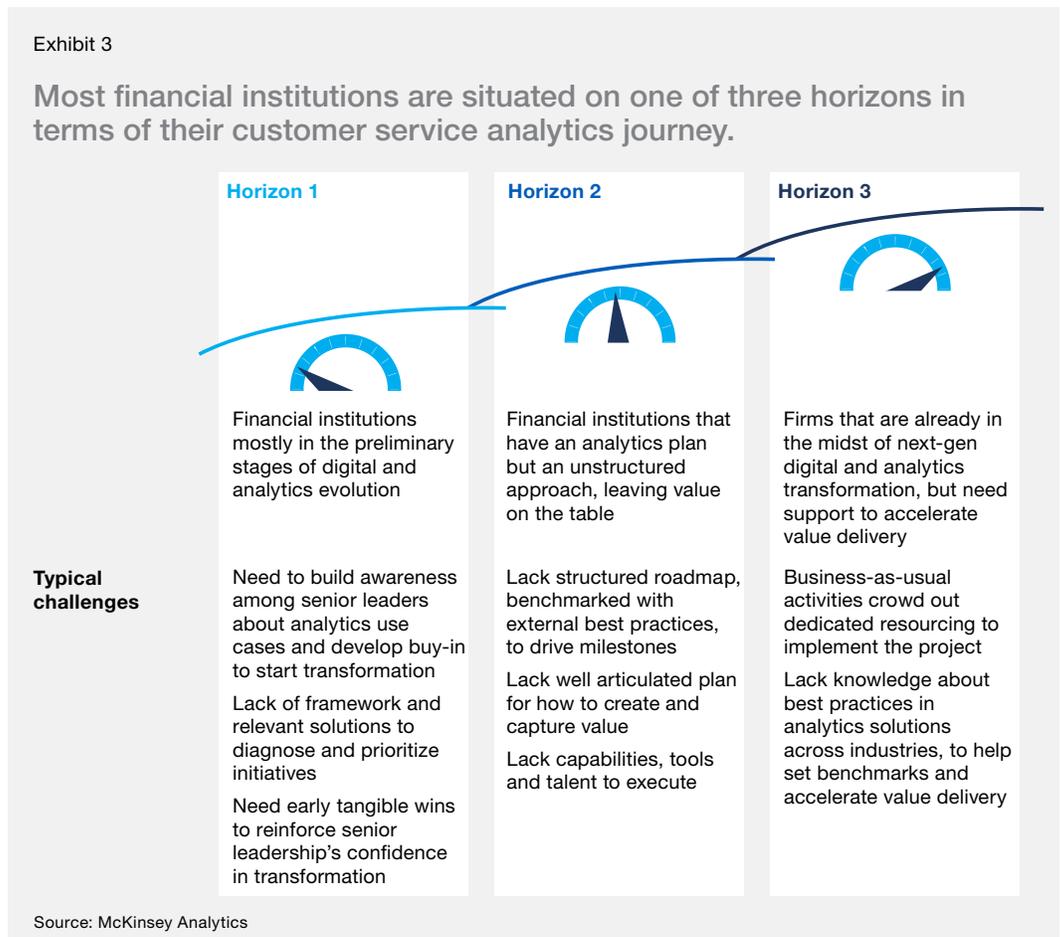
The bank achieved a 20 to 40 percent error reduction in forecasting for a subset of population and are rolling it out across all FTEs.

Starting the journey on analytics to customer service

When introducing advanced analytics, a critical first step is clearly understanding the organization’s current position in terms of one

of three horizons (Exhibit 3):

Those on *Horizon 1* generally have low levels of awareness regarding recent developments in advanced analytics for customer service. These organizations need to begin their transformation by building a business case, educating their leadership, and obtaining organizational buy-in. Once these initiatives are underway, quick, tangible wins should be pursued to reinforce the organization’s commitment to a full transformation. Additionally, another challenge faced by these organizations is lack of in-house knowledge



on relevant frameworks and solutions, to diagnose and prioritize initiatives.

Enterprises at *Horizon 2* have a better understanding of recent advances in the field, and have started to experiment with or adopt them. However, they have done so largely on an ad hoc, unstructured basis. Unfortunately, informal approaches are likely to leave significant value on the table. The key challenge for *Horizon 2* organizations is to identify the most efficient path for delivering the desired results. This might be accomplished, for instance, by shaping their perspectives through a sharing of external best practices, and then setting challenging timelines.

Horizon 3 firms are well ahead of the curve, applying next-generation analytics solutions

to transform the customer service model. At this stage, the key challenge is finding ways to advance to even higher levels, and to continue to invest in next-generation solutions.

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The use of new analytical tools and capabilities are transforming customer service in financial services. The following questions can help firms shape their strategy discussions:

- Where do we stand currently in terms of the three advanced analytics/customer service horizons?
- What challenges are preventing us from advancing to the next horizon?
- What immediate steps can we take to address these challenges?

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