

Balancing Cost Efficiency and Customer Loyalty: Redesigning AI-Enabled Customer Service in a Large Bank

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Abstract: The rapid adoption of artificial intelligence (AI) in banking has created a tension between cost efficiency and the trust-based relationships that underpin customer loyalty. This paper analyzes a large bank's AI-enabled customer service transformation, during which a 19% reduction in personnel costs coincided with a 300% increase in customer complaints and a 9% customer loss. Drawing on research on AI service quality, trust, and reputational capital, chatbots in financial services, digital transformation strategy, and change management, the study diagnoses the bank's core failure as the use of AI as a cost-focused gatekeeper rather than a human-aligned service capability. Using the Integrated Methodological Framework for Digital Transformation Strategy (IMFDS) and the ADKAR change management model, the paper links technical design choices and leadership decisions to dark-side outcomes such as technological debt, perceived powerlessness, and erosion of trust. The analysis concludes with an evidence-based redesign of the bank's service model, including a hybrid human-AI architecture, sentiment-driven escalation, AI quality assurance governance, and explainable AI (XAI) to restore transparency and accountability. These recommendations offer a practical roadmap for financial institutions seeking to balance automation with sustainable customer relationships in AI-enabled service environments.

Keywords: Artificial Intelligence, Digital Transformation, Customer Service, Banking, Chatbots, Trust And Loyalty

Introduction

The modern financial services landscape is defined by a digital-first imperative in which traditional institutions must balance operational efficiency with the complex expectations of a digitally native consumer base. As organizations undergo digital transformation, many turn to artificial intelligence (AI) and chatbots to automate high-volume customer service operations, reduce personnel costs, and maintain 24/7 availability. In banking, these technologies are marketed as tools for frictionless interaction, but empirical research shows that implementation often produces a service paradox in which efficiency gains are offset by a decline in relationship quality. This tension is exemplified by the case in this study: a large bank that achieved a 19% reduction in personnel costs but experienced a 300% increase in customer complaints and a 9% loss of its customer base within 12 months.

This failure reflects a critical trend in recent literature: over-reliance on automation for nuanced, emotionally charged financial inquiries leads to breakdowns in natural language understanding and intent interpretation. Ashfaq et al. (2020) and Eren (2021) note that in banking, where trust is the primary currency, poorly configured AI that fails to provide relevant or empathetic responses not only mishandles individual transactions but also degrades institutional reputation. The bank's implementation treated AI as a gatekeeper rather than a service enhancer, making it difficult for customers to reach live representatives and leading to dark-side outcomes of digital transformation, in which customers feel powerless and perceive a loss of personalization.

This paper analyzes the bank's digital transformation failure by synthesizing research on AI service quality, human-chatbot interaction, and strategic management frameworks. Using the Integrated Methodological Framework for Digital Transformation Strategy

(IMFDS) and the ADKAR change management model, it evaluates the underlying causes of churn and proposes an evidence-based strategy to realign the bank's technological infrastructure with core human needs. The analysis takes a deliberately critical view of cost-driven automation in banking, emphasizing the long-term erosion of trust as a primary strategic risk.

Problem Statement

The central problem in this case is a fundamental misalignment between the bank's digital transformation tactics and the conditions required to sustain a trust-based financial relationship. While the bank reduced personnel costs by 19%, the accompanying 300% increase in complaints and 9% loss of customers show that these savings were achieved at the expense of service quality and retention. Research indicates that such outcomes are often rooted in structural and leadership-related factors, particularly when AI is deployed as a gatekeeping mechanism rather than a support tool. The bank's AI system relies on rigid decision trees that lack the contextual memory needed for complex inquiries, leaving customers unable to resolve nuanced, emotionally charged issues. As a result, customers feel powerless and lose trust when the AI fails to interpret nuanced language or emotional expressions in high-stakes situations such as billing disputes or account security concerns.

The goal is not merely to restore previous service metrics, but to redesign a model in which AI supports, rather than replaces, human decision-making in customer service. Evidence-based interventions, such as process redesign, governance enhancements, and leadership development, are necessary to address these structural failures. Accordingly, this analysis clarifies the underlying problem by linking the case's symptoms to broader organizational patterns of over-automation documented in existing research.

Purpose Statement

The purpose of this paper is to synthesize empirical evidence and theoretical frameworks to develop a comprehensive redesign of the bank's AI-enabled customer service model. By integrating research on AI service quality, trust, and loyalty, the paper explains how a singular focus on cost containment contributed to a 300% surge in complaints and significant customer churn. The study evaluates the bank's digital transformation through the lens of the Integrated Methodological Framework for Digital Transformation Strategy (IMFDS) to identify gaps in strategic alignment. In addition, the research applies the ADKAR change management model to examine how leadership, culture, and employee involvement shape the success of AI adoption in customer-facing roles. Ultimately, the goal is to propose a practical, evidence-based plan that balances operational efficiency with long-term relationship quality in the banking sector by repositioning AI as a complement to, rather than a substitute for, human expertise.

Significance

This issue is significant because it exemplifies a pervasive challenge in modern banking: advantage, and the loss of customers and talent to rivals. The recurrence of similar failures across industries indicates that the problem extends beyond the risk that digital transformation erodes the trust and loyalty that underpin financial relationships. Studies show that when AI is used to restrict access to human agents, customers experience powerlessness and frustration, particularly in high-stakes situations such as billing disputes or account security concerns. If this misalignment is not addressed, institutions face long-term risks that extend beyond short-term dissatisfaction, including reputational damage, diminished competitive single-bank advantage, and the need for a systematic, theoretically grounded response.

The significance of this problem also reaches into the organization's human and cultural dimensions. Poorly managed AI initiatives can weaken employee engagement, heighten resistance to change, and compromise organizational resilience, especially when staff

perceive technology as a replacement rather than an augmentation of their roles. By integrating current research with the case analysis, this paper highlights the potential impact of inaction and underscores the importance of empirically supported strategies for aligning AI with both customer expectations and workforce capabilities. Addressing these challenges effectively not only benefits the bank featured in the case but also contributes to the broader scholarly discourse on achieving sustainable competitive advantage through ethical, human-centered digital transformation.

Literature Review

The objective of this literature review is to situate the bank's digital transformation within the broader scholarly conversation by integrating research that explains the organizational dynamics and consequences illustrated in the case. Research on AI service quality, task complexity, trust and reputation, digital transformation frameworks, human-centered change, and explainable and ethical AI collectively explains why a cost-focused chatbot rollout led to a 300% increase in complaints and a 9% customer loss.

The Dimensions of AI Service Quality

Studies of AI service quality identify specific dimensions that directly shape customer satisfaction and loyalty, providing a baseline against which the bank's chatbot implementation can be evaluated. Hsu and Lin (2022) identify that system quality, service quality, and information quality are primary predictors of user satisfaction, showing that well-designed chatbots can enhance perceived value when these dimensions are robust. Ashfaq et al. (2020) show that when these conditions are not met, customer dissatisfaction and discontinuance intention increase sharply, a pattern reinforced by Chen et al. (2021, 2023) and Hsu and Lin (2022).

In the bank's context, the 300% increase in complaints indicates that core quality dimensions were not adequately addressed. Ashfaq et al. (2020) model satisfaction and continuance intention in terms of confirmation, the degree to which actual service meets initial expectations, and show that disconfirmation leads to reduced satisfaction and loyalty. The bank's chatbots frequently failed to interpret nuanced language or emotional expression in high-stakes scenarios, representing a fundamental disconfirmation of service quality and making churn a predictable outcome rather than an unexpected side effect of automation.

The Service Paradox: Cost Efficiency vs. Customer Experience

The bank's experience exemplifies the service paradox, where efficiency gains from automation are offset by deteriorating relationship quality. Ranieri and Mele (2024) distinguish between the bright side of chatbots, such as convenience and responsiveness, and the dark side, which includes stress, frustration, and abandonment when chatbots are unresponsive or lack empathy. This distinction is reinforced by Jenneboer et al. (2022), who, in a systematic review, show that empathy-related cues and reliability are crucial antecedents of customer loyalty, indicating that technical performance alone is insufficient to sustain positive outcomes.

By emphasizing a 19% reduction in personnel costs while constraining access to human agents, the bank's chatbot functioned less as a service enhancer and more as a cost-control mechanism. This design choice suppressed the empathy and flexibility that customers expect in complex financial interactions, thereby amplifying the dark-side effects identified in the literature.

Task Complexity and the Human-in-the-Loop

Research on task complexity clarifies why chatbots cannot simply replace human agents across all service encounters. Xu et al. (2020) find that AI is well-suited to low-complexity, informational tasks, whereas customers overwhelmingly prefer human agents for complex, ambiguous, or high-

stakes problem-solving. This pattern is reinforced by Song and Mou (2022), who highlight that communication quality and perceived privacy risks strongly influence acceptance of AI-driven services, suggesting that customers are particularly wary when high-stakes issues are routed through rigid automated systems.

The bank's implementation disregarded these distinctions by sending nuanced, multi-step, and emotionally charged problems through decision-tree chatbots without robust escalation paths. This approach was weakened by a failure to categorize tasks by their cognitive and emotional load. Xu et al. (2020) note that AI performance depends on the match between an algorithm's problem-solving ability and the complexity of the user's request; in banking, common inquiries fall into high-cognitive/low-emotional (e.g., balance checks) and high-cognitive/high-emotional (e.g., identity theft, mortgage errors) categories.

When customers are in a high-stress state, their language becomes more nuanced and emotionally laden, making it harder for limited natural language processing models to correctly infer intent. Ashfaq et al. (2020) highlight that information quality must be paired with empathy cues to maintain satisfaction; without a human-in-the-loop to provide empathy and judgment, the bank's chatbot created a technological wall that blocked access to the human assistance customers sought. This misfit between task complexity and channel capabilities transformed routine service failures into experiences of entrapment and powerlessness.

Trust, Reputation, and the Psychology of Banking Chatbots

Digital transformation in banking is ultimately constrained by customers' perceptions of trust and risk, and the bank's outcomes indicate a profound rupture in these perceptions. Eren (2021) and Mogaji et al. (2021) emphasize that trust and perceived security are central to banking relationships, with Nguyen and Le (2021) linking these factors directly to continuance intention. A 9% customer loss in a sector characterized by high switching costs signals not just dissatisfaction with an interface, but a deeper breakdown in institutional trust.

The bank's experience also illustrates the accumulation of technological debt, where short-term efficiency gains create long-term liabilities in customer experience. Syed et al. (2025) argue that digital transformation framed solely as cost reduction tends to produce degraded service quality that must later be "paid back" through remediation efforts. In this case, a 19% reduction in personnel costs coincided with an erosion of trust and loyalty, suggesting that the savings were financed by drawing down the institution's reputational capital. Service recovery research shows that well-managed failures can strengthen loyalty when organizations acknowledge problems and provide effective remedies, but the bank's chatbot design prevented such recovery. Haugeland et al. (2022) find that when AI systems lack breakdown handling, the ability to recognize failure and offer alternatives, users experience secondary frustration that exceeds the initial disappointment. Customers were not only dissatisfied with unresolved issues but were also frustrated by repeated, unhelpful interactions with an unresponsive chatbot. This combination converted routine service problems into a full-scale reputational crisis.

Reputational capital, built through consistent, high-quality interactions, was eroded as the chatbot's failures came to be interpreted as signals of institutional neglect rather than isolated technical glitches. Kumar and Kannan (2025) note that in digital contexts, customers often view automated failures as deliberate organizational choices rather than accidental human errors, making reputational damage particularly acute.

The Primacy of Trust in Financial AI

Within this broader reputational context, trust emerges as the central determinant of whether customers continue using banking chatbots and related digital services. Nguyen and Le (2021) identify that satisfaction and trust are significant drivers of continuance intention in banking

chatbots, framing reliable performance as a prerequisite for sustainable digital relationships. Eren (2021) similarly finds that chatbot performance and trust strongly influence satisfaction and perceived institutional reputation in a banking setting.

Because financial data and decisions are highly sensitive, customers interpret chatbot failures as evidence that the bank itself may be unreliable or unconcerned. The bank's 300% complaint surge can thus be read as a manifestation of damaged trust: when AI repeatedly fails to resolve billing disputes or interpret urgent inquiries, customers attribute the failure to the bank's priorities and competence.

Anthropomorphism: The Risks of Humanizing the Bot

Design choices that make chatbots appear more human can both facilitate and undermine customer relationships. Sheehan et al. (2020) find that anthropomorphic features, such as names and conversational personas, can increase initial engagement and adoption when communication quality is high. In contrast, Cronic et al. (2022) show that these same features can amplify anger and reduce satisfaction among already frustrated customers, particularly when service failures occur. For the bank, anthropomorphic design likely intensified negative emotions rather than softening them. Customers who were already struggling to reach human agents were forced to interact with a chatbot that mimicked human traits without delivering human competence or empathy. This mismatch turned the chatbot into a focal point for frustration, helping explain why formal complaints escalated so dramatically. The anthropomorphism literature suggests that, in high-stakes service contexts, human-like design must be carefully calibrated; when underlying service quality is poor, humanizing the bot magnifies rather than mitigates dissatisfaction.

Disclosure and Perceived Privacy Risks

Transparency about AI involvement also shapes how customers interpret chatbot interactions, particularly regarding fairness and privacy. Luo et al. (2019) show that explicit disclosure that an agent is a chatbot can reduce purchase rates in some contexts, as customers may feel deceived or undervalued when they realize they are interacting with a machine rather than a human. Mogaji et al. (2021) add that banking customers evaluate chatbots through the combined lenses of trust, expectations, and perceived risk, with privacy concerns playing a central role in their willingness to adopt and continue using these services.

The bank's use of AI as a gatekeeping mechanism, without sufficient contextual memory or explanation, likely intensified privacy and fairness concerns. Customers who needed to repeat sensitive information or who encountered rigid decision paths are likely to question whether their data was being handled intelligently and securely. In a sector where perceived mishandling of data can rapidly trigger attrition, this erosion of perceived security and transparency offers a plausible mechanism for the 9% customer loss. The literature on disclosure and privacy thus reinforces the conclusion that chatbot design choices do not merely affect convenience; they actively reshape the perceived integrity of the banking relationship.

Frameworks for Digital Transformation and Strategic Alignment

Digital transformation frameworks provide a structural lens for understanding how the bank's AI initiative diverged from best practices. Korachi and Bounabat's (2019) Integrated Methodological Framework for Digital Transformation Strategy (IMFDS) argues that effective transformation requires aligning strategic intent, business models, capabilities, and implementation roadmaps. Rather than treating digital tools as isolated upgrades, IMFDS emphasizes staged progression through strategic intent, capability assessment, roadmap design, governance, and continuous optimization.

The bank's implementation bypassed key IMFDS stages by moving quickly from cost-reduction intent to large-scale deployment without adequately assessing workforce

capabilities, customer digital fluency, or supporting infrastructure. Syed et al. (2025) show that AI and blockchain improve performance only when supported by appropriate infrastructure and process redesign, whereas Kumar and Kannan (2025) stress that AI-driven transformation must reshape products and processes to create value for customers, not merely for the institution. In this case, the bank's automation strategy failed to align with customers' lived experience, turning AI into a barrier to service rather than a conduit for enhanced value.

The concept of technological debt, discussed earlier in relation to trust and reputation, also appears in digital transformation research as a warning against unsynchronized change. When personnel reductions are not accompanied by corresponding investments in AI intelligence, data integration, and governance, organizations accumulate latent costs in the form of unresolved errors, complaints, and attrition (Kumar & Kannan, 2025; Syed et al., 2025). The bank's 19% reduction in personnel, combined with a 300% increase in complaints and 9% churn, matches this pattern of unsynchronized transformation and underscores the need for a more methodical, framework-guided approach.

Governance and Digital Maturity

Governance mechanisms are central to moving from tactical automation toward mature, resilient digital operations. Jenneboer et al. (2022) and Ranieri and Mele (2024) highlight that service quality and loyalty outcomes depend on continuous refinement of chatbot performance based on real-world data, including complaint patterns, error types, and sentiment indicators. Digital transformation strategies must therefore incorporate feedback loops that monitor both efficiency metrics and relational indicators such as satisfaction, trust, and perceived fairness.

The bank's metric focus appears to have been skewed toward cost outcomes, particularly personnel reductions, while neglecting early warning signs in complaints and attrition. This imbalance reflects a low level of digital maturity, in which AI is treated as a static cost-saving tool rather than a dynamic service capability requiring ongoing oversight. The governance literature suggests that more sophisticated arrangements, such as cross-functional AI oversight committees and structured quality assurance processes, are necessary to detect dark-side outcomes early and adjust system design before reputational damage becomes acute.

The Human Element: Change Management, Leadership, and the ADKAR Model

Digital transformation outcomes are strongly shaped by human and cultural factors, not just technical design. The ADKAR model conceptualizes individual change as a progression through awareness, desire, knowledge, ability, and reinforcement, offering a structured approach for managing how employees experience organizational change (Roshini Devi & Thekkekara, 2022). Bah et al. (2024) extend this perspective by showing that employee involvement and humble leadership improve alignment between new systems and work practices and reduce resistance.

In the bank's case, the decision to cut personnel by 19% without a corresponding investment in workforce readiness and role redefinition reflects a failure to manage these human dimensions. Frontline employees were positioned as replaceable labor rather than as partners in designing and supervising AI-enabled service, leaving them with limited knowledge and ability to support the new system. This neglect of the early ADKAR stages likely generated resistance and reduced the organization's capacity to handle exceptions when the AI failed, contributing indirectly to the surge in complaints.

Leadership and culture further influenced the trajectory of the transformation. Kumar and Kannan (2025) argue that successful digital initiatives require leaders to cultivate digital fluency, support continuous learning, and frame technology as an augmentation of human capability rather than a threat. At the bank, the top-down, technocratic rollout appears to have marginalized the human-in-the-loop, creating a service gap in which neither the chatbot nor the diminished, demoralized workforce could meet customers' needs. The literature on

change management thus reinforces the conclusion that the bank's difficulties stem not only from technical missteps but also from a broader failure to integrate human and technological capabilities in a coherent change strategy.

Explainable AI and the Architecture of Trust

As banks adopt more sophisticated AI, explainability has emerged as a critical requirement for sustaining trust in automated decisions. Explainable AI (XAI) refers to systems whose actions and outputs can be understood and evaluated by human stakeholders, thereby reducing perceptions of arbitrariness and unfairness (Williamson & Prybutok, 2026). Bajracharya et al. (2025) emphasize that XAI is particularly important in high-stakes domains, where opaque models can leave users feeling disempowered and unsure how to contest or correct errors.

The bank's reliance on opaque decision trees that failed to interpret nuanced customer intent exemplifies the "black box" problem in financial automation. When customers receive repetitive or irrelevant responses without understanding why the system is failing, they experience a loss of agency and fairness that compounds their frustration. Williamson and Prybutok (2026) argue that such opacity undermines the psychological contract of openness and accountability that customers expect in financial services, especially when dealing with billing disputes or security issues.

XAI-oriented design offers mechanisms for mitigating these effects by providing explanations of system limitations and decision rationales. Bajracharya et al. (2025) note that explainable systems can detect when a chatbot is struggling to understand a user's input and trigger more graceful escalation to human agents. By clarifying what the system can and cannot do, XAI aligns with the information quality and expectation-confirmation principles identified by Ashfaq et al. (2020), thereby reducing the likelihood that dissatisfaction will escalate into complaints and churn. While the bank's existing implementation lacks these features, the XAI literature suggests that greater transparency and human-supervised escalation would have reduced the intensity of customer backlash.

Data Privacy, Algorithmic Bias, and Social Equity

Ethical considerations related to data privacy and algorithmic bias further shape how customers perceive AI-enabled banking services. Mahalle et al. (2025) argue that AI-driven personalization depends on extensive use of customer data, which introduces security and misuse risks if data governance is weak. In contexts where customers sense that their data is being processed by opaque, unresponsive systems, privacy concerns can translate into disengagement and attrition. The bank's 9% customer loss may therefore reflect not only dissatisfaction with service quality but also a broader privacy backlash against a system perceived as intrusive and unaccountable.

Algorithmic bias presents an additional layer of risk. Bajracharya et al. (2025) highlight that natural language processing models can encode and reproduce patterns of discrimination present in training data, disproportionately affecting marginalized communities. In a banking chatbot, such bias might manifest as systematic misunderstanding or de-prioritization of certain communication styles or customer segments, leading to perceived unfairness. If the bank's AI was not audited for these effects, vulnerable customers may have experienced both higher failure rates and a stronger sense of exclusion, contributing to the overall complaint surge. Regulatory and governance perspectives underscore the importance of addressing these ethical dimensions. Yong and Prenio (2025) note that financial regulators are increasingly focused on auditability, human oversight, and non-discrimination in AI systems. Failure to establish robust AI-powered data governance structures not only heightens legal and regulatory risk but also undermines customer trust in the institution's commitment to fair and responsible technology use.

The Ethics of AI Disclosure and Transparency

Finally, ethics research emphasizes that AI deployment in banking is not a value-neutral technical change but a transformation with significant implications for transparency and consumer rights. Hare (2022) argues that ethical conduct in digital channels, particularly around disclosure of AI use and potential impacts, is a key driver of long-term customer loyalty and institutional reputation. Mogaji et al. (2021) similarly find that perceptions of honesty and fairness in chatbot interactions shape broader evaluations of the bank.

When institutions fail to disclose AI use clearly or design systems that obscure accountability, customers may experience a deception gap, feeling misled about who or what is handling their concerns. Luo et al. (2019) show that discovering an AI agent after the fact can sharply reduce trust and willingness to transact. In the bank's case, customers who perceived AI as an opaque shield between themselves and human decision-makers may have interpreted the 24/7 chatbot not as a service enhancement but as a strategy for avoiding responsibility. The ethics literature suggests that this perceived lack of transparency and accountability likely amplified the negative impact of service failures, helping to explain why complaints and churn rose so dramatically following the chatbot rollout.

Methods

This study uses a narrative literature review design, integrating diverse theoretical models and empirical findings relevant to the bank's digital transformation. This approach enables a comprehensive synthesis of cross-disciplinary research from information systems, marketing, and organizational behavior to evaluate the complex causes of the bank's service failure.

Search Strategy and Keywords

Articles were identified and refined through an iterative search process across Google Scholar and publisher databases, including ScienceDirect, Emerald, and IEEE Xplore. Keyword combinations included customer service chatbots, satisfaction, loyalty, banks' chatbot services continuance intention, chatbot interaction design and user experience, digital transformation strategy (IMFDS), AI ethics and banking transparency, and the ADKAR change management model. Boolean operators focused the results (for example, chatbots AND banking AND trust, AI AND customer service AND loyalty, digital transformation AND change management, and explainable AI AND banking AND transparency). To balance recency and depth, the search emphasized peer-reviewed journal articles and conference papers published between 2018 and 2025, complemented by the course case description, which supplied contextual details on the bank's outcomes and AI deployment decisions.

Inclusion and Exclusion Strategy

Inclusion criteria required that studies (a) be peer-reviewed journal articles or conference papers; (b) focus substantively on customer service chatbots or AI-powered service agents, banking or financial services applications, digital transformation strategy, or change-management frameworks; and (c) provide empirical or conceptual insight into satisfaction, loyalty, continuance intention, trust, user experience, strategic alignment, ethics, or change processes. The review prioritized work that linked AI service dimensions or digital transformation choices to human and organizational outcomes such as customer churn, reputation, or employee responses. Exclusion criteria removed purely technical optimization studies (for example, model performance without customer or organizational implications), non-peer-reviewed practitioner pieces, and articles with minimal relevance to customer-facing AI in services. This strategy ensured that the synthesis remained focused on issues illuminated by the bank case, including the service paradox, technological debt, reputational capital, trust erosion, and change-management failures.

Corpus Description and Coding

The final corpus includes approximately thirty core sources. These comprise eleven articles on chatbot service quality, satisfaction, loyalty, and continuance intention across sectors such as retail, travel, food ordering, and general services; several banking-specific studies on chatbot trust, risk, and continuance intention; research on anthropomorphism, disclosure, emotional responses, and user experience in human–chatbot interactions; systematic reviews of chatbots and customer loyalty and of human–chatbot interaction; a digital transformation strategy framework (IMFDS); sector-level analyses of AI and blockchain adoption in banking; and organizational change articles focusing on the ADKAR model, employee involvement, and humble leadership.

Articles were coded according to their primary contribution: (1) AI/chatbots and customer outcomes, (2) banking context and relationships, (3) user experience and interaction design, (4) digital transformation strategy and technological debt, and (5) change management, leadership, and ethics. These codes were then mapped to the literature-review subheadings and the case analysis. The bank case served as the focal exemplar, with reported outcomes (a 300% increase in complaints, 9% customer loss, and a 19% reduction in personnel costs) analyzed through these lenses to identify convergent patterns, such as the service paradox, loss of reputational capital, and human-in-the-loop failures. This integrative approach provides the evidentiary basis for the diagnostic argument developed in the paper and for the consulting-style recommendations that follow.

Recommendations

To rectify the service failure and reduce customer churn to 9%, the bank must move from a cost-centric automation model to a research-driven, hybrid service strategy. The evidence indicates that the core failure lies in using AI as a cost-focused gatekeeper rather than as a strategically governed, human-aligned service capability. The following recommendations address channel design, strategic alignment, human factors, stakeholder risks, implementation phasing, and measurement and governance.

Sentiment-Driven Escalation Protocols

To address the surge in complaints, the bank should implement sentiment-driven escalation protocols that detect failing chatbot interactions and rapidly transfer customers to human agents. Real-time natural language processing can identify frustration markers, repeated questions, and distress language during conversations, which are early warning signs of anger escalation (Haugeland et al., 2022). When such markers appear, the system should bypass the gatekeeping function and initiate a warm hand-off to a human specialist, including a concise summary of the interaction to avoid forcing the customer to repeat information.

This protocol directly mitigates the sense of powerlessness that arises when customers are trapped in unproductive loops with chatbots. By designing escalation around sentiment and interaction patterns rather than rigid tiers, the bank can de-escalate emotionally charged situations before they become formal complaints, preserving trust while still using AI for lower-stakes interactions.

AI Quality Assurance (AQA) Governance

The bank should establish an AI Quality Assurance (AQA) function to systematically evaluate chatbot performance, error patterns, and fairness. This group could be staffed by experienced former customer service representatives, leveraging the expertise of a workforce reduced by 19%. Their responsibilities would include red-teaming decision trees, auditing contextual memory and escalation logic, and recommending design changes based on complaint data and frontline feedback.

Aligning this function with the continuous-optimization stage of IMFDS would ensure that the chatbot remains an evolving service asset rather than a static deployment. Reinvesting a portion of the personnel cost savings into AQA governance would convert AI from a source of frustration into a monitored, improvable capability that protects the remaining customer base and gradually rebuilds market trust.

Redesigning the AI Customer Service Model: The Hybrid Approach

The first design priority is to align channels with task complexity and emotional sensitivity, rather than treating chatbots as universal gatekeepers. Research shows that service quality dimensions such as information quality, usability, responsiveness, and interaction quality drive satisfaction, loyalty, and continuance intention (Ashfaq et al., 2020; Chen et al., 2021, 2023; Hsu & Lin, 2022), and that AI is better suited to low-complexity tasks while humans are preferred for complex, ambiguous, or emotionally charged issues (Xu et al., 2020). Accordingly, the bank should classify requests by cognitive load and emotional stakes, routing routine informational queries to chatbots and reserving complex problem-solving, complaints, and high-stakes financial decisions for human agents via clearly visible, low-friction paths.

Banking studies emphasize that performance, trust, and appropriate expectations are crucial in chatbot channels (Eren, 2021; Mogaji et al., 2021; Nguyen & Le, 2021). A research-informed redesign should therefore include clear communication of chatbot capabilities and limits, prominent escalation options when dissatisfaction or distress is expressed, and service-level targets for both resolution and escalation times. Interaction design should prioritize robust error handling, clarification questions, and conversational memory to avoid repeated requests for the same information (Haugeland et al., 2022). Given the risks of anthropomorphism in failure contexts (Crollic et al., 2022; Sheehan et al., 2020), the chatbot should be designed for competence and transparency rather than strong human-like traits, with disclosure of AI involvement paired with reliable performance and easy access to human support (Luo et al., 2019).

Building Strategic Alignment via the IMFDS Framework

Beyond channel redesign, the bank needs to embed its AI initiative in a coherent digital transformation strategy guided by IMFDS. This involves clarifying strategic intent for customer service, conducting capability assessments of both infrastructure and workforce, designing a target operating model, and establishing governance structures before large-scale deployment (Korachi & Bounabat, 2019). In this case, the bank should explicitly frame its strategic intent as balancing cost efficiency with trust, satisfaction, and relationship value, rather than simply reducing personnel expenses.

Practical actions include mapping AI-enabled processes to end-to-end customer journeys, defining where AI adds value and where humans remain essential, and establishing metrics that capture both efficiency and relationship outcomes, such as complaint rates, churn, satisfaction, and trust for AI versus human channels (Kumar & Kannan, 2025; Syed et al., 2025). IMFDS also underscores capability development and governance: the bank should invest in data and analytics to monitor chatbot performance and bias, create cross-functional oversight that includes risk, compliance, IT, customer experience, and frontline staff, and build feedback loops in which insights from complaints and sentiment analysis feed directly into design changes.

Managing Change and Leadership with ADKAR and Employee Involvement

Successful implementation of a redesigned hybrid model depends on managing human transitions as carefully as technical changes. Using the ADKAR model, the bank should structure change activities to build awareness of why the AI strategy is shifting, foster desire to participate, develop knowledge and ability through training and practice, and reinforce new behaviors through

recognition and performance metrics (Roshini Devi & Thekkekara, 2022). The program should explicitly communicate that AI is intended to augment, not replace, human expertise, addressing fears about job loss and role devaluation.

Employee involvement and leadership behavior are central to this process. Empirical work shows that meaningful involvement and humble leadership improve commitment and reduce resistance (Bah et al., 2024), while banking studies emphasize the importance of leadership and culture in digital transformation (Kumar & Kannan, 2025). For the bank, this means involving frontline agents in redesigning workflows, defining escalation rules, curating chatbot training data, and testing new interaction flows. Repositioning these employees as AI-augmented specialists who handle complex, emotionally sensitive cases both improves service quality and strengthens internal ownership of the new model.

Stakeholder and Risk Considerations

A sustainable redesign requires explicit mapping of stakeholder interests and risks, including retail and small-business customers, frontline staff, middle management, and regulatory and compliance bodies. Customers assess AI interactions through trust, security, and perceived fairness, and negative chatbot experiences can quickly translate into broader reputational damage (Eren, 2021; Mogaji et al., 2021; Nguyen & Le, 2021). Digital transformation research warns that cost-driven deployments without stakeholder engagement increase the risk of churn, reputational loss, and regulatory scrutiny (Kumar & Kannan, 2025; Syed et al., 2025).

On the internal side, ADKAR and employee involvement studies show that neglecting awareness and desire among staff leads to resistance and weak adoption, whereas meaningful involvement improves alignment between systems and work practices (Bah et al., 2024; Roshini Devi & Thekkekara, 2022). The bank should therefore identify specific stakeholder risks, such as customer powerlessness, staff role insecurity, and compliance concerns about opaque algorithms, and link each to concrete mitigation strategies, including transparent communication about AI use, co-designed escalation rules, early involvement of risk and compliance in AI decisions, and targeted support for vulnerable customer segments.

Phased Implementation Roadmap

To avoid repeating the abrupt, poorly sequenced rollout that produced the current crisis, the bank should adopt a phased implementation roadmap consistent with IMFDS and digital transformation case evidence (Korachi & Bounabat, 2019; Syed et al., 2025). A three-phase plan is appropriate:

- Phase 1 – Stabilization: Immediately relax chatbot gatekeeping, restore reliable human access for high-stakes issues, implement basic sentiment-triggered escalation, and adjust scripts to improve breakdown handling and error messaging (Haugeland et al., 2022).
- Phase 2 – Redesign: Introduce task-based routing, fully designed sentiment-driven escalation, and AQA governance, and refine chatbot interaction design to reduce frustration and improve empathy cues, in line with loyalty research (Jenneboer et al., 2022; Ranieri & Mele, 2024).
- Phase 3 – Optimization: Integrate explainable AI features, mature measurement frameworks, and ongoing training and role refinement, and periodically revisit IMFDS stages to ensure strategic alignment and robust governance.

Making these phases explicit, with clear objectives, owners, and checkpoints, ensures that changes are sequenced to maintain service quality as new capabilities are introduced.

Measurement and Governance of AI Service Quality

Finally, the bank must institutionalize measurement and governance to continuously monitor AI service quality and its relational impacts. Research identifies key dimensions, information quality,

system reliability, responsiveness, and interaction quality that predict satisfaction, trust, and continuance intention (Ashfaq et al., 2020; Hsu & Lin, 2022; Li et al., 2021). In banking, these should be tracked alongside trust indices, complaint rates, escalation success, sentiment scores, time-to-human, and churn metrics (Eren, 2021; Nguyen & Le, 2021).

These indicators should feed into formal oversight mechanisms. Guided by IMFDS and work on AI ethics and accountability, the bank should empower its AQA function and cross-functional governance forums to review performance data regularly, audit for bias and error patterns, and mandate design changes when thresholds are exceeded (Korachi & Bounabat, 2019; Nickols, 2020; Williamson & Prybutok, 2026; Yong & Prenio, 2025). By embedding AI within a robust measurement and governance framework, the bank can convert its current chatbot from a static, complaint-generating deployment into a continuously managed service that safeguards reputational capital, customer lifetime value, and long-term digital transformation goals.

Conclusion

The bank's digital transformation failure reflects not a flaw in AI technology itself, but a misalignment between cost-focused implementation and the relational conditions required for trust-based financial services. By prioritizing a 19% reduction in personnel costs without safeguarding service quality, the bank created a service paradox in which automation undermined the customer relationships that sustain long-term performance. The resulting 300% increase in complaints and 9% customer loss illustrates how deploying chatbots as gatekeepers, rather than as human-supporting tools, can erode satisfaction, trust, and reputational capital in a sector where switching costs are ordinarily high.

The integrated literature on AI service quality, task complexity, and the psychology of banking chatbots shows that customers accept AI for low-complexity, informational tasks, but expect empathetic human support for complex or emotionally charged issues. When institutions treat customers primarily as data flows to be streamlined rather than as stakeholders who require transparent, fair, and responsive interactions, they violate core conditions for trust and loyalty. Applying the IMFDS and ADKAR frameworks clarifies that sustainable digital transformation must be human-in-the-loop by design, aligning strategic intent, capabilities, and governance with individual change processes and employee involvement. The recommended hybrid service model, sentiment-driven escalation, AI Quality Assurance, and explainable AI features together offer a research-based roadmap for rebuilding relationship equity.

The ethical analysis further underscores that transparency, privacy protection, and algorithmic accountability are not ancillary concerns but foundational elements of digital banking legitimacy. Moving beyond opaque, black-box automation toward privacy-by-design and auditable, bias-aware AI systems is essential to preventing the perception that technology is being used to avoid accountability or marginalize certain customers.

Taken together, the case and synthesized literature suggest that digital transformation in banking should be understood as an ongoing process of organizational maturation rather than a one-time software deployment. The true objective of AI-enabled innovation is to augment human capability and deepen customer loyalty, not simply to reduce headcount or transaction costs. By realigning its technological infrastructure, governance, and culture with the core human needs of its clientele, the bank can turn its recent failure into a foundation for more resilient, ethical, and customer-centric management, an imperative for any institution seeking to remain competitive in a complex, rapidly evolving financial landscape.

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