INNOVATION MANAGEMENT IN COMMERCIAL BANKING: FORMATION, DEVELOPMENT AND DIGITAL TRANSFORMATION AT ALOQABANK JSCB

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ABSTRACT

Background: Digital transformation is reshaping the competitive landscape of the banking sector globally, including in Uzbekistan. Innovation management has become a strategic necessity for commercial banks seeking to sustain competitiveness.

Methods: The study employs SWOT analysis, comparative financial benchmarking, structural-functional analysis, and review of official Aloqabank reports (2021–2026). Frameworks include the Oslo Manual (OECD, 2018), ISO 56000, and international fintech research.

Results: Key systemic barriers in Aloqabank's innovation management were identified: hierarchical rigidity, technological debt, limited AI integration, and insufficient digital competency. A multi-pillar improvement model is proposed.

Conclusions: Systematic development of innovation management is a prerequisite for Aloqabank's transformation into a modern technological financial platform. The proposed model targets active Zoomrad user growth to 5.5–6.0 million (+51–64%) and CIR reduction to 35–38% by 2027–2028.

Keywords: *innovation management, digital transformation, banking sector, Aloqabank, Zoomrad, open innovation, Agile, artificial intelligence, financial ecosystem, Uzbekistan.*

1. INTRODUCTION

Global banking is undergoing profound structural change driven by digitalization, intensifying competition from fintech companies, and shifting customer expectations. *Innovation management* — the systematic process of generating, selecting, implementing, and commercializing new ideas — has evolved from an auxiliary tool into a core strategic competency for financial institutions (Tidd & Bessant, 2021; McKinsey Global Institute, 2023).

In the Republic of Uzbekistan, the **Digital Uzbekistan 2030** state programme provides a policy framework that accelerates the digitalization of the financial sector (Decree No. PF-6079, 2020). Under this stimulus, domestic banks face simultaneous pressure to modernize legacy technology, adopt agile operating models, and compete with emerging neobanks and aggregators.

Despite growing scholarly attention to bank innovation in emerging markets (Mention & Torkkeli, 2014; Carbó-Valverde et al., 2016), the literature on innovation management in Central Asian banking remains sparse. Existing international frameworks — the Oslo Manual (OECD/Eurostat, 2018), ISO 56000:2020, and Chesbrough's open innovation model — provide theoretical foundations but require contextual adaptation to the Uzbek environment.

This study addresses the gap by examining the innovation management system of **JSCB Aloqabank**, one of Uzbekistan's leading commercial banks. The bank offers a particularly instructive case: it operates a proprietary super-app (Zoomrad), manages the country's first bank-affiliated venture fund (AloqaVentures), and has publicly committed to an ecosystem transformation strategy. Its experience illuminates both best practices and systemic barriers transferable to the wider Central Asian banking sector.

The objectives of this study are threefold:

- to assess the current state and theoretical underpinnings of innovation management at Aloqabank;
- to identify organizational, technological, and human-capital barriers impeding innovation performance;
- to develop evidence-based recommendations for strengthening the bank's innovation management system and quantify expected outcomes.

2. METHODS

This study adopts a mixed-methods case-study design appropriate for exploratory applied research (Yin, 2018). The unit of analysis is JSCB Aloqabank's innovation management system. The research period spans 2021–2026, with particular emphasis on data from 2024 to early 2026.

2.1 Data Sources

Primary quantitative data were drawn from Aloqabank's annual reports, financial disclosures, and official website (aloqabank.uz). Macro-level regulatory data were sourced from the Central Bank of Uzbekistan and the Ministry of Digital Technologies. International benchmarks were obtained from McKinsey Global Banking Annual Review (2023, 2024), the EY Global Banking Outlook (2025), and the World Bank FinTech database.

Secondary qualitative sources include academic literature on innovation management (Schumpeter, 1934; Chesbrough, 2003; Teece et al., 1997; Tidd & Bessant, 2021), international methodological standards (Oslo Manual, OECD/Eurostat, 2018; ISO 56000:2020), and industry reports (IdeaScale, 2024; DashDevs, 2025).

2.2 Analytical Methods

Four primary analytical methods were applied:

• SWOT analysis — to map internal strengths and weaknesses against external opportunities and threats in Aloqabank's innovation ecosystem, following the approach of Helms & Nixon (2010);

• Comparative financial benchmarking — to position Aloqabank's key performance indicators (ROA, ROE, CIR, NPL) against domestic peers (Xalq Bank, Ipoteka Bank, Uzum Bank) and international norms (McKinsey, 2023);

• Structural-functional analysis — to diagnose organizational architecture and governance of innovation activities;

• Expert assessment — to validate proposed recommendations and estimate outcome ranges, drawing on published practitioner case studies from JPMorgan Chase, DBS Bank, and Kaspi.kz as comparators.

Data triangulation across document analysis, quantitative benchmarking, and comparative case evidence enhances the reliability of findings (Denzin, 2017).

RESULTS

3.1 Theoretical Context: Innovation Models in Banking

The Oslo Manual (OECD/Eurostat, 2018, p. 20) defines innovation as "a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users." Four categories are recognized: product, process, marketing, and organizational innovation — all of which are observable at Aloqabank.

Innovation management in banking has evolved through three generations: (1) closed R&D-centric models (1950s–1990s); (2) technology-push/market-pull hybrids (1990s–2010s); and (3) open ecosystem models (2010s–present) (Chesbrough, 2003; Gassmann et al., 2010). The third generation is characterized by Open Banking, Banking-as-a-Service (BaaS), embedded finance, and platform competition — the context in which Aloqabank now operates.

Dynamic capabilities theory (Teece et al., 1997) posits that sustained competitive advantage derives from an organization's ability to sense, seize, and reconfigure resources in response to environmental change. In banking, this translates to the capacity to rapidly prototype digital products, integrate fintech partners, and deploy AI-enabled personalization — capabilities that differentiate leading digital banks such as DBS, Nubank, and Kaspi.kz (McKinsey, 2023; EY, 2025).

3.2 Aloqabank Profile and Innovation Activities

Founded in 1994 under Cabinet of Ministers Resolution No. 502 as a specialized bank for the telecommunications sector, Aloqabank was restructured into a universal commercial bank in 2001. As of end-2025, the bank holds approximately 3% of the domestic banking market by assets and serves retail and corporate clients through 94 service centres, 162 ATMs, and over 37,000 POS terminals.

Table 1. Aloqabank JSCB — Key Financial and Digital Performance Indicators, 2025

Indicator	Value	Comment
Total Assets	> 16.5 trillion UZS	Leading commercial bank
Bank Capital	> 2.3 trillion UZS	Capital adequacy > 16%
Return on Assets (ROA)	≈ 4.5%	Above sector average
Return on Equity (ROE)	≈ 18%	Stable profitability
Non-Performing Loans (NPL)	≈ 3.8%	Below sector average
Cost-to-Income Ratio (CIR)	≈ 45%	Room for optimization
Active Zoomrad users	3.65 million	As of early 2025
Corporate AloqaBusiness users	> 29,500	Strong growth in corporate segment

Source: Aloqabank JSCB annual report (2025); Central Bank of Uzbekistan data (2025).

The bank's innovation portfolio encompasses four flagship initiatives. The **Zoomrad** mobile application, with 3.65 million active users as of early 2025, supports over 300 payment categories, online micro-lending, HUMOPay integration, and virtual cards — positioning it as a nascent super-app. **AloqaVentures**, established as the first bank-affiliated venture fund in Uzbekistan, channels equity investment into domestic fintech start-ups and facilitates technology transfer. **AloqaBusiness** serves over 29,500 corporate clients through a dedicated digital platform integrating cash management,

trade finance, and analytics. Finally, integration with the low-code platform **PLATMA** enables rapid development of microservices without extensive back-end engineering (aloqabank.uz, 2025).

Aloqabank has also adopted agile methodologies (Scrum, Kanban) in digital product development and applied elements of Kaizen in operational process improvement. These practices align with global digital bank standards (Deloitte, 2024) but remain partially embedded rather than organization-wide.

3.3 Competitive Assessment and Innovation Barriers

Benchmarking against domestic peers reveals a competitive landscape defined by scale asymmetry and divergent digital strategies. State-owned banks (SQB, Xalq Bank) command dominant market share but face structural inertia. Uzum Bank, operating as a de-facto neobank, has rapidly captured younger, digitally native segments — growing its user base over 40% in 2024 (CBU, 2025). Aloqabank occupies a middle tier: more digitally advanced than traditional incumbents but not yet matching neobank velocity.

SWOT analysis identifies three categories of barriers constraining Aloqabank's innovation performance:

Organizational barriers: a rigid vertical hierarchy with functional "silos" reduces cross-departmental collaboration; the idea generation and selection process lacks formal governance; decision authority for innovation investments is highly centralized. These conditions are documented as primary inhibitors of innovation velocity in traditional banks (Mention & Torkkeli, 2014; Deloitte, 2024).

Technological barriers: legacy core banking systems create integration friction for new digital services; AI and machine-learning deployment remains limited to basic chatbot functionality; the Open Banking API layer is underdeveloped relative to regional peers; and cybersecurity architecture requires updating to manage ecosystem-scale risks (DashDevs, 2025).

Human-capital barriers: a structural shortage of qualified data scientists, ML engineers, and product managers capable of leading digital transformation; a skills gap exacerbated by competition from technology companies; insufficient knowledge-management systems; and a reward structure that inadequately incentivizes innovative behaviour (IdeaScale, 2024).

4. DISCUSSION

4.1 Interpretation of Findings

The identified barriers collectively constitute a coherent pattern aligned with the "ambidexterity deficit" documented in incumbent banking literature: organizations optimized for operational efficiency struggle to simultaneously pursue exploratory innovation (O'Reilly & Tushman, 2016). For Aloqabank, this manifests as strong

incremental improvement within Zoomrad but limited breakthrough product launches or ecosystem platform plays.

The success of Kaspi.kz (Kazakhstan) and DBS Bank (Singapore) in executing ecosystem transitions provides relevant evidence. Both institutions restructured around open API architectures, embedded AI in core customer journeys, and built developer marketplaces — achieving CIR reductions of 8–12 percentage points within three years (McKinsey, 2023; EY, 2025). These precedents inform the feasibility of the proposed targets for Aloqabank.

4.2 Recommendations for Innovation Management Development

Based on the analysis, five strategic pillars are recommended:

Pillar 1 — Ecosystem Transformation: Develop an Open Banking strategy with a centralized API Gateway; evolve Zoomrad into a super-app integrating non-financial services (retail, healthcare, transport); launch a Banking-as-a-Service (BaaS) layer enabling third-party fintech embedding. This pathway is supported by empirical evidence from neobank growth trajectories in Eastern Europe and Central Asia (EY, 2025).

Pillar 2 — AI and Data Intelligence: Establish a Data and Analytics Centre; implement predictive personalization and NLP-based virtual assistants; develop alternative credit-scoring models using telco and transactional data. McKinsey (2023) estimates AI-driven personalization can increase retail banking revenue by 10–15%.

Pillar 3 — Agile Operating Model: Scale Agile frameworks (SAFe/LeSS) bank-wide; implement Stage-Gate governance for large innovation programmes; create a dedicated FinTech Lab as a protected space for experimental initiatives, insulated from quarterly performance pressure (Tidd & Bessant, 2021).

Pillar 4 — Human Capital and Culture: Reform KPIs to include innovation-specific metrics (number of pilots launched, time-to-market, digital NPS improvement); launch a Corporate Innovation Academy; deploy a digital idea-management platform to formalize bottom-up ideation; integrate knowledge management systems.

Pillar 5 — Strategic Partnerships: Strengthen AloqaVentures' role as a corporate accelerator; formalize university–industry collaboration under a Triple Helix model (Etzkowitz & Leydesdorff, 2000); develop Islamic finance products (Murabaha, Ijara) to capture underserved market segments.

4.3 Expected Outcomes and Target Metrics

Table 2 presents projected performance improvements under full implementation of the proposed model, benchmarked against current values and comparable bank transformations in the region.

Table 2. Expected Performance Outcomes of Innovation Management Improvements, 2027–**2028**

Indicator	Current (2025)	Target (2027–2028)	Expected Change
Active Zoomrad users	3.65 million	5.5–6.0 million	+51–64%
NPS (digital channels)	Baseline	+25–35 points	Significant increase
Cost-to-Income Ratio (CIR)	~45%	35–38%	-7–10 p.p.
Market share by assets	~3%	5–7% (by 2030)	×1.7–2.3

Source: Author's projections based on Aloqabank (2025) baseline data and McKinsey Global Banking benchmarks (2023).

The projected CIR reduction to 35–38% is consistent with McKinsey's (2023) benchmark for digital-first banks in emerging markets. The Zoomrad user target of 5.5–6.0 million is grounded in Uzbekistan's internet penetration growth trajectory (ITU, 2024) and comparable super-app adoption curves in Kazakhstan (Kaspi.kz) and Vietnam (MoMo).

4.4 Limitations

Several limitations should be noted. First, the study relies primarily on publicly disclosed data; internal operational metrics and proprietary technology assessments were unavailable. Second, projected outcomes involve inherent uncertainty — actual results will depend on execution quality, regulatory developments, and competitive dynamics. Third, the single-case design limits generalizability, though the analytical framework is transferable to comparable banking markets.

5. CONCLUSION

This study investigated the formation and development of innovation management at JSCB Aloqabank against the backdrop of Uzbekistan's accelerating digital transformation. Three principal conclusions emerge.

First, Aloqabank has constructed a meaningful innovation foundation — including Zoomrad, AloqaVentures, and an agile development capability — that positions it ahead of many domestic peers. However, systemic barriers in organizational structure, legacy technology, and human capital constrain the bank's capacity to deliver innovation at scale and speed.

Second, the five-pillar improvement model — ecosystem transformation, AI integration, agile operating model, human capital reform, and strategic partnerships — provides an actionable roadmap grounded in both theoretical frameworks (Chesbrough, 2003; Teece et al., 1997; O'Reilly & Tushman, 2016) and empirically validated international precedents (McKinsey, 2023; EY, 2025).

Third, successful implementation is projected to deliver material improvements in user engagement, cost efficiency, and market share — transforming Aloqabank from a digitally active bank into a full-fledged financial technology platform. These outcomes carry implications for other commercial banks in Uzbekistan and the broader Central Asian region pursuing similar transformation agendas.

Future research should examine longitudinal implementation outcomes, explore the role of regulatory sandboxes in accelerating bank innovation, and extend the comparative analysis to other CIS banking markets.

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