Business Requirements Specification (BRS)  
KOMEZA BANK – Churn Intelligence Platform for Bank of Kigali  
Version: 0.1  
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**Document Control and Information**

| **Name** | **Title** | **Action** |
| --- | --- | --- |
| Rose NGABIRE | Chief Operations Officer | Approve |
| Nicholas MURIMI | Chief Product Development Officer | Review |
| Samuel MUTINDA | Head, Data & Analytics | Review |
| Steven SHYAKA | Machine Learning Engineer | Compile |

**Revision History**

| **Version** | **Author** | **Summary of Change** |
| --- | --- | --- |
| 0.1 | Steven SHYAKA | Initial draft for Data Management & BI Department |

**Distribution List**

| **Name** | **Area** | **Action** |
| --- | --- | --- |
| Samuel MUTINDA | Data Science and Analytics | Review |
| Herve TWAHIRWA | Data Science and Analytics | Solution Development |
| Alphonse MUHAYIMANA | Business Applications | CRM Integration |
| Sandra UWADEDE | Business Applications | CRM Integration |
| Francine UMULISA | Customer Experience | Comment/Noting |
| Zaina AMRI-SUED | CEO Office | Comment/Noting |

**Glossary**

| **Term/Abbreviation** | **Definition** |
| --- | --- |
| BK | Bank of Kigali Ltd. |
| Churn | When a customer stops using bank services or closes their account. |
| Retention | Efforts to maintain existing customers and reduce churn. |
| CVM | Customer Value Management – strategic approach to maximizing customer lifetime value. |
| CLV | Customer Lifetime Value |
| CRM | Customer Relationship Management system |
| Data Lake | Centralized repository for storing structured and unstructured data |
| AUC | Area Under Curve – model performance metric |

**Executive Summary**

Bank of Kigali currently has multiple customer touchpoints across digital and physical channels — including the BK Digital App, USSD (*BK Quick*), Contact Center, and Branch network. However, customer attrition remains a key challenge, especially among retail and SME segments. The **KOMEZA BANK** initiative seeks to develop a **Churn Intelligence Platform** that uses data science to predict, explain, and reduce customer churn.

The platform will leverage data from **core banking (T24)**, **digital channels**, **CRM**, and **customer feedback** to provide actionable insights that enable targeted retention campaigns. It aligns with BK’s broader **Customer Value Management (CVM)** strategy, complementing the ongoing **Telesales and Portfolio Banking** initiatives.

KOMEZA BANK will provide the Data Management & BI Department with a scalable, interpretable, and compliant predictive analytics system capable of early churn detection and insight generation across customer segments.

**Business Objectives**

1. Detect customers who have churned or are at high risk of churning.
2. Identify and understand churn drivers across retail, SME, and corporate segments.
3. Provide actionable, data-driven recommendations for retention.
4. Integrate with BK systems (T24, CRM, Digital Banking) to provide near real-time analytics.
5. Support compliance with the **Law No. 058/2021 on Data Protection and Privacy**.
6. Provide intuitive dashboards for non-technical users (Marketing, CX, Credit).

**Scope**

**In Scope**

* Integration with **T24**, **Digital Banking**, **CRM**, and **Call Center** systems.
* Collection and transformation of at least **12 months of historical data**.
* Machine learning model for churn prediction and explainability.
* Segmentation and churn driver analysis.
* Retention recommendation engine.
* Data privacy and anonymization measures.
* Development of **interactive dashboards** for visualization.

**Out of Scope**

* Direct execution of retention campaigns.
* Mobile Money and BK Agent data (future phase).
* Infrastructure procurement.
* Hardware acquisition.

**Stakeholders**

| **Role** | **Department** | **Responsibilities** |
| --- | --- | --- |
| Project Sponsor | Chief Digital Officer | Approves project funding and direction |
| Project Owner | Head, Data & Analytics | Oversees delivery and technical alignment |
| Business Analyst | Data & Analytics | Gathers and documents requirements |
| Data Science Team | Data & Analytics | Builds and trains churn prediction models |
| IT Infrastructure | ICT Department | Ensures data integration and security |
| Marketing & CRM | Marketing Department | Uses insights for targeted campaigns |
| Customer Care | Contact Center | Engages churn-risk customers |
| Compliance Officer | Legal & Risk | Ensures privacy and data protection |

**Functional Requirements**

| **ID** | **Process** | **Requirement Description** |
| --- | --- | --- |
| REQ-001 | Data Ingestion | System shall ingest data from core systems (T24, Digital Banking, CRM, Call Center). |
| REQ-002 | Data Retention | System shall support at least 12 months of historical data. |
| REQ-003 | Model Prediction | System shall generate churn risk scores monthly. |
| REQ-004 | Explainability | System shall provide top churn drivers per customer using SHAP or LIME. |
| REQ-005 | Segmentation | System shall cluster customers based on churn probability and key behaviors. |
| REQ-006 | Recommendations | System shall provide retention recommendations per segment. |
| REQ-007 | Dashboard | System shall include dashboards showing churn risk, trends, and key features. |
| REQ-008 | Compliance | System shall anonymize personal data and restrict access per user role. |
| REQ-009 | Reporting | Reports exportable to Excel and PDF formats. |
| REQ-010 | CRM Integration | Churn scores shall be accessible through CRM interface. |
| REQ-011 | Alerts | High-risk customers shall trigger alerts for proactive follow-up. |

**Non-Functional Requirements**

| **ID** | **Requirement** | **Priority** |
| --- | --- | --- |
| NFR-001 | System uptime of at least 99.5% | High |
| NFR-002 | Data encryption (AES-256, TLS 1.2+) | High |
| NFR-003 | Dashboard query response under 3 seconds | Medium |
| NFR-004 | UI available in English and Kinyarwanda | Medium |
| NFR-005 | Compliance with Rwandan Data Protection Law | High |
| NFR-006 | Scalable to 1 million+ records | High |
| NFR-007 | Comprehensive logging and audit trails | High |

**Data Requirements**

| **Field Name** | **Description** | **Data Type** |
| --- | --- | --- |
| Customer\_ID | Unique anonymized identifier | String |
| Account\_Number | Account reference | String |
| Segment | Retail/SME/Corporate | String |
| Account\_Status | Active/Dormant/Closed | String |
| Account\_Balance | Current balance | Numeric |
| Loan\_Status | Active/Repaid/Default | String |
| Digital\_Usage\_Freq\_3mo | Logins via mobile/web channels | Integer |
| Complaints\_Count\_3mo | Number of complaints | Integer |
| NPS\_Score | Net Promoter Score (0–10) | Integer |
| Churn\_Flag | 1 = churned, 0 = active | Binary |
| Branch\_ID | Branch code | String |
| Last\_Transaction\_Date | Most recent activity date | Date |
| Income\_Bracket | Monthly income band | Numeric |

**Assumptions**

* Historical data accessible via BK Data Warehouse.
* All customer IDs anonymized prior to modeling.
* Regular collaboration between Data, Marketing, and CX teams.
* Adequate compute and storage resources available.

**Constraints**

* Potential inconsistencies in historical data.
* Limited behavioral data from legacy systems.
* Regulatory limits on data sharing.

**Acceptance Criteria**

| **ID** | **Criterion** |
| --- | --- |
| AC-001 | Model accuracy ≥ 80%, AUC ≥ 0.85 |
| AC-002 | Dashboard validated by key business units |
| AC-003 | Demonstrated churn reduction of ≥ 10% during pilot |
| AC-004 | Full compliance with BK data governance standards |

**Future Enhancements**

* Integration with **Telesales Recommender System** for proactive outreach.
* Real-time churn scoring and alert automation.
* CLV prediction and cross-sell opportunity analysis.
* Expansion to include **BK Agent** and **BK Quick** channels.

**Conclusion**

The **KOMEZA BANK Churn Intelligence Platform** represents a key enabler of BK’s Customer Value Management strategy, supporting data-driven decision-making across departments. It strengthens the bank’s ability to anticipate churn, personalize engagement, and enhance customer lifetime value while ensuring compliance and scalability.