**1. Data Governance Framework**

**Project:** Telco Cloud Migration  
**Objective:** Establish policies and controls to manage the lifecycle, quality, protection, and regulatory compliance of telco data assets during and after migration.

**1.1 Data Types Covered**

| **Category** | **Examples** |
| --- | --- |
| Customer Data | Subscriber records, SIM metadata, CRM history |
| Financial Data | Billing logs, mobile money (e.g., M-PESA) transactions |
| cccccssexrqNetwork Data | NMS logs, call records (CDRs), QoS metrics |
| Operational Data | OSS/BSS configurations, support tickets |
| Metadata | API logs, data lineage, access records |

**1.2 Governance Principles**

* **Ownership:** Define data stewards per domain (CRM, OSS, billing).
* **Lineage Tracking:** Use ETL tools (e.g., Apache Atlas, Talend) to track data movement.
* **Data Quality:** Implement rules for format, completeness, duplication, and consistency.
* **Lifecycle Management:** Automate archiving, retention (e.g., 5–7 years for billing), and secure deletion.
* **Access Policies:** Implement RBAC and audit logging.
* **Data Classification:** Public, Confidential, Sensitive (e.g., identity documents).

**1.3 Compliance Mapping**

| **Regulation** | **Requirement** | **Implementation** |
| --- | --- | --- |
| **GDPR** | Right to be forgotten, DPO accountability | Data masking, erasure APIs |
| **Kenya Data Protection Act** | Consent, residency | Host subscriber data locally |
| **ISO 27001** | Access control, risk management | IAM, encryption, DLP |
| **CAK/KCA** | Interception readiness | Legal intercept gateway logging |

**1.4 Tools & Governance Artifacts**

* **Data Catalogs:** Google Data Catalog, AWS Glue, Apache Atlas
* **Policies:** Data Retention Policy, Metadata Policy, Access Control Matrix
* **Dashboards:** Power BI, Grafana for data quality and compliance KPIs