**Regulatory Compliance & Security Impact Assessment**

**Smart 5G Deployment – Kenya**

**A. Regulatory Overview (Kenya + Global Standards)**

| **Area** | **Requirement** | **Authority / Reference** |
| --- | --- | --- |
| **Spectrum Licensing** | C-band, 700 MHz, mmWave licensing | CAK (Kenya) |
| **Health & Radiation** | EMF emission compliance | WHO, CAK |
| **Data Privacy** | End-user consent, data handling | Kenya Data Protection Act, GDPR |
| **Network Security** | SDN security, lawful interception | NIS Directive (EU), CAK |
| **Cross-border Data** | Restrictions on offshore storage | ODPC Kenya, EU SCCs |
| **Interconnection** | Seamless fallback to 4G | Telco Interconnect Rules (CAK) |
| **Infrastructure Sharing** | Mandated passive sharing in rural | CAK + EAC ICT Policy |

**B. Security Risk Areas**

| **Security Domain** | **Risk** | **Impact** | **Mitigation** |
| --- | --- | --- | --- |
| SDN Controller | Exploitable via exposed APIs | Critical | Zero Trust + API tokenization |
| AI System | Adversarial poisoning | High | Model auditing & version control |
| RAN Infrastructure | Rogue base stations | Medium | eSIM authentication & IMSI encryption |
| Data Plane | User plane hijacking | High | End-to-end traffic encryption |
| Cloud Infrastructure | Privilege escalation | High | RBAC + IAM & container isolation |

**C. Legal & Regulatory Compliance Plan**

* Pre-deployment **Environmental Impact Assessment (EIA)**.
* Annual **Cybersecurity audit** for compliance (per CAK & NCA guidelines).
* Regular **Data Protection Impact Assessments (DPIA)**.
* Filing of **spectrum usage reports** and equipment certifications.