**Cloud Infrastructure & Network Design Documents**

**Purpose:** To design resilient, secure, and scalable hosting environments — critical in remote or bandwidth-limited regions.

**Key Elements:**

* **Cloud Deployment Architecture:**
  + **Hybrid or Multi-cloud** model to support local hosting and public cloud scalability
  + Use of **CDNs** for static content caching (e.g., education videos in rural schools)
* **Capacity Planning:**
  + Estimations based on expected data volumes, user concurrency, transaction loads
  + Scaling rules (e.g., auto-scaling for campaign season peaks)
* **Security Architecture:**
  + Demilitarized zones (DMZ), VPN gateways for field staff
  + **Zero Trust model** or Identity Federation for secure partner access
* **Failover & Redundancy:**
  + Load-balanced clusters across data centers (geo-redundancy if applicable)
  + Data replication and disaster recovery plans
* **Network Topology Maps:**
  + Connection diagrams for satellite, GSM, 3G/4G, and Wi-Fi mesh networks
  + Integration with local ISPs or NGO networks