Here is a detailed breakdown of the **cost implications** of integrating your own mkononi-ivr system directly with **Safaricom via an E1 trunk** — based on **Kenyan market prices and Safaricom's official IVR document**.

## **💸 1. One-Time Setup Costs**

|  |  |  |
| --- | --- | --- |
| **Item** | **Cost (KES)** | **Notes** |
| **E1 Interface Card** (Digium/Sangoma) | 45,000 – 90,000 | Hardware for connecting E1 |
| **PBX Server Hardware** | 40,000 – 80,000 | Or use a cloud VPS (below) |
| **Asterisk PBX Setup (Dev cost)** | 50,000 – 150,000 | Includes installation, dialplans, SIP, Node.js interface |
| **Audio Prompt Recording** | 5,000 – 20,000 | Studio-quality IVR prompts |
| **Power Backup (UPS)** | 15,000 – 40,000 | Optional but recommended |
| **Static IP / Firewall Setup** | 5,000 – 15,000 | If self-hosted |

### **🟢 Total Setup Cost Estimate: KES 160,000 – 395,000**

## **💼 2. Recurring Monthly Costs**

|  |  |  |
| --- | --- | --- |
| **Item** | **Monthly Cost (KES)** | **Notes** |
| **E1 Line (Safaricom)** | 6,000 – 10,000 | Line rental for 30 channels |
| **Safaricom Shortcode (IVR)** | 10,000 + VAT | Premium code monthly fee |
| **Data Center / VPS Hosting** | 6,000 – 15,000 | Optional if not self-hosting |
| **Bandwidth + Utilities** | 2,000 – 5,000 | Internet/power for hosted PBX |
| **Technical Support / DevOps** | 50,000+ | In-house or outsourced |
| **Call Costs (per minute)** | KES 0.80 – 2.00 | If non-premium; you may monetize if premium IVR |

### **🟢 Total Monthly Cost Estimate: KES 74,000 – 130,000+**

## **🧾 Optional Revenue via Premium IVR (if charging users)**

From Safaricom’s form:

* If you charge KES 10/min, you earn:
* **KES 7.94 net revenue**
* **Safaricom takes 25% (KES 2.06)**
* Potential monthly revenue for 10,000 minutes:
* **KES 79,400** to **KES 476,200** depending on rate used.

## **📊 Summary: Cost Implications**

|  |  |  |
| --- | --- | --- |
| **Stage** | **Low Estimate (KES)** | **High Estimate (KES)** |
| **Initial Setup** | 160,000 | 395,000 |
| **Monthly Running** | 74,000 | 130,000+ |

## **✅ When It’s Worth It**

This setup is ideal **if**:

* You expect **>30,000 minutes/month**
* You want **long-term cost savings**
* You plan to monetize via **premium IVR**
* You require **full control over IVR logic and flow**