Metroville Urban Rail Expansion Project - KPI Development Template

# Technical Feasibility KPIs

## KPI 1:

**KPI Name**: Track Installation Progress Rate

**Definition (What it measures)**: Measures the rate of rail track installed (in km) per month compared to the project schedule

**Measurement Method (How data will be gathered and calculated)**: Construction progress reports submitted weekly by contractors; calculated as (actual km of track laid ÷ planned km for the month) × 100.

**Rationale (Why this KPI is important)**: Timely track installation is vital to meet project milestones. Metroville’s challenging topography, including hills and a river, makes monitoring construction pace essential to detect delays early and manage resources effectively.

## KPI 2:

**KPI Name**: Electrification Milestone Achievement Rate

**Definition (What it measures):** Tracks the percentage of completed electrification tasks (substations, overhead lines) compared to the project timeline.

**Measurement Method (How data will be gathered and calculated):** Milestone completion status logged in the project management system; calculated monthly as (completed electrification milestones ÷ planned milestones) × 100.

**Rationale (Why this KPI is important):** Electrification is a core component for operational readiness and sustainability. This KPI ensures electrical infrastructure is progressing in sync with civil works.

# Environmental Sustainability KPIs

## KPI 1:

**KPI Name**: CO₂ Emissions Reduction Estimate

**Definition (What it measures):** Measures projected annual reduction in carbon emissions due to the shift from car to rail travel.

**Measurement Method (How data will be gathered and calculated):** Transportation modeling based on commuter behavior data, baseline car usage, and anticipated rail ridership.

**Rationale (Why this KPI is important):** One of Metroville’s goals is improved air quality. This KPI tracks the environmental benefit of encouraging public transit use over private vehicles.

## KPI 2:

**KPI Name:** Green Space Enhancement Index

**Definition (What it measures):** Measures the total area (in m²) of new or rehabilitated green spaces as part of the project (e.g., green station rooftops, reforested buffer zones).

**Measurement Method (How data will be gathered and calculated):** Geographic Information System (GIS) mapping and contractor reports validated by environmental consultants.

**Rationale (Why this KPI is important):** Aligns with Metroville’s urban greening strategy. This KPI reflects how well the project supports biodiversity and public health through added green areas.

# Community Acceptance KPIs

## KPI 1:

**KPI Name:** Community Sentiment Score

**Definition (What it measures):** Gauges public support and satisfaction with the project through survey results and sentiment analysis.

**Measurement Method (How data will be gathered and calculated):** Quarterly surveys of residents and passengers; social media sentiment tracked using keyword analysis tools.

**Rationale (Why this KPI is important):** A high level of public approval indicates community trust and reduces resistance to project phases that may cause short-term inconvenience.

## KPI 2:

**KPI Name**: Accessibility Improvement Rate

**Definition (What it measures):** Tracks the percentage of new stations compliant with universal design standards (e.g., wheelchair ramps, tactile surfaces, elevators).

**Measurement Method (How data will be gathered and calculated):** Compliance checklists reviewed post-construction by access auditors; calculated as (accessible stations ÷ total new stations) × 100.

**Rationale (Why this KPI is important):** Expanding access is a key public value. This KPI ensures inclusivity for all Metroville residents, including those with mobility challenges.