MARKET RESEARCH REPORT

AIR PURIFIER STREET LAMP

# 1. Problem Statement

*Urban air pollution is a critical issue affecting public health and quality of life. Cities are also facing challenges with energy consumption, lack of safety infrastructure, and ineffective waste management. The Air Purifier Street Lamp aims to address these issues by combining air purification, solar-powered lighting, and additional smart features into one eco-friendly solution*.

# 2. Product Overview

Name of the Product: Air Purifier Street Lamp

Purpose:

Combat air pollution in urban areas.

Provide sustainable and eco-friendly street lighting.

Enhance public safety and convenience.

Key Features:

1. Air Purification System:

Filters out harmful pollutants using HEPA filters or activated carbon filters.

Improves air quality in surrounding areas.

2. Solar Panels:

Powers the lamp using renewable solar energy.

Reduces energy consumption and dependence on fossil fuels.

3. Smart Safety Features:

SOS Button: Immediate access to emergency services.

First Aid Kit: For minor injuries in public spaces.

4. Waste Management:

Integrated Dustbin: Encourages proper waste disposal in public areas.

5. Charger Ports:

USB Charging Stations: Allow citizens to charge their devices while on the go.

6. Information Directory:

A digital/physical panel that displays maps, directions, or announcements.

7. Night Mode and Motion Sensor Lighting:

Lights turn on only when motion is detected, saving energy during low-traffic hours.

# 3. Market Research

Market Potential:

Global Smart Cities Market: Expected to grow from $624 billion in 2022 to over $1.2 trillion by 2027.

Air Purifier Market: Estimated to reach $19 billion by 2027, driven by concerns over air quality.

Solar Street Lighting Market: Growing at a CAGR of 10%, showing demand for energy-efficient infrastructure.

Target Market:

Primary Audience: City governments, municipal corporations, urban planners.

Secondary Audience: Construction companies, sustainability organizations, smart city developers.

Competitor Analysis:

1. Existing Smart Street Lamps:

Philips Smart Lighting: Focused on energy efficiency but lacks air purification.

Huawei Smart Street Lights: Integrates IoT but no eco-friendly features.

2. Air Purifiers:

Dyson and Xiaomi: Portable air purifiers dominate the consumer market but aren't designed for public spaces.

# 4. Financial Model

Cost Breakdown:

1. Production Costs:

Air Purifier Unit: ₹25,000 (per unit).

Solar Panel: ₹15,000.

Street Lamp (LED): ₹8,000.

Smart Features (Charger, SOS, Dustbin): ₹10,000.

Miscellaneous (First Aid, Maintenance): ₹5,000.

Total Production Cost per Unit: ₹63,000.

2. Installation Costs:

Labor and Tools: ₹10,000 per unit.

Transportation: ₹5,000 per unit.

Total Installation Cost per Unit: ₹15,000.

3. Annual Maintenance Costs:

Filter Replacement: ₹3,000 per unit.

General Repairs: ₹2,000 per unit.

Total Annual Maintenance Cost: ₹5,000 per unit.

Revenue Model:

1. Direct Sales:

Selling each unit at ₹1,00,000 to city governments or private organizations.

2. Service Contracts:

Annual maintenance services for ₹10,000 per unit.

3. Advertising Revenue:

Use directory panels for ads: ₹5,000 per panel annually.

# 5. Business Development Plan

Market Entry Strategy:

1. Launch a pilot project in a city with high pollution (e.g., Delhi, Bangalore).

2. Partner with:

Municipal corporations for installation.

NGOs promoting eco-friendly initiatives.

Renewable energy companies for solar panel integration.

Sales Channels:

1. B2G (Business to Government): Directly sell to municipal bodies.

2. B2B: Collaborate with construction firms and smart city developers.

3. Public-Private Partnerships: Share costs and benefits with city governments.

Promotion Strategy:

1. Launch campaigns on LinkedIn and Instagram highlighting product benefits.

2. Host demonstrations at smart city expos or sustainability conferences.

3. Partner with eco-friendly influencers to spread awareness.

# 6. Marketing Strategy

Target Audience:

Primary: Government bodies (municipal corporations, smart city councils).

Secondary: Urban developers, eco-conscious organizations, and citizens.

Positioning:

Brand Message: “Cleaner Air, Smarter Cities.”

Differentiator: Combines air purification, solar energy, and public safety features into one product.

Promotional Activities:

1. Social Media Campaigns:

Create videos showing the product’s impact (before/after pollution levels).

Share testimonials from early adopters.

2. Public Demonstrations:

Showcase the lamp’s features in crowded areas (e.g., parks, malls).

3. Content Marketing:

Blog posts on pollution control and sustainable urban living.

Infographics showing the benefits of the Air Purifier Street Lamp.