
AIRPURE INNOVATIONS
Market Fit & AQI Intelligence Dashboard

TABLE OF CONTENTS

PROMBLEM STATEMENT

*India is home to some of the world's most polluted cities, with **14 in the top 20 globally**. AirPure Innovations wanted to identify high-potential markets, understand pollution patterns, and link this data to health and vehicle trends — before committing to R&D and large-scale production.*

AIM

My goal is to design and develop a **data-driven solution** that empowers both executives and product strategists — unifying real-time AQI trends, public health data, vehicle statistics, and population projections into a single, cohesive view.
The solution transforms complex datasets into **clear, actionable insights** through interactive dashboards and impactful data storytelling.

UI/UX DESIGN APPROCH

Before building in Power BI, I developed a UI storyboard and design system in Figma. The Behance case study includes: Project Overview, The Challenge, Strategy & Approach, Solutions, Typography & Colors, Low-Fidelity Wireframes, High-Fidelity Frames, Research & Insights, and Impact & Learnings. This ensured a clean, consistent, and user-friendly interface across all dashboards.

Dashboard UI Design

PRIMARY ANALYSIS

Q1 – Top 5 and Bottom 5 areas with highest average AQI (Dec 2024 – May 2025)
Top 5: Delhi, Lucknow, Patna, Kanpur, Muzaffarpur
Bottom 5: Aizawl, Kohima, Itanagar, Shillong, Imphal

Q2 – Top 2 and Bottom 2 pollutants in Southern Indian states (Post-COVID: 2022 onward)
Top 2 Pollutants: PM10, PM2.5
Bottom 2 Pollutants: O_3, SO_2

Q3 – AQI on weekends vs weekdays in Indian metro cities (Last 1 year)
Observation: Weekends show slightly better AQI (4–6% improvement) in metros like Delhi, Mumbai, and Bengaluru due to reduced traffic volume.

Q4 – Months with consistently poor air quality in top 10 states
Observation: November, December, January consistently record worst AQI, linked to winter inversion and crop residue burning in northern states.

PRIMARY ANALYSIS

Q5 – Bengaluru's air quality categories (Mar–May 2025)
Breakdown:
Good: 12 days
Satisfactory: 38 days
Moderate: 24 days
Poor/Very Poor/Severe: 17 days

Q6 – Most reported disease illnesses per state + avg AQI (Past 3 years)
Example:
Bihar – Chickenpox, Acute Diarrheal Disease – Avg AQI: 156
Maharashtra – Dengue, Diarrhea – Avg AQI: 142

Q7 – Top 5 states with highest EV adoption vs average AQI (2022–2025)
Highest EV adoption: Delhi, Maharashtra, Tamil Nadu, Karnataka, Uttar Pradesh
Observation: States with high EV adoption still show moderate to high AQI → indicates EV adoption alone hasn't yet made a measurable AQI improvement.

SECONDARY ANALYSIS

Q1 – Age group most affected by air pollution-related health outcomes

Finding: Children (0–14) and elderly (65+) show highest respiratory hospitalizations; Delhi, Kanpur, and Patna report the highest pediatric asthma admissions (Source: Lancet Planetary Health, 2024).

Q2 – Major competitors in the Indian air purifier market & key differentiators

Mi Air Purifier: Affordable, basic HEPA filter

Dyson: Premium pricing, advanced HEPA+Carbon filtration, smart AQI sensing

Philips: Mid-range, app connectivity, nano-protect filter

Sharp: Plasmacluster technology for allergen removal

Q3 – Relationship between city population size and average AQI (2024)

Observation: Large cities like Delhi, Mumbai have high AQI due to dense traffic & industry, but some smaller cities (e.g., Muzaffarpur, Gaya) also have severe AQI due to local emissions and poor ventilation.

Q4 – Awareness of AQI meaning & health implications

SECONDARY ANALYSIS

Q4 – Awareness of AQI meaning & health implications

Finding: Only ~30% of urban Indians regularly check AQI; awareness is highest in Delhi & Mumbai. Google Trends data shows spikes during pollution emergencies (e.g., Delhi smog events).

Q5 – Most impactful pollution control policies in last 5 years (2020–2025)

National Electric Mobility Mission: Boosted EV adoption but impact on AQI still limited.

Graded Response Action Plan (GRAP): Seasonal measures in NCR during severe AQI helped short-term reductions.

Odd-Even Vehicle Scheme: Reduced AQI temporarily during severe pollution episodes.

POWER BI

Enables the transformation of complex environmental, health, and market datasets into interactive dashboards.
Delivering real-time insights that help identify trends, risks, and opportunities for informed decision-making.
Power BI Report


THANK YOU !