

Recommendation: Transforming Delhi's Urban Transport & Streets: A People-First, Low-Pollution replicable Model for Indian Cities

Executive Summary

Delhi's air quality, congestion, and road safety crisis cannot be solved through vehicle electrification or flyover construction alone. International evidence and Delhi's own experience show that road capacity expansion and grade separation worsen congestion and pollution over time, while people-first street design and public transport prioritisation deliver faster, more durable gains.

This memo recommends a Paris–Singapore hybrid urban transport model for Delhi—combining people-centric street design, strong public transport prioritisation, and firm pricing and enforcement mechanisms. While Delhi is the primary case, the framework is replicable across Indian metros such as Mumbai, Bengaluru, Chennai, Hyderabad, Kolkata, Pune, and Ahmedabad.

The core principle is simple:

> Focus on moving people, not vehicles.
Reduce trips, not just emissions.

1. The Delhi Problem: A Systemic Diagnosis

Delhi's transport challenges are often treated as isolated issues. In reality, they are interconnected:

1.1 Key symptoms

- Chronic PM_{2.5} and NO₂ exceedances
- Extreme congestion despite massive flyover investment
- Declining bus ridership despite Metro expansion
- Unsafe, discontinuous footpaths
- Overdependence on private vehicles for short trips
- High pedestrian and cyclist fatalities

1.2 Root causes

- Car-centric road design

- Fragmented transport governance
- Excessive reliance on flyovers and grade separation
- Under-prioritisation of walking, buses, and surface transit
- Free or underpriced use of scarce road space

2. Why Flyovers Are Overused—and Why They Fail

2.1 The flyover paradox

Flyovers appear to “solve” congestion at a junction, but they:

- Shift congestion downstream
- Increase vehicle speeds locally, raising crash severity
- Encourage longer and more frequent car trips
- Create hostile environments under and around structures
- Sever neighbourhood connectivity
- Consume enormous capital with limited long-term benefit

This is a textbook case of induced demand, observed globally and repeatedly in Delhi.

2.2 Delhi-specific outcomes

- Flyovers on arterial corridors coexist with gridlock
- Pedestrians are forced into long detours via FOBs or unsafe crossings
- Areas under flyovers become parking lots, informal dumping zones, unsafe, poorly lit spaces

2.3 Global lesson

Cities such as Paris, Seoul, and Madrid have reversed flyover-heavy planning—removing elevated roads and reclaiming streets for public use—resulting in lower congestion and cleaner air, not worse.

3. The Recommended Model

This model blends:

Paris's people-first street design

Singapore's pricing, enforcement, and system discipline

It is neither utopian nor European-only—it is contextually adaptable to Indian cities.

4. Core Recommendations for Delhi (Replicable Nationwide)

4.1 Make Public Transport the Default Choice

Actions

- Rail-first planning: Metro + suburban rail + bus Integration.
- Surface trams / light rail on high-demand corridors where feasible
- Unified transport authority for Delhi NCR - overseeing rail, bus, metro, parking, rentable EV two-wheelers & cycles and allied services.
- Single ticketing system across Metro, buses, feeder services, parking, and cycles

Why Reliability and frequency matter more than prestige projects? A frequent bus or train reduces car use immediately.

Applicability Mumbai, Chennai, Kolkata (strong rail backbone);
Bengaluru, Hyderabad, Pune (bus and BRT revival potential).

4.2 Prioritise Walking as Core Infrastructure

Actions

- Continuous footpaths (minimum 1.8–2.5 m)
- Universal at-grade pedestrian crossings
- Raised crossings and tightened junction geometries
- Tree cover, shade, and climate-sensitive design
- Planned accommodation of vendors instead of ad-hoc encroachment

Why Walking is the base mode for all trips? If the first and last 500 metres are hostile, public

transport fails.

Applicability : All Indian cities—especially dense cores and mixed-use areas.

4.3 Replace Flyover-Led Planning with At-Grade Street Design

Actions

- Freeze new urban flyovers except on highways and rail corridors
- Redesign junctions at-grade with signal optimisation
- Convert vehicle slip roads into pedestrian space
- Remove or repurpose underperforming grade-separated structures

Why At-grade intersections? Improve pedestrian safety, Reduce speeds, Improve visibility and compliance, Are cheaper and more flexible, city becomes pedestrian friendly, humane and vibrant.

4.4 Reallocate Road Space, Not Expand It

Actions

- Dedicated, camera-enforced bus lanes
- Physically protected cycle tracks
- Reduction of general-purpose car lanes
- Tactical urbanism: paint, bollards, pilots before permanent builds

Why? One bus lane can move more people than three car lanes.

4.5 Actively Manage Car Use Through Pricing and Policy

Actions

- Eliminate free street parking
- Market-based parking fees

- Congestion pricing pilots in CBDs
- Ring-fence revenues for public transport and footpaths

Why? Singapore demonstrates that pricing is the most efficient car-control tool.

Applicability Delhi CBDs, South Mumbai, Bengaluru core, Hyderabad IT corridors.

4.6 Transit-Oriented Development (TOD), Done Properly

Actions

- Higher FAR within 500–800 m of transit
- Mixed-use zoning
- Affordable and rental housing near stations
- Reduced parking minimums near transit

Why? Shorter trips reduce emissions faster than cleaner vehicles.

4.7 Governance and Capacity Reform

Actions

- Empower city-level transport authorities
- Reduce fragmentation between agencies
- Build permanent urban planning and transport cadres, empower the city planning department to be able to protect the

Use data-driven route and service planning

Why? Infrastructure succeeds only when institutions are capable and stable.

5. Why This Reduces Pollution Faster Than EV-Only Strategies?

- EVs address tailpipe emissions, not congestion or dust
- Non-exhaust emissions (brake, tyre, road dust) remain significant

- Fleet turnover takes decades
- Mode shift delivers immediate emission reduction

Global evidence shows bus priority, walking, and cycling infrastructure reduce PM2.5 faster than EV adoption alone.

EVs work best after street reform—not before it.

6. A Scalable National Framework

City Type Priority Focus

- Mega dense metros (Delhi, Mumbai) Bus lanes, walkability, car restraint
- Growing tech cities (Bengaluru, Hyderabad) Prevent car lock-in early
- Historic cities (Chennai, Kolkata) At-grade redesign, TOD
- Tier-2 aspirational cities Avoid flyover dependency from start

Conclusion: A Strategic Shift, Not Incremental Tweaks

Delhi does not need more flyovers, wider roads, or faster cars.
It needs calmer streets, reliable buses, dignified walking, and firm governance.

This memo recommends a decisive shift from vehicle throughput to human throughput.

> Cities that prioritise people move more people, breathe cleaner air, and remain economically competitive.

Delhi can lead this transformation—and Indian cities can follow.

Prepared for policy consideration.