

ARTERIES UNDER SIEGE: REIMAGINING GHANA'S URBAN ROAD NETWORKS FOR A SUSTAINABLE FUTURE

By

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Ghana's major cities, Accra, Kumasi, Takoradi, Tamale, and Sekondi-Takoradi, pulsate with life, ambition, and the relentless energy of a rapidly urbanizing nation. Yet, beneath this vibrant surface lies a critical infrastructure system under unprecedented strain: the urban road network. These asphalt arteries, conceived in a different era and struggling to adapt to explosive growth, are no longer merely conduits for movement; they have become battlegrounds of congestion, safety hazards, and stark inequality. Understanding the historical trajectory, acknowledging the profound impact on urban populations, dissecting the competing demands of vehicles and pedestrians, and charting a course for radical improvement is not just a planning exercise, it is fundamental to Ghana's economic vitality, social equity, and environmental sustainability.

Historical Context: Colonial Legacies and Post-Independence Pressures

The skeletal framework of Ghana's major urban road networks is largely a colonial inheritance. Designed primarily to facilitate the extraction of resources and the administration of territory, these networks focused on connecting ports (like Takoradi and later Tema) and administrative centers (Accra, Kumasi) to resource-rich hinterlands. Radial patterns emerged, concentrating traffic flow towards central business districts and harbors. Roads were often wide and well-constructed by the standards of the time, but their design prioritized motorized colonial administration

and commerce over the needs of the indigenous urban populace navigating primarily on foot.

Post-independence, particularly under Kwame Nkrumah's ambitious industrialization drive, saw significant expansion and modernization efforts. New arterial roads were built, and existing ones upgraded, aiming to project a modern, forward-looking nation. Tema was developed as a planned city with a more structured grid. However, the underlying philosophy often remained car-centric, reflecting global trends of the mid-20th century. Crucially, formal urban planning struggled to keep pace with the accelerating rural-urban migration triggered by economic aspirations and, later, structural adjustment impacts. Informal settlements mushroomed, often on the periphery or in environmentally sensitive areas poorly served by the formal road grid. Planning institutions were frequently under-resourced, undermined by political expediency, and unable to enforce regulations effectively against powerful informal forces.

The late 20th and early 21st centuries witnessed an explosion in private vehicle ownership, fueled by economic liberalization, rising middle-class aspirations, and often, the perceived inadequacy and discomfort of public transport. This surge occurred on networks designed for a fraction of the current traffic volume and composition. Simultaneously, massive population growth, Accra alone has ballooned from under half a million at independence to an estimated 5 million plus in its metropolitan area today – placed intolerable pressure on these aging and incomplete systems. Piecemeal upgrades, flyovers like the Kwame Nkrumah Interchange (a significant engineering feat but primarily for vehicles), and bypass attempts provided temporary relief but failed to address the systemic deficiencies rooted in historical planning paradigms and relentless, often unmanaged, urban expansion.

Current Population Impact: The Human Cost of Congested Arteries

The state of urban road networks in Ghana today profoundly impacts the daily lives and well-being of millions, with consequences rippling far beyond mere inconvenience:

1. **Economic Drain:** Chronic congestion is a massive drag on productivity. Hours spent idling in traffic represent lost working time, delayed deliveries, increased fuel consumption, and higher operational costs for businesses. The Ghana Institute of Freight Forwarders routinely cites port congestion exacerbated by poor road access as a major cost factor. Studies estimate that traffic congestion costs African cities billions annually in lost GDP; Accra and Kumasi bear a significant portion of this burden.
2. **Public Health Crisis:** Urban roads are major sources of air and noise pollution. Vehicle emissions, concentrated in traffic-choked corridors, contribute significantly to respiratory illnesses like asthma and bronchitis, particularly affecting vulnerable populations like children and the elderly living near major roads. Stress induced by daily commutes impacts mental health. Furthermore, the dominance of vehicles creates dangerous environments for active transport, discouraging walking and cycling, contributing to sedentary lifestyles and associated non-communicable diseases.
3. **Social Inequity Amplified:** The burden of poor road networks falls disproportionately on the poor. Those reliant on often unreliable, uncomfortable, and overcrowded public transport (trotros and buses) suffer the most from delays and unpredictable journey times. Pedestrians, including children walking to school and street vendors, navigate hazardous, often non-existent, footpaths. The physically disabled face near-insurmountable

barriers. Conversely, those with private vehicles, while also affected by congestion, possess greater comfort and flexibility, widening the mobility gap. Informal settlements, frequently located in poorly accessible areas with inadequate road infrastructure, face further marginalization.

4. **Safety Emergency:** Ghana's urban roads are notoriously dangerous. A complex mix of factors, poor road design, inadequate pedestrian facilities, lack of safe crossings, speeding, driver behaviour, vehicle condition, and weak enforcement – contribute to high rates of traffic fatalities and injuries. Pedestrians and motorcyclists are particularly vulnerable. The World Health Organization consistently ranks Ghana among countries with high road traffic fatality rates, a tragic and preventable loss of life that devastates families and communities.
5. **Urban Fragmentation and Livability Decline:** Congested, vehicle-dominated roads act as physical and psychological barriers, dividing communities and making neighbourhoods less walkable and connected. Noise pollution degrades the urban soundscape. The sheer dominance of traffic diminishes public space, discouraging social interaction and reducing the overall quality of urban life.

Vehicular and Pedestrian Roles: A Fractured Symbiosis

The urban road network is a shared space, yet the relationship between vehicles and pedestrians in Ghanaian cities is often adversarial rather than symbiotic:

- **The Vehicular Onslaught:** The surge in private cars, taxis, commercial vehicles (trucks, vans), and, increasingly, motorcycles, has overwhelmed the capacity of existing infrastructure. Roads designed decades ago cannot handle the volume, size, and speed of modern traffic. The dominance of the private

vehicle is reinforced by cultural status associations and the genuine inadequacies of public transport alternatives. Freight movement through city centres, often at peak hours, further compounds congestion. Parking, largely unmanaged and encroaching on road space and sidewalks, is a constant challenge.

- **The Precarious Pedestrian:** Pedestrians constitute the majority of urban trips for many Ghanaians, especially the poor, yet they are frequently relegated to the status of an afterthought. Sidewalks are often non-existent, impassably narrow, obstructed by vendors, utility poles, parked vehicles, or crumbling infrastructure. Safe pedestrian crossings (zebra crossings, signalized crossings, footbridges) are scarce and often disregarded by motorists. Crossing wide, multi-lane arterial roads becomes a perilous undertaking. This forces pedestrians onto the carriageway, increasing conflict and danger. The lack of safe pedestrian infrastructure severely limits mobility options, especially for children, the elderly, and people with disabilities.
- **The Public Transport Quandary:** Public transport, primarily privately operated minibuses ("trotros") and buses, plays a vital role but operates within the same congested network. Its unreliability, discomfort, and sometimes unsafe conditions push those who can afford it towards private vehicles, exacerbating the cycle of congestion. Formal bus services like Aayalolo face operational challenges within the constrained road space. The absence of dedicated lanes or priority measures means public transport users suffer equally from delays, undermining its attractiveness as a viable alternative.

Pathways to Improvement: Towards Integrated, Equitable, and Sustainable Mobility

Addressing the crisis of Ghana's urban road networks demands a fundamental paradigm shift, moving away from reactive, vehicle-centric expansion towards proactive, integrated, and human-centred mobility planning. Incremental fixes are insufficient; systemic transformation is required:

1. **Prioritizing Public Transport:** High-quality, reliable, safe, and affordable public transport is the cornerstone of sustainable urban mobility. This requires:
 - **Investing in High-Capacity Systems:** Accelerating the development of Bus Rapid Transit (BRT) corridors with dedicated lanes, off-board fare collection, and modern stations on major corridors in Accra (completing and expanding pilot lines) and Kumasi. Explore feasibility for higher-capacity solutions like Light Rail Transit (LRT) on the densest corridors in the long term.
 - **Formalizing and Modernizing Existing Services:** Implementing robust regulation, franchising, and support programs to improve the safety, comfort, emissions standards, and operational efficiency of trotro services, potentially integrating them as feeders to BRT/LRT. Explore fleet modernization incentives.
 - **Integrated Ticketing and Planning:** Developing a seamless, multi-modal fare payment system and ensuring coordinated schedules and routes between different public transport modes.
2. **Reclaiming Space for People:** Pedestrians and cyclists must be elevated from afterthoughts to central considerations in road design and management:

- **Universal Sidewalk Mandate:** Implementing and enforcing a policy of continuous, unobstructed, well-maintained sidewalks of adequate width on all urban roads, particularly arterials and near key destinations (schools, markets, hospitals).
- **Safe Crossing Infrastructure:** Proliferating safe, accessible, and well-designed pedestrian crossings (signalized crossings, raised crosswalks, pedestrian refuges) at regular intervals. Ensure footbridges are accessible for all, including those with mobility challenges.
- **Dedicated Cycling Infrastructure:** Building a connected network of protected cycle lanes physically separated from motor traffic, providing a safe and viable alternative for shorter trips and first/last-mile connectivity. Implement bike-sharing schemes.

3. **Demand Management and Smart Infrastructure:** Managing the use of private vehicles is essential:

- **Traffic Management Systems:** Deploying intelligent transportation systems (ITS) including adaptive traffic signal coordination, real-time traffic monitoring, and dynamic information systems for drivers and public transport users.
- **Parking Reform:** Implementing effective on-street and off-street parking management, including time restrictions and evidence-based pricing in congested areas, to discourage long-term curb parking and generate revenue for transport improvements.
- **Congestion Charging (Long-term):** Carefully studying and potentially piloting congestion pricing schemes for highly congested zones during

peak hours, using revenue to fund public transport and active mobility infrastructure.

- **Freight Management:** Developing designated urban freight routes, promoting off-peak delivery windows, and exploring consolidation centres to reduce truck traffic in city centres during peak hours.

4. **Integrated Land Use and Transport Planning:** Breaking the cycle of car dependency requires aligning spatial development with transport infrastructure:

- **Transit-Oriented Development (TOD):** Promoting higher-density, mixed-use development (residential, commercial, office) around major public transport hubs (BRT stations, future LRT stations) to maximize access and reduce reliance on private vehicles.
- **Compact City Planning:** Encouraging urban infill and densification within existing service areas rather than perpetual low-density sprawl that necessitates long car journeys.
- **Strict Enforcement of Planning Regulations:** Curbing haphazard development, especially along major transport corridors, which impedes future road widening or public transport corridor development.

5. **Institutional Strengthening and Sustainable Finance:**

- **Unified Metropolitan Transport Authorities:** Establishing empowered, well-resourced metropolitan transport authorities for major cities (like Accra and Kumasi) with the mandate and capacity to

plan, coordinate, regulate, and manage all transport modes holistically, cutting across fragmented departmental responsibilities.

- **Dedicated Funding Mechanisms:** Securing sustainable long-term funding through mechanisms like dedicated fuel levies, road tolls (applied fairly), parking revenues, congestion charges, and value capture from properties benefiting from transport investments.
- **Capacity Building:** Investing in training for transport planners, engineers, and enforcement agencies in modern, sustainable urban mobility principles and technologies.
- **Robust Data Collection:** Establishing comprehensive systems to collect data on traffic flows, public transport usage, pedestrian volumes, and accident statistics to inform evidence-based decision-making.

Choosing a Different Path

The state of road networks in Ghana's major cities is not merely an infrastructure problem; it is a reflection of deeper challenges in urban governance, planning foresight, and resource allocation. The historical legacy of colonial priorities and post-independence pressures has collided with unprecedented urbanization and motorization, creating a perfect storm of congestion, danger, inequality, and environmental degradation.

Continuing down the path of prioritizing private vehicles through endless road widening and flyover construction is a proven failure. It induces more traffic, consumes valuable urban space, degrades the environment, and does little to serve the mobility needs of the majority. The alternative path demands courage, vision, and significant investment. It requires placing sustainable mobility, centred on

efficient public transport, safe walking and cycling, and managed private vehicle use – at the heart of urban development.

Improving Ghana's urban road networks is ultimately about improving the quality of urban life. It is about enabling people to reach jobs, education, and healthcare reliably and affordably. It is about creating safe streets where children can walk to school and communities can thrive. It is about fostering economic productivity by freeing businesses and workers from the shackles of gridlock. It is about building cleaner, healthier, more equitable, and more resilient cities. The transformation will be complex and challenging, demanding political will, institutional reform, public engagement, and sustained financial commitment. However, the cost of inaction, measured in lost lives, stunted economic growth, environmental damage, and deepening social divides, is far greater. The time to reimagine and rebuild Ghana's urban arteries for a sustainable future is now. The path forward must prioritize people, not just vehicles, and embrace integrated solutions that create cities truly worthy of their inhabitants.