Deera Editorial

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Walkable by Design:

Five Modern Mobility Ideas for Kuwait City

Deera's recent blueprint for Madinat al-Hareer made the case that a new city in the Subiya desert can be built around walkability, shaded movement, and integrated public transport from the first day. That argument applies in full to greenfield sites. The harder and more urgent question is what can be done for the city that already exists. Kuwait City is, on the data, one of the most car-oriented capitals in the world. It is also a city with a 98.3 percent urbanisation rate (Oxford Business Group), a young population, rising household demand for outdoor public space, and a clear national trajectory under Vision 2035 toward smart-city upgrades. These conditions, taken together, make Kuwait City an unusually promising candidate for a modern mobility retrofit.

This brief offers five concrete ideas for how that retrofit could proceed. The argument is supportive and design-led. The premise is that the global playbook for converting a car-first city into a people-first city is now well established and well costed. Singapore has done it in a tropical climate. Shenzhen has done it with a fleet of sixteen thousand electric buses. The Netherlands has done it with a national framework for zero-emission delivery. Each of these models contains lessons that translate directly to a fifty-degree Gulf summer, and each can be adapted at the neighbourhood scale before any city-wide commitment is made.

I. THE INHERITED CITY, AND THE WINDOW NOW OPEN

Every Gulf capital was built during the same forty-year window of rising oil revenue, rapid population growth, and the global mid-twentieth-century consensus that the automobile was the future of urban mobility. Kuwait City built accordingly, and built well by the standards of that era: wide arterials, generous parking, decentralised neighbourhoods, and a road network that

allowed the city to scale without bottlenecks. The result is a city that performs reliably for car travel and presents a real opportunity for thoughtful retrofit. Recent peer-reviewed research describes Kuwait City as among the least walkable major capitals globally, with no rail network, limited public transport, and residential areas spaced for vehicle commuting (Middle East Journal of Islamic Studies and Culture, 2025). The framing here is not that the original design was wrong; the framing is that the world has learned, in the decades since, what a successful retrofit looks like, and Kuwait now has the tools and the timing to apply those lessons.

The window is open in three respects. The first is climate-technical: shaded-walkway engineering, evaporative cooling, and high-albedo surface materials have advanced substantially over the past decade and are now performing well in cities that share Kuwait's climate band. The second is institutional: Vision 2035, the Kuwait New City project (sixty-four square kilometres, up to 150,000 residents, $863 million in infrastructure contracts signed in April 2025 according to Highways Today), and XZERO City (1,600 hectares, 100,000 planned residents, walking-and-cycling-led masterplan according to Akbar Travels reporting in November 2025) provide the policy and budget environment in which mobility innovation is welcomed. The third is commercial: McKinsey research summarised in the Oxford Business Group's 2025 Kuwait Report estimates that smart-mobility applications could reduce GCC commute times by 15-20 percent on average, depending on city density and existing transit infrastructure. Each of these three windows points toward the same policy conclusion: now is the moment to design, pilot, and scale.

II. FIVE IDEAS FOR THE MOBILITY RETROFIT

Idea one: a shaded pedestrian network on the Singapore model. Singapore is the most direct precedent for any tropical-or-arid city seeking to make outdoor movement comfortable. Through its Walk2Ride programme, the Land Transport Authority added approximately 200 kilometres of sheltered walkways across the island between 2018 and 2020 alone, and now provides sheltered links within 400 metres of every Mass Rapid Transit station and 200 metres of every bus interchange (Land Transport Authority Singapore). The engineering principle is

simple: where rain or extreme sun makes outdoor walking uncomfortable, the state builds the cover. The principle adapts directly to Kuwait. A pilot programme covering a five-kilometre network of shaded walkways linking, for example, Salmiya's commercial spine to its residential blocks, or Hawalli's mixed-use core to Bayan's residential interior, would test the engineering, surface the operational lessons, and produce visible public benefit before any city-wide commitment is required.

Idea two: an electric bus fleet on the Shenzhen model. Shenzhen is the global benchmark for full-fleet bus electrification. Beginning in 2011 with a pilot programme and completing in 2017, the city converted all 16,359 of its public buses to electric operation, becoming the first major city in the world to do so (World Resources Institute). The Shenzhen Bus Group has reported annual savings of approximately 160,000 tonnes of coal-equivalent energy and 440,000 tonnes of carbon dioxide emissions through this transition (GoFleet case study). For Kuwait, the relevant lesson is not only environmental: an electric bus fleet is quieter, experiences lower lifecycle maintenance costs, and pairs naturally with the integrated payment and routing capabilities of the existing Sahel platform. A phased plan replacing diesel buses as they reach end-of-life with battery-electric equivalents, supported by depot charging on the model proven by Shenzhen Bus Group, would put Kuwait among the first GCC capitals to achieve this milestone. The Kuwait Public Transport Company is well-positioned to lead such a programme. The climate-control implications of an electric fleet, with instant cabin cooling available without engine warmup, are particularly meaningful for summer ridership.

Idea three: zero-emission delivery zones on the Dutch model. The Netherlands implemented, in January 2025, the world's first nationally-coordinated framework for Zero-Emission Zones for Freight, applied initially across eighteen cities including Amsterdam, Rotterdam, Utrecht, and Eindhoven, with thirty to forty cities in total expected by year-end (International Council on Clean Transportation; EU Urban Mobility Observatory). The early data is striking. By mid-2025, 78 percent of new vans and 76 percent of new medium-trucks registered in the Netherlands were battery-electric, the highest figures in the European Union, with electric

truck sales rising 188 percent year-on-year. The model for Kuwait is neither a sudden ban nor a punitive measure. It is a published timeline, paired with subsidies for delivery operators to convert their fleets, focused initially on a small high-traffic delivery zone such as the central business district, the Avenues area, or a single dense neighbourhood. Delivery vehicles are a small share of total vehicle fleets but a disproportionate share of urban emissions and noise; converting them first delivers visible public-health benefit at relatively contained cost.

Idea four: smart-mobility orchestration through Sahel. Kuwait already has a national mobile platform with 2.9 million users (Times Kuwait, September 2025) and the institutional capacity to integrate cross-agency services, as demonstrated by the Newborn Journey workflow. Mobility services map naturally onto this platform. A Sahel mobility layer could include integrated bus and route information, real-time arrival predictions, transit-pass payment, parking-availability data for major corridors, and ride-share or taxi integration where useful. The Oxford Business Group's 2025 Kuwait Report cites McKinsey research estimating that smart-mobility applications can reduce GCC commute times by 15-20 percent on average. The implementation model is already proven domestically; what remains is the integration, the open-data API for transit operators, and the policy decision to organise mobility around the user rather than around the operator.

Idea five: neighbourhood-scale demonstration districts. The case for Kuwait City is strengthened, not weakened, by the recognition that retrofitting an entire capital is a multi-decade undertaking. The most effective entry strategy, used in cities from Barcelona to Melbourne, is to designate a small number of demonstration districts where the full retrofit toolkit is applied: shaded pedestrian network, calmed-traffic streets, electric public transport, zero-emission delivery, integrated digital services, and active programming of public space. Salmiya, Hawalli, and Mubarakiya each present specific candidate footprints. A two-to-three-year demonstration in one such district would generate the evidence base, the contractor capability, and the public appetite for wider rollout. The Kuwait New City project and XZERO City both already commit to walkability as a design principle. Demonstration districts inside the existing city extend that

design ambition to the population that lives there today rather than the population that will arrive over the next decade.

III. WHAT CAN START TOMORROW

The five strategic ideas above describe the multi-year horizon. Kuwait City's mobility reality, however, is shaped by a specific near-term geography: most residents live in suburban neighbourhoods (Salwa, Mishref, Bayan, Salmiya, Hawalli, Jabriya, Surra, Adailiya), while most jobs concentrate in the central business district and Sharq, with the daily commute funnelled through four ring roads and a small number of arterials. The result is a recurring morning and evening peak that compresses thousands of vehicles into the same corridors at the same time. Five concrete steps can be initiated within twelve to eighteen months and would meaningfully ease this pattern while the longer-horizon work is being designed.

Step one: AI-adaptive traffic signals on the highest-volume ring-road junctions. Dubai's Roads and Transport Authority completed Phase 1 of its UTC-UX Fusion adaptive-signal rollout in 2025, applying artificial intelligence, predictive analytics, and digital-twin simulations to manage signal timing in real time. The published results: traffic-flow efficiency improvements of 16 to 37 percent at upgraded intersections, with citywide travel-time gains of 10 to 20 percent overall (Gulf Business; Gulf News, September 2025). Pittsburgh's SURTRAC system, the academic precedent for adaptive control, achieved comparable results: 26 percent reduction in travel time, 41 percent reduction in idling, and 21 percent reduction in emissions across its initial pilot deployment (IEEE Spectrum; Carnegie Mellon Robotics Institute). Kuwait can begin with a twenty-to-thirty-intersection pilot at the Fourth and Fifth Ring Road junctions where peak congestion concentrates, with evaluation against pre-existing fixed-timing baselines after six months. The hardware is mature, the suppliers are well-established in the region, and the implementation cost per intersection is well-documented in published procurement records.

Step two: shaded, climate-controlled pedestrian bridges at the highest-traffic crossing points. Pedestrian bridges exist in Kuwait City. The near-term opportunity is to retrofit

the most-used among them with climate control: shaded approach ramps, low-energy mechanical ventilation, evaporative cooling where feasible, lifts for accessibility, and clear signage and lighting. The model is the climate-controlled crossings at major mall-to-metro connections in the UAE, which made outdoor-to-indoor pedestrian transitions usable through summer months. Candidate locations in Kuwait City include the Gulf Road crossings at Salmiya and Marina Mall, the Al-Rai retail corridor, and the Avenues approach. Each retrofitted bridge becomes immediately useful in summer and demonstrates the shaded-network principle at small scale before any city-wide Walk2Ride-style programme is launched.

Step three: dedicated bike and micro-mobility lanes on a small number of low-traffic streets. The full case for everyday cycling in a fifty-degree summer is conditional. The case for evening, autumn, winter, and spring cycling, and for year-round e-scooter use on shaded routes, is strong. Five to eight kilometres of physically separated bike lanes on selected low-traffic streets in Salmiya, Hawalli, or near the Scientific Centre would establish the legal and physical infrastructure, test maintenance and enforcement protocols, and provide a platform for expansion. International evidence is consistent: physical separation from motor traffic is the single design factor most strongly correlated with usage, and protected lanes typically generate ridership levels three to five times higher than painted-only lanes.

Step four: pedestrian-priority signal upgrades at high-volume crossings. A small subset of urban intersections in Kuwait City carry disproportionate pedestrian traffic, particularly near schools, hospitals, mosques, and the Mubarakiya market. At these locations, signal timing and physical design changes can be made in months rather than years: longer pedestrian-crossing phases, leading pedestrian intervals (giving pedestrians a head-start before parallel vehicle traffic gets a green), high-visibility crosswalk markings, and refuge islands on wide arterials. These are low-cost interventions, well-established in international engineering practice, and produce immediate measurable safety and comfort improvements at the locations where they matter most.

Step five: park-and-ride at the suburban edge of the city, paired with a dedicated bus corridor on the Fourth Ring Road. The structural cause of Kuwait City's morning

congestion is that almost everyone enters the central business district by private vehicle. A park-and-ride facility at one or two suburban locations, paired with a dedicated bus corridor (initially a peak-hour bus lane, later a fully separated bus rapid-transit corridor) on the Fourth Ring Road, would offer commuters a credible alternative for the first time. The Dutch and Singaporean experiences both demonstrate that park-and-ride only works when the bus journey is faster and more reliable than driving, which is why the dedicated corridor is essential. With the existing Sahel infrastructure providing real-time arrival data and integrated payment, the user experience can match or exceed comparable systems internationally from day one.

IV. WHAT TURNS A PILOT INTO A PROGRAMME

International evidence points consistently to four institutional features that distinguish successful urban-mobility transitions from stalled ones. **The first is a single empowered coordinating vehicle** with budget authority across road, transit, and digital-services portfolios. London's Transport for London, Singapore's Land Transport Authority, and Amsterdam's integrated mobility office each play this role. **The second is a published multi-year roadmap with named milestones**, of the kind the Dutch national government issued in April 2025 for its zero-emission freight transition, including a six-month grace period and explicit exemption clauses for genuine implementation challenges. Predictability is what allows private operators to invest. **The third is open data**, on the model London demonstrated through Transport for London's open API, which allowed an entire ecosystem of third-party applications to grow around public-transport information at zero cost to the state. **The fourth is honest measurement of outcomes**: London's Ultra Low Emission Zone, the largest such zone in the world covering approximately nine million people, achieved a 13 percent reduction in nitrogen-dioxide concentrations in outer London and 96 percent vehicle-fleet compliance, results that were published transparently and that have helped sustain political support for the policy (Vianova). Kuwait can adopt all four institutional features without rebuilding existing structures; what is required is an empowered mandate, a published plan, and the discipline to report results.

V. CONCLUSION

A modern Kuwait City does not require erasing the city that exists. It requires layering new infrastructure on top of the existing footprint with the patience and discipline that worked in Singapore, Shenzhen, Amsterdam, and London. Five ideas frame a constructive path: a shaded pedestrian network adapted to fifty-degree summers; a phased electric bus fleet operated by Kuwait Public Transport Company; a zero-emission delivery zone piloted in a single dense district; a Sahel mobility layer that puts integrated public transport in every resident’s pocket; and a small number of neighbourhood demonstration districts that turn the playbook into visible reality. None of these ideas requires inventing new technology. All of them have been tested and costed in real cities. Each builds on capabilities Kuwait already possesses. Together they describe a Kuwait City that, ten years from now, can be cited alongside Singapore and Amsterdam in the literature of successful urban modernisation. Deera’s view is that this is achievable, that the moment is right, and that the work is worth doing carefully.

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