# Reviving or Reimagining the Mumbai Monorail: A Citizens' Proposal for Accountable, Sustainable Transit

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## Executive Summary

The Mumbai Monorail was once hailed as a pioneering leap in Indian urban transport, promising modern, efficient, and high-capacity mobility to supplement the city's overstretched suburban railways. Today, it stands as a sobering reminder of how grand infrastructure ambitions can falter when planning fails to align with real commuter needs. More than a decade after the project began, the monorail carries less than a tenth of its design capacity, has consumed over ₹3,000 crore in public funds, and continues to depend heavily on taxpayer subsidies to survive.

Recent efforts by the Mumbai Metropolitan Region Development Authority (MMRDA) to revive the system have injected a measure of optimism. Ten new rakes have been commissioned from Megha Engineering, older trains are being refurbished with modern Automatic Train Protection systems, and integration with the soon-to-be-operational Metro Line 3 is expected to improve ridership. Yet serious questions remain. The safety record of the monorail is among the worst for any comparable system globally, marked by the catastrophic 2017 fire that exposed glaring gaps in oversight and technical safeguards. Meanwhile, the long-term sustainability of operations is in doubt because Scomi Engineering—the original manufacturer—has gone bankrupt, leaving no standard supply chain for future rakes or spare parts.

At the same time, a viable alternative exists that deserves thorough exploration. Rather than abandon the monorail corridor or rebuild from scratch, Mumbai could potentially repurpose the existing elevated infrastructure into a dedicated Bus Rapid Transit System (BRTS). Such a conversion would draw upon lessons from cities that have leveraged BRTS to achieve higher ridership, lower costs, and more flexible service. This proposal outlines the background, the challenges of revival, the potential of BRTS conversion, and the clear need for transparency and evidence-based decision-making.

## 1. Rise and Fall of Mumbai's Monorail

The monorail project was first proposed in 2005 as part of Mumbai's larger transportation vision. The corridor selected—spanning nearly 20 kilometres from Chembur to Sant Gadge Maharaj Chowk—was envisioned as a feeder line that would integrate with the suburban

rail and metro networks. In theory, it would ease congestion and provide faster connections across eastern neighbourhoods and the city centre. Construction began in 2009 under a consortium of Larsen & Toubro and Malaysia's Scomi Engineering, which had limited experience with large urban monorail systems.

Phase I, connecting Wadala and Chembur, was inaugurated in 2014, already three years behind schedule. Phase II, extending to Jacob Circle, took another five years and opened only in 2019. Cost overruns became routine, pushing the total expenditure beyond ₹3,000 crore, while the system's operational readiness remained questionable. In November 2017, a fire broke out near Mysore Colony station, destroying two coaches and forcing a months-long shutdown. Investigations revealed that the monorail was operating without a valid fitness certificate, lacked essential ATP systems, and was marred by chronic maintenance neglect.

Even after service resumed, ridership never approached the promised 200,000 daily commuters. For much of the past decade, the system has transported between 16,000 and 18,000 passengers per day—less than many mid-sized bus corridors. Meanwhile, operating losses mounted, with subsidies required to cover deficits estimated at ₹1,200 crore by 2024. The project, once touted as a showcase of technological progress, gradually acquired a reputation as Mumbai's "white elephant."

## 2. Global Comparisons and Persistent Safety Concerns

If Mumbai's monorail failures were unique, they might be excusable as an unfortunate experiment. But internationally, successful monorail systems share a set of characteristics that Mumbai never adopted. The Tokyo Monorail, for example, moves nearly 270,000 passengers per day between Haneda Airport and central Tokyo, benefitting from dense corridors, seamless rail integration, and rigorously enforced safety standards. It operates with redundant ATP and modern fire suppression equipment, backed by independent regulatory audits. Similarly, Osaka's monorail leverages tight connections with commuter rail and serves clear travel needs among suburban workers, achieving high frequencies and consistent reliability.

By contrast, Mumbai's system was built on an alignment that bypassed the city's densest business districts. At no point did the project receive independent safety certification comparable to international norms. The 2017 fire was not merely an accident but a symptom of systemic neglect: a rushed operating schedule, incomplete safety installations, and a culture of inadequate oversight. While MMRDA has since begun retrofitting ATP and installing more advanced fire detection systems, public confidence remains fragile. The absence of an independent safety regulator, coupled with poor transparency in maintenance practices, leaves commuters wary.

## 3. Revival in Motion—But Critical Weaknesses

In late 2024, MMRDA announced a comprehensive revival plan intended to salvage the system's reputation. Ten new rakes were ordered from Megha Engineering—a company with no prior experience manufacturing monorail trains. These units are reverse-engineered adaptations of Scomi's original designs. At the same time, eight older rakes are being refurbished, and upgrades to train control, communication systems, and interiors are underway. Once all eighteen rakes are operational, MMRDA promises frequency improvements to intervals of 7–10 minutes, a significant upgrade from the current 15–30 minute gaps.

The most consequential improvement is the expected integration with Metro Line 3, which is scheduled to open in late 2025. This linkage at Jacob Circle could, in principle, drive substantial increases in ridership by offering smoother transfers and more meaningful connectivity to the broader rail network.

Yet even with these changes, critical challenges remain. The monorail's inherent capacity is modest: at maximum throughput, the system can carry approximately 7,000 passengers per hour per direction—well below what high-capacity BRT corridors achieve in other cities. The rolling stock supply chain is fragile to the point of crisis. With Scomi defunct, Megha's bespoke rakes are effectively a one-time solution. There is no evidence that any established manufacturer is prepared to adopt and mass-produce this design. This means that within the next decade, Mumbai may again face a shortage of spare parts and rolling stock replacements.

Moreover, the system's record of frequent breakdowns, lengthy service suspensions, and low public trust cannot be erased overnight. While commuters may cautiously return if frequency and safety improve, any further incidents will likely reinforce perceptions of the monorail as an unreliable investment.

## 4. Case for Exploring BRTS Conversion

Given these structural weaknesses, many experts have suggested that Mumbai should prepare to pivot toward alternative uses of the infrastructure. A widely discussed possibility is converting the monorail viaduct into a Bus Rapid Transit System. While the idea may sound radical, the concept is not without precedent internationally. Elevated BRT corridors—like Jakarta's Corridor 13—have been constructed to carry thousands of buses daily over traffic-choked streets. In cities such as Bogotá and Los Angeles, BRTS projects have demonstrated their ability to deliver metro-like capacity at a fraction of rail costs.

In Mumbai's case, the unique advantage is that the core infrastructure—the elevated guideway, columns, and stations—is already in place. Contrary to the assumption that conversion would mean demolishing everything and starting anew, a BRTS project could focus primarily on structural reinforcement and adapting the track bed. The guideway

would need to be widened or filled to create a continuous roadway surface, safety barriers and evacuation pathways would need to be constructed, and ramps added for vehicle access. Unlike monorail rolling stock, buses are widely available from multiple manufacturers, ensuring supply chain resilience and cost competition.

Estimated conversion costs are significantly lower than building new elevated BRT corridors. Based on benchmarks from Jakarta and Ahmedabad, adapting the monorail for BRTS could cost ₹30–50 crore per kilometre—covering engineering studies, reinforcement, decking, and ramps. This translates to a total project budget between ₹600 crore and ₹1,000 crore, far less than the cumulative outlay the monorail has already consumed. The resulting system could carry as many as 15,000–20,000 passengers per hour per direction—triple the monorail's best-case throughput.

**Mumbai's monorail was conceived with the ambition of modernising urban transport. But as with so many infrastructure experiments, success requires execution, community engagement, and the humility to adapt when reality diverges from plans. Today, the system stands at a crossroads: a final opportunity to prove itself as a useful feeder line or to evolve into something more sustainable. The choice must be made transparently, guided by evidence and committed to the public interest above all.**

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