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The Success of the Transport System during FIFA World Cup Qatar 2022

From Demand Management to Sustainability

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Hosting the FIFA World Cup 2022 was not only a historic achievement for Qatar, but also a successful real-world experiment in managing transportation during a global mega-event in a geographically compact setting. With over one million visitors, 64 matches held over 29 days across 8 stadiums located within short distances of each other, Qatar was expected to face major challenges in meeting transportation demand for both daily activities and event-related travel. Yet, the outcome defied expectations.

This success was achieved through a comprehensive Travel Demand Management (TDM) strategy, which was carefully planned, piloted, and effectively implemented. The strategy included over 30 measures designed to encourage residents and visitors to shift from private cars to sustainable modes of transport. As shown in Figure 1, these interventions were geographically distributed to optimize their impact. These measures can be grouped into four main categories:

• Road-related measures: such as restricting access to stadium roads and dedicating lanes for buses and taxis.

• Public transport service enhancements: services, including extended operating hours, reduced waiting times, and a trip-planning mobile app.

• Supportive measures: such as remote work policies, adjusted working hours for public and private sectors, temporary school closures, and halting construction projects near event zones.

• Hayya Card privileges: services, which served as stadium access passes and offered free public transport throughout the tournament.

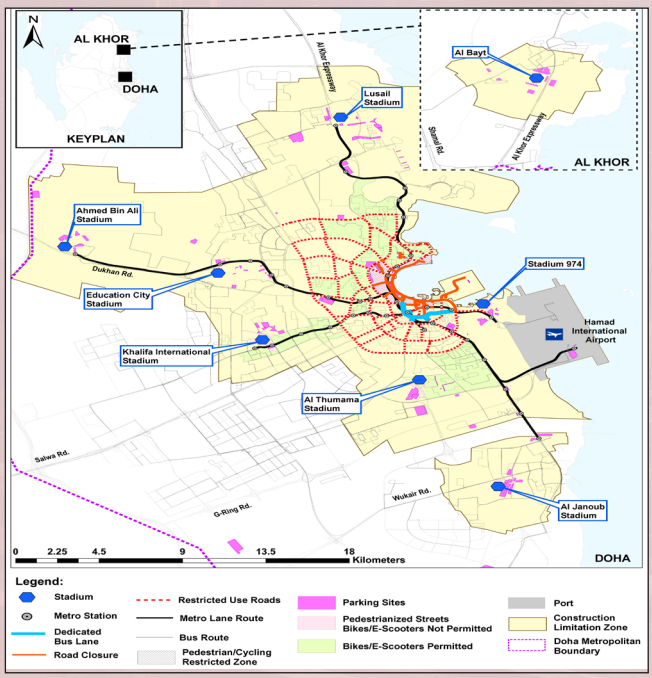

Figure 1: Spatial Representation of TDM Measures during FIFA World Cup Qatar 2022.

Study Objectives and Methodology

To assess the impact of TDM measures on daily mobility behavior and evaluate the most influential interventions during the tournament, Qatar University conducted a field study involving 1,200 interviews, supported by survey analysis and secondary data such as public transport ridership statistics, as illustrated in Figure 2. The study focused on:

• Mobility behavior analysis: comparing trip frequency and mode usage before and during the tournament.

• Nature of changes: examining how residents adapted, by reducing trips, changing travel times or routes, or switching modes, and linking these changes to socio-economic factors.

• Measure evaluation: rating the impact of each TDM measure on a scale from 1 (no impact) to 5 (high impact).

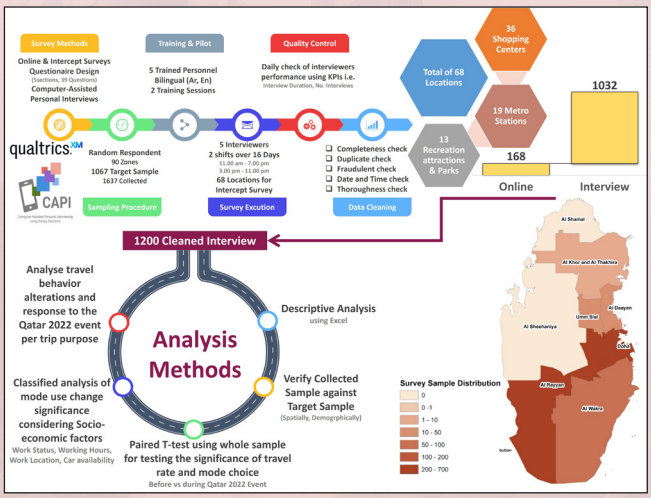

Figure 2: Data Collection and Analysis Framework. Key Findings

Key Findings

Analysis of the survey results revealed that 93% of residents changed their travel behavior during the tournament, while only 7% did not alter their mobility patterns compared to regular days before the event. This represents a remarkable success where private car usage decreased by an average

of 2.8 trips per week, while metro usage increased by 2.5 trips per week, without any significant increase in daily travel time or delays.

Additionally, 29% of residents reduced their daily trips, either by deferring them or switching to digital services (such as online shopping or remote work), highlighting the important role of technology adoption. Meanwhile, 23% of residents shifted from using private cars to metro or public buses, and 16% changed their travel times to avoid peak hours—a change strongly linked to temporary school closures and adjustments in working hours.

The results also showed that 33% of residents changed their travel routes to avoid congested areas, making this the most common change. This indicates a high level of awareness among residents and their ability to make smart decisions based on traffic updates via apps, media, or intelligent transport systems.

Our evaluation of 16 TDM measures, showed that measures related to personal comfort, cost reduction, and work flexibility were the most influential, while strict regulatory measures were the least impactful, according to participants' perceptions.

How Qatar Outperformed Global Experiences

Qatar's experience stands out for the scale of behavioral change among residents. For example:

• In the London 2012 Olympics, only 20% of residents reduced daily trips.

• In Beijing 2008, strict road closures caused public dissatisfaction.

• In Brazil 2014, major cities faced severe congestion with little increase in public transport use.

In contrast, Qatar achieved change through positive incentives (e.g., free tickets) rather than strict restrictions. Car dependency among Qataris dropped from 95% to 83%, while metro usage among expatriates rose from 9% to 19%, with no significant impact on daily travel time. This success was driven by early planning, robust infrastructure, and cultural and social awareness.

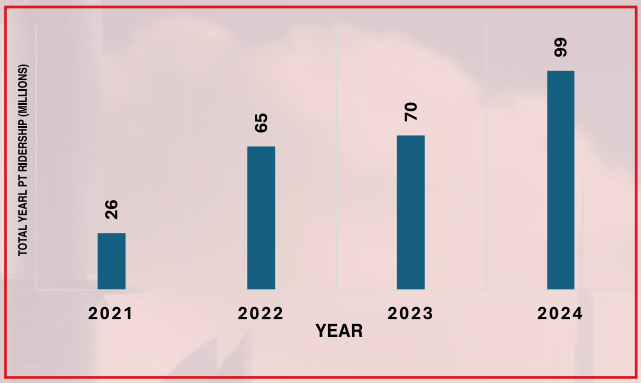

Figure 3: Annual Public Transport Ridership (2021–2024).

Can This Shift Be Sustained?

Yes, this shift can be sustained. According to the analysis results, residents expressed a willingness to continue using public transport if incentives such as fare discounts (66%) and flexible working hours (53%) remain in place. Moreover, the results illustrated in Figure 3 indicate that the FIFA World Cup 2022 was not a temporary event, but rather a catalyst for building a culture of sustainable transport in Qatar. For example, annual public transport usage increased by 53%, from 65 million in 2022 to 99 million in 2024. To build on this success, the country can:

- Expand the metro network to cover new areas.
- Promote remote work and flexible working hours to reduce peak-hour congestion.
- Integrate smart technologies like mobile apps and e-payment systems.

Lessons Learnd

Qatar successfully managed transportation operations during the FIFA World Cup 2022 through a combination of modern infrastructure, such as metro and tram lines, and the implementation of incentive-based measures rather than restrictive ones—most notably free public transport tickets and the use of digital solutions. This led to a behavioral shift among 93% of residents, as the number of trips on the Doha Metro reached 18.2 million in just 28 days, with public transport usage increasing by 232%.

The keys to success were planning, centralized coordination, data-driven decision-making, and collaboration across all stakeholders. This experience can be replicated across the GCC and Middle Eastern countries, with adjustments tailored to each country's local context.

In summary, Qatar's success in hosting the FIFA World Cup 2022 was not just a temporary event, it was a successful model of sustainable transport that can be adapted globally.