

CASE STUDY

# Bus Rapid Transit Development in Peshawar

## Healthy City

## Built Environment



### Climate Issue: Public Transportation

- Transportation is a major source of global greenhouse gas (GHG) emissions.
- Transitioning to zero-emissions transportation alternatives is key to preventing the worst impacts of climate change.
- In 2013, Peshawar ranked among the world's most polluted cities, partly due to aging transport and the absence of formal public transit.
- Instead, the city was served by hundreds of small private operators, who ran decades-old buses, trucks, and taxis.
- The air pollution from these vehicles caused health problems among residents and lowered their quality of life.

### Political, Social, and Institutional Triggers

- Most of Peshawar's two million residents relied on these 618 unsafe, polluting vehicles. Buses contributed to traffic congestion and had few seats available to women.
- The elderly, people with disabilities, transgender individuals, and children faced harassment in this system. Fares were high, and disruptions were frequent.
- Due to these challenges, the Khyber Pakhtunkhwa province created a new Urban Mobility Authority to approve project budgets and develop urban mobility solutions.
- The Authority established TransPeshawar, a publicly-owned company, to design and implement a new transportation system.
- These cross-sector partnerships enabled the project to grow and maximize its impacts.

TransPeshawar created a Bus Rapid Transit (BRT) system and a bicycle sharing program to reduce air pollution and provide low-cost transportation modes.

The new transportation network covers 70% of the city, with a daily peak of 300,000 passengers.

These transit options are accessible to women, children, the elderly, those with disabilities, and transgender residents.

### Including the Excluded

Peshawar's new BRT and cycling systems have improved citywide equity, allowing low-income and marginalized communities to access job opportunities and resources.

- Peshawar's old bus system was unsafe for many community members. Each bus had just two seats reserved for women. High floors also made it difficult for older people and those with mobility constraints to board buses.
- The 244 new buses are wheelchair accessible, serving 5,000 residents with disabilities. They have more seats allocated to women, increasing female ridership from 2% to 30%.
- The new BRT network saved the city \$182 million in operating costs and an additional \$344 million in efficiency improvements. This allowed TransPeshawar to lower bus fares to 5 cents, making transportation accessible to low-income groups.
- The city's new bicycle sharing system provides 360 bikes for 160 kilometers of paths. The paths enable cyclists and pedestrians to navigate the city easily at low costs.

### Enabling Factors

The Khyber Pakhtunkhwa Urban Mobility Authority established TransPeshawar to reimagine Peshawar's transportation system. TransPeshawar strategically developed partnerships and delegated roles for effective project implementation.

- TransPeshawar drastically improved the efficiency of the bus system by establishing dedicated bus corridors.
- It turned to the Peshawar Development Authority for construction, drawing on their proven expertise in infrastructure development and risk management.
- The project built 27 kilometers of corridor with 30 bus stations. This system was integrated with 59 kilometers of off-corridor routes that serve 155 bus stops.
- Once construction was completed, TransPeshawar partnered with the private sector for project operations and management.
- Clear division of responsibilities ensured effective, joint execution by all stakeholders.

This project was a 2021-2022 finalist for the WRI Ross Center Prize for Cities, a global award celebrating and spotlighting transformative urban change. Information was self-reported by finalists. Learn more at [prizeforcities.org](https://prizeforcities.org) and [wri.org/cities](https://wri.org/cities).

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### Ongoing Barriers to Success

#### Political instability

- Located near the Afghan border, Peshawar faces ongoing security risks that deterred foreign experts from visiting.
- The pandemic also reduced flights into Peshawar, making it difficult to bring in project contractors.
- This convergence of challenges led the project to turn inward toward local expertise and resources. Virtual meetings allowed some external experts to participate.

#### Technology procurement

- Travel restrictions hindered the procurement of new buses.
- Project leaders debated whether to bring in conventional diesel buses or to adopt hybrid models, which had not yet been tested in the country.
- Workshops and expert consultations persuaded the government to procure hybrid buses and scale electric bus infrastructure for long-term sustainability.

#### Political division

- A rift between local and federal governments, led by differing political parties, has delayed project scaling.
- Because loan agreements with the Asian Development Bank (ADB) are contracted through the federal government, tensions have stalled progress. Feasibility studies for expansion cannot currently move forward.

### Sustaining & Scaling:

The growth of the project has been sustained and scaled by:

#### Gaining public buy-in

- Creating jobs and providing services to all residents, including low-income and marginalized communities.
- Demonstrating a strong proof of concept that has shifted public perception. Citizens now recognize the benefits of cleaner technologies and are more open to their adoption.

#### Investing in climate resilience

- Reducing system disruptions and costly infrastructure damage. TransPeshawar constructed 28 kilometers of drainage on both sides of bus corridors to prevent flooding.

#### Scaling up, out, and across

- Building momentum that was solidified by Pakistan's participation in COP 29. This signaled an ongoing federal commitment to environmental initiatives.
- Expanding operations to add 20 kilometers of high-speed bus corridors and 250 fully electric buses by 2030. This expansion is reliant on a partnership between the Government of Pakistan and the ADB.
- Setting an example for other Pakistani cities to replace diesel buses with cleaner alternatives. 600 electric buses have been procured in Lahore and Rawalpindi, with Lahore also planning to build new terminals.

### IN A NUTSHELL

- In Peshawar, upgrading public transit systems to be low-emissions, efficient, and accessible fostered a more interconnected and healthy city.
- Integrating climate-resilient features, such as green infrastructure, also improved the new transit system's sustainability and reliability.
- By strategically forging partnerships and delegating roles for project implementation, Peshawar's government strengthened its overall urban development capacity.

### WHAT CAN YOUR CITY DO?

**UPGRADE** public transportation infrastructure to increase efficiency and reduce emissions.

**INCLUDE** all residents, especially low-income and marginalized communities, when designing new transportation initiatives.

**ENHANCE** the climate resilience of public transit systems through green infrastructure and electrification.

**FACILITATE** public-private partnerships that address community needs.

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