Cycle Rickshaw as Feeder Service
First and Last Miles

Symposium on Public Transportation in Indian Cities with
Special focus on Bus Rapid Transit (BRT) Systems
20-21 January 2010, New Delhi

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The problem

- Urbanization has far exceeded the carrying capacity of the cities.
- Ongoing and clear modal shift from the non-polluting modes of walking, cycling and cycle rickshaws to polluting motorised two and three wheelers and cars.
- Increasing motorization leading to congestion and pollution.
- Since the perceived problem of congestion was lack of space for cars, the transport engineering solution has been to provide more space to cars.
- Thus cities create a self-reinforcing process of ever more cars requiring ever more road space.

CHANDANI CHOWK - Congested for cars, cycle rickshaws banned!
एक राष्ट्र, समान नागरिक... एक नगर, समान सड़कें – भेदभाव क्यों?
One Nation, One Citizenship... Same city, same roads – different standards!

स्रोत: लोकयात्रा संघर्ष

Source: LOKAYAN Collection
The Social Perspective

The rickshaw needs to encouraged to
- Decrease unemployment
- Decrease pollution
- Decrease fuel consumption by transport sector
- Increase social equity
- Provide access to all
- Achieve sustainable urban transportation system

The interventions necessary to achieve this are:
- Provision of segregated infrastructure for non-motorized vehicles on the roads
- Integrate the rickshaw with mass transit systems like buses and metro rail
- Include it in policy making and planning
- Improve design and technology

Ref: UNDP report by Lokayan
Ref: Poster Exhibition by IDS

Bharat ki sadkon par saikikl dixasha
Cycle Rickshaw on the Urban Street – in India

Source: LOKAYAN Collection

Jaamian ke uppar... aasmamaan ke niache - bajrangi ka bhasra
On the ground... under the sky - a home away from home

Source: LOKAYAN Collection
Cycle rickshaw in Indian Cities – the existing technology

Source: LOKAYAN Collection
Trip characteristics of Rickshaw Users

- Trip Length distribution for the rickshaw users shows that the approximately 75% of the trips are of distances more than 0.5 km and upto 2 Km.

- Most of the rickshaw users (92.5%) spend more than 5 min and 20 min or less on their trips. This is in accordance with the recorded trip distances (Source Bus Users on BRT Corridor – TRIPP 2004)

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Modeling PT-NMT integration

Figure: Probability curves for access and egress trips in The Netherlands (Krygsmann et al. (2004)).

Figure: Passenger catchment areas for integrated bus-bike trips are influenced by the distance of the origin to the main haul line based on hypothetical distribution curve (green: bus-walking catchment, purple: bus-bicycle catchment, orange: bus-feeder bus catchment).
Bicycles and Cycle Rickshaws can be efficient and cost-effective means of transport to access the BRT system.

While acting as efficient feeder for public transport vehicles, using cycle rickshaws as muscle-powered taxis can help generate livelihoods for many.

There is a large number of already existing rickshaws and pullers in the city.

These modes are zero polluting that will help reduce carbon emissions and if implemented with proper planning, could help the public transport system become carbon-neutral.

So, what can be done... ?
Cycle Rickshaws taxis as feeders

- Cycle Rickshaws be introduced as formal feeder modes with stipulated fares so that commuters needn’t haggle and the rickshaws are easily used.

- A large cycle rickshaw puller force exists in the city. They can be incorporated into this plan thereby reducing the need to develop special human resource for this task.

- The rickshaws can ply on the NMV lanes near the BRTS corridor when on the main road. This will take care of fear of commuters to use rickshaws on main roads.

- Rickshaws can be marked with black and yellow paint to identify them as credible, formal taxis.

- Rickshaws pullers can be employed by DIMTS to drive DIMTS owned rickshaws or rickshaw pullers using self-owned or self-rented rickshaws provided they comply with the service quality standards.
Cycle Rickshaws taxis as feeders

Better, contemporary design:
The world over, cycle rickshaws are in and are being designed to suit contemporary aspirations using appropriate and innovative.

For this purpose, the resources in various Industrial Design Schools in the country can be engaged to design a modern Indian rickshaw. This can take the form of a design competition with student designer awardees.
Innovative concepts

The Rickshaw Bank

Rickshaw cooperatives to address issues of seasonal migration of rickshaw pullers

(Ref – UNDP project by Lokayan)
The Ecocab initiative - Fazilka