Metro stations can be key to seamless connectivity in Bengaluru, here's how

TRANSPORT INTEGRATION

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Metro stations are ideal for transport integration. Baiyyappanahalli Metro station has vehicle parking facility and auto/bus stops nearby. Pic: Ekta Sawant

It seems like Bengaluru is sitting on a powder keg. Recently the state Transport Department revealed that a staggering

50,000 vehicles were registered every month in the city, on average, in 2019.

 The public transport (PT) system here – Metro and buses – is hampered by the lack of seamless connectivity. This in turn forces commuters to use private cars, two-wheelers and private buses, along with intermediate public transport (IPT) like autos and cabs. The increasing number of private vehicles have led to traffic congestion, increased travel time and air pollution.

Despite introducing Metro and procuring more buses, Indian cities have not been able to increase the share of PT significantly. What could be the solutions to this problem?

Metro stations are ideal for integration

A commuter's choice of transport mode is mainly dictated by:

- travel time
- cost
- ease of access to the transport system

With three to six coaches, and a 4-15 minute headway (interval between trains), Metro currently has daily ridership of approximately 4.5 lakh passengers. According to Namma Metro's DPR (Detailed Project Report), even increasing the coaches from six to eight, and reducing the headway to 3-10 minutes, can almost double the ridership capacity. This would encourage more people to use Metro.

Further, Bengaluru can take a leaf out of London's transport authority TfL (Transport for London) and Singapore's Land Transport Authority, which ensure seamless integration across various modes.

In Bengaluru, Metro stations can be good transit points for multimodal integration. This is because Metro is a fixed transport mode (in contrast to other modes that may take varying routes), and also the fastest, in the city.

Our study, at the research-based think tank CSTEP (Center for Study of Science, Technology & Policy) in 2017, found that, of about 2500 Metro commuters surveyed,

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approximately 30 per cent used the Metro only occasionally for daily trips. (Rest of the survey respondents were those who already used Metro regularly, or only used it rarely for leisure trips.)

Among this 30 per cent, over 65 per cent use buses, two-wheelers or cycles for their daily commute, while almost 27 per cent use cars, cabs, and autos. Seamless connectivity and hassle-free travel can encourage this group to travel in Metro more often. One way to do this is by Metro-bus integration – deploying feeder buses at select Metro stations, depending on commuter demand and infrastructure availability.

Integration should depend on characteristics of Metro stations

When planning multimodal integration, the physical characteristics of Metro stations — surrounding land use, access road width, and footfall — should be considered.

For instance, a Metro station on a wide road (over 30 m), with a high footfall, can have a dedicated bus bay for feeder buses, along with wider footpaths (over 1.5 m). But a Metro station on a road that’s narrower than 30 m or is congested, may not support this kind of infrastructure. In such cases, two-wheeler parking and IPT bays/stops may be a better solution.

Metro stations which already have PT/IPT stops within 100m can use them as feeder stops, instead of building new infrastructure. This will save both infrastructure cost and space. Authorities only need to ensure there’s proper pedestrian connectivity between the existing stops and the Metro station.

Private parking can be prioritised for a Metro station in a predominantly residential area like Banashankari, as commuters may use their own vehicles between their home and the station. Whereas, PT/IPT bays are essential in non-residential areas like MG Road where commuters will alight and then go to their workplaces by bus, auto etc.

Multimodal transport hubs

Multimodal transport hubs can be another key step in integrating the city transport system, and thus increasing the share of public transport. Yeshwanthpur, for instance, is a hub for buses, railway, and Metro.

Proper signage and minimum conflict points are crucial to designing such Metro stations. Needless to say, facilities like safe pedestrian walkways and crossings, signage, pick-up and drop-off points are essential at all Metro stations.

Integrated trips and payments

Payment and route integration of Metro with PT/IPT should also be considered. Hassle-free payment methods like going cashless, single-card payment, integrated trip payment (pay for the whole trip: auto-metro-bus) will add to commuter convenience.

Similarly, high-demand origin destinations such as IT parks and the Central Business District can focus on integrated trips using various transport modes. There can be an app where a commuter can book a complete trip starting from home: auto to Metro station, cab from the metro station to their destination, and also make the total payment.

With this, the commuter is assured of a door-to-door service and doesn't have to waste time waiting, or bargaining with auto drivers. The app would also estimate the number of people travelling to the same destination, and can offer a pooled ride. This will also help optimise vehicle capacity; low vehicle capacity has been a major constraint in bringing down road traffic.

Integration is a win-win situation for society as well as the environment. Let's give it a try and use public transport at least for our leisure trips, once in a while.

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