

Kochi, the commercial capital of Kerala, is one of the fastest growing two-tier metropolitan cities in India with a population of 13.55 lakh, including the Kochi Urban Agglomeration(KUA)¹.The Kochi Urban Agglomeration comprises of Kochi Municipal Corporation, five municipalities, 15 Panchayats and a part of three Panchayats. The city has an area of 94.88sq. km. Urban expansion during the past few decades outgrew the limits of Kochi City. The immediate hinterland of Kochi Port has been delineated as the Greater Kochi Region, which covers 731 sq. km- almost eight times the area of the city.

The population growth in Kochi Municipal Corporation alone is expected to be 10 per cent per decade. The growth of population in the remaining area is expected to be 19 per cent per decade. Although the present population of the adjoining municipalities and Panchayats is less than the population of the Kochi Municipal Corporation, it is projected that the former will be greater. This will create unprecedented transport demand and passenger inflow to the already congested city adding more inter-city buses and private vehicles.²

Records say that about 2,000 vehicles are registered in the city limits in a month; 85 percent of which are private ones. The widening gap between the growing number of vehicles, the lack of infrastructure and unscientific plans has turned life worse for the average Kochiite. The city roads are over-crowded with road-based public and private vehicles. Kochi has around 630 city buses, 3,000 auto-rickshaws, 6,500 taxis and countless cars and motorcycles.

The proposed Vytilla bus terminal will act as the mobility hub for this growing city. This report has looked at the various secondary data resources available to elicit the logic behind the proposed bus terminus in order to comprehensively argue the impact and necessity of implementation of the proposal. The basic reason for planning a modern integrated bus terminus is to accommodate the demands and requirements of urban agglomerate like Kochi in terms of traffic and transportation. It would be futuristic and provide a platform for the establishment of a unified urban transport authority (UMTA) in the days to come. Sustainable transportation incorporating various elements of development is the key to the success of the proposed project³.

According to a report drafted by Confederation of Indian Industries with the help of Centre for Public Policy Research and Kumar Groups, the site for the mobility hub in Vyttila is well-

connected with all routes. It serves as a meeting point for all intercity and intra-city roads. The site is connected to the city through the Sahodaran Ayyapan Road. It is connected to Edappally and Kakkanad providing hassle free transition in various directions. Passengers can easily get down at the bus terminal at the hub and use the Mass Transit System like the inter-city bus, auto, taxi or metro train to enter the city. The site offers a sprawling 25 acres of land that can develop around 100 bus bays and more than 150 ideal bus parking spots for long and short distance buses. It can accommodate more than 1000 cars and 100 autorickshaws in its parking lots at a time and has the potential to host a world-class mega shopping mall, food courts, cultural centre and health club, a hotel, a 50m swimming pool, and a boat jetty in a total buildup area of 1.5 million square feet.

The entrance and exit points of the site are connected to National Highway 47, Eror (via Kaniyampuzha Road connecting Vyttila and Eror) and Tripunithura (via Vyttila Tripunithura Road).

Transport System in Kochi

The existing public transport system consists of buses and ferry services operated mainly by private operators. There are about 630 intra-city buses operating on 160 routes originating and terminating at 60 locations scattered all over the city⁴. In addition to the above, there are about 2,300 long-distance private (mofussil) buses and 466 intercity/state Government buses, which enter city roads. Every year about 1,000 auto-rickshaws are added in Kochi alone. When 30,000 vehicles get added to the already soaring figures of vehicles on Kochi roads, the very narrow lanes of the city are inadequate for the increased traffic

Characteristics

1. The buses contribute about 14 per cent of the vehicular traffic and carry 73 percent passenger traffic.
2. The share of cars in terms of vehicular trips is about 38 per cent carrying 15 per cent of the passengers
3. Two-wheelers contribute 35 per cent of vehicular traffic and eight per cent of passenger traffic.

4. Auto-rickshaws contribute about 13 per cent of vehicular traffic and four per cent of passenger traffic.
5. The city has insufficient carriage way width.
6. It has insufficient on-street and off-street parking facility.
7. Absence of good quality link roads connecting the three major corridors, viz. Shanmugham Road, M.G. Road and Chittoor Road.
8. The presence of a railway line dividing the city into two parts, due to the absence of Railway Overbridges.
9. Over saturation in SA road and Banerji Road; the only connection to the eastern part of the town, due to large volume of traffic and presence of intersections at close intervals.
10. The average speed during peak hours on 66 per cent of the important roads in the city is less than 30 km/hr.

The buses access the city through various routes, namely,

1. The city buses come from Vytilla to Kaloor through M G Road, which is a distance of seven km and, on an average, takes approximately 40 minutes to cover.
2. The inter-city buses from Kottayam side are not allowed to come to the Kaloor bus stand. They instead come to the Karshaka Road on the eastern side of the Ernakulam Junction Railway station. This distance is approximately three km and takes about 20 minutes
3. The inter-city buses from Allapuzha side come to the Kaloor bus stand through Ponurni via Kathrikadavu Road, which is a distance of five km and takes approximately take 30 minutes.
4. The KSRTC buses come to the KSRTC bus stand through M.G. Road from Vytilla, which is a distance of six km and takes 40 minutes⁵

All the other buses coming from these two mobility hubs⁶ - Palarivattom and Thoppumpady shall take NH 47 for their destination keeping the minimum distance to hit the national highway. These terminals will be called as two main 'spokes' of the hub system.

Vytilla is the mobility hub for Kochi city. This mobility hub offers public transport system connecting Thoppumpady and Palarivattom on a frequency of both intra and inter hubs operations mode. Intelligent transport systems can be developed at hubs at Thoppumpady and Palarivattom. Thoppumpady can be a hub for places like Fort Kochi, Wellington Island, Aroor, Edakochi, Perumppadappu, Mattancheri, Palluruthy, Chellanam etc. Palarivattom can be connected with Vypin, Kakkanad, North Parur, Tripunithura etc.

Identify the corridor based on passenger travel data.

Identify a network of hubs on this corridor for seamless transfer points

Develop solutions based on the indicators for entire corridor to achieve indicator measures

Propose integrated solution with sub-components:

- Bus
- Bus stops and depots
- MRTS and trains (if any in the corridor) and their stations
- Car
- Taxi, auto, share auto connectivity and discipline
- Cycle
- Pedestrian facilities, traffic calming to avoid accidents
- Parking and park and ride

A New Mobility Hub in the Vytilla Bus terminus has the advantageous positioning of operating as a self-sustained model, forecasting the growth potential of the city.

Urban Growth Centres

The Government of Kerala and Corporation of Kochi have already identified urban growth centres within the GCDA. It has been specifically mentioned in the CDP and in JNNURM projections. It is within these urban growth centres that the greatest concentrations of jobs and housing, as well as other destinations and attractions are to be focused. In the future, many, but not all, of those growth centres contain one or more higher-order transit station, defined as being served by the subway, MRTS, Metro, and Bus Rapid Transit (BRT). Each centre varies greatly in terms of current density, growth potential and measure of urbanity.

Transit Stations

As mentioned earlier, Vytilla is on the fringes of the national highway. A flyover and an elevated corridor are proposed to ease out the congestion and improve the upward mobility in the city. Mobility can also be utilized for parking of inter-state private buses and goods carriages.

Regional Destinations

There are also several other key regional destinations that must be considered. In determining what kinds of mobility hubs make the most sense in various locations, we can think about which stations, and the areas around them, can make the greatest contribution to a highly mobile region, and what characteristics those places should have. Vytilla is best suited for the futuristic planning purposes of transportation requirements in city. Nearby towns like Muvattupuzha, Piravom, Cherthala, Thripunithura and Alwaye are going to benefit out of this Mobility Hub. Easy access to these centres from the hub would help these areas to grow on a faster mode and can be developed as satellite towns of the growing Kochi city.

Feeder system

Hubs need to be viewed in a holistic manner. Vytilla mobility hub being the city mobility hub, feeders systems like auto rickshaws, taxi services, rented two wheelers and rented cycles will be incorporated. Unlike in the western countries, Indian transport is heterogeneous in nature and has a generic value system culturally imbibed into it. Taking off 2,500 buses from city will increase the demand for alternate vehicles that can at the same time decongest and decrease the pollution in the system. Salaried employees in the higher income bracket like in IT sector can disembark and embark near their companies or campuses and can be picked up by other feeder vehicles. Here, electric vehicles and cycles could be provided for the short distance trips in and out of the campus. These feeder systems can be coordinated amongst the hubs using better technology and controlled from the mobility hub in Vytilla. Eco-friendly feeder system like modernised cycle-rickshaws like in Amsterdam could be introduced at the hub.

Airport/ Railway station shuttle service

The Airport/ Railway station shuttle service tracks passenger arrivals and departures at airport and railway stations and customers are met at the entrance. Shuttles serve hotels, businesses and homes with door-to-door service. The airport/railway station shuttle vans carry seven to 10 passengers to and from airports and train stations.

The Vytilla mobility hub can be used as the operating base station for shuttle service, as it provides transit terminal for other modes of transport, including the feeder system. This way, airport and railway systems are also connected to the mobility hub by road.

Smart Cards

Prepaid card similar to Octopus card in Hong Kong could be introduced with the mobility hub for hassle-free and cashless transactions for travel, retail and restaurants. Vytilla Mobility hub would be the first of that kind in Kerala to introduce Smart Cards. It is a pocket-sized card with embedded integrated circuits that can process data. A smart card would be an ideal option for all the proposed site utilities like buses, MRTS, Metro, cars, feeder systems etc. The same card can be used for shopping, dining, etc.

Revenue Generation Model

Vytilla Mobility will be built on 25 acres of land with facilities for bus parking and necessary amenities for the passenger traffic. The remaining area can be utilized for the following as per the revenue generation model. The mobility hub opens enormous opportunities for business and vendors to become a part of the developmental shift in Kochi city. Keeping up with international standards and offering high-class services to investors and stake holders, the model helps generate income and can break even at the earliest. Mobility Hub can be showcased as the transport nagar model cum Mobility Hub.

Like any other city, Kochi experiences urban problems such as traffic-choked streets to grime and pollution, making life in the city often less than desirable. The Vytilla mobility hub has been envisioned as a long-term transport solution for the city.

Thumbnail

<http://maps.google.com/maps?t=h&hl=en&ie=UTF8&ll=9.968708,76.319023&spn=0.000999,0.003449&z=18>

Citations

1 Census of India, 2001

2 http://jnnurm.nic.in/nurmudweb/toolkit/KochiCdp/Executive_Summary.pdf

3 MoA of Kochi Corporation with JNNURM says; for traffic and transport services there would be an

integrated plan prepared in the implementation of which existing stakeholders like Public Works

Departments, Police, Kerala State Road Transport Corporation, Private Bus Service providers and the

Corporations would be given definite roles and a coordination arrangement put in place, to ensure

that every actor plays his assigned role properly. Constitution of Greater Kochi transport authority

4 Comprehensive Study for Transport System for Greater Kochi Area, Rites Ltd, 2001

5 Interview with Motor Vehicle Inspector, Mr. Sajan, RTO

6 Mobility hubs connect a variety of sustainable modes of transportation and services through a

network of physical locations or “mobile points” throughout a city or region, physically and electronically linking the elements necessary for a seamless, integrated, sustainable door-to-door

urban trip (MTE, 2004). Hubs are practical for cities in the developed or developing world because

they can be customized to fit local needs, resources, and aspirations. Hubs can link and support a

variety of diverse elements:

multiple transportation operators, modes, and services

taxis and car-sharing of a variety of vehicle types and sizes

“slugging” (Slug-Lines.com, 2006)

free or fee-for-use bicycle sharing (Bikeshare/CBN, 2006)

walkable, bikable, and transit-oriented spatial design and development (Kelbaugh, 1997)

cafes and meeting places

Wi-Fi amenities

electronic fare-payment options and pricing mechanisms for all transportation modes and services

satellite-enhanced, real-time, urban traveller information for all modes of transportation provided at on-street kiosks and by pda

7 <http://www.hong-kong-travel.org/Octopus.asp>

References

- Decks cleared for Vytilla Mobility Hub, The Hindu 22.01.2009
<http://www.cpprindia.org/uploads/File/vytila.jpg>
- Vytilla Hub likely to be executed in CIAL model, The Hindu December 11 2009
<http://cppr.in/popup.php?id=69>
- Vytilla Hub: VS to convene meeting in capital tomorrow, The Hindu December 8 2009
<http://cppr.in/popup.php?id=68>
- Mathrubhumi September 2009 <http://www.cpprindia.org/uploads/File/MB-Nagaram-2009-09-10-Vytil.jpg>
- Metro Manorama September 2009 <http://www.cpprindia.org/uploads/File/Metro-Manorama-2009-Sep-10-.jpg>
- The Hindu September 2009
<http://www.cpprindia.org/uploads/Image/The%20Hindu%20/Untitled-12.jpg>
- Madhyamam September 2009
<http://www.cpprindia.org/uploads/Image/Madhyamam/Untitled-1.jpg>
- Malayala Manorama August 2009
<http://www.cpprindia.org/uploads/Image/Manorama/mnorama%2021.08.09%20500%20copy.jpg>
- Deshabhimani August 2009
<http://www.cpprindia.org/uploads/Image/Deshabimani/desh%2020-08-09.jpg>
- Deshabhimani August 2009
<http://www.cpprindia.org/uploads/Image/Deshabimani/deshabimani%2012.07.09%20500.jpg>

- The Hindu August 2009
<http://www.cpprindia.org/uploads/Image/The%20Hindu%20/The%20Hindu%2012.08.jpg%20500.jpg>
- Deshabhimani August 2009
<http://www.cpprindia.org/uploads/Image/Deshabimani/Deshabimani-06.08.09.jpg>
- Deshabhimani August 2009 <http://www.cpprindia.org/uploads/Image/Desabimani-01-08-09-500.jpg>
- India Today Magazine July 2009 <http://www.cpprindia.org/uploads/Image/India-today-29.07.09.jpg>
- The Hindu July 2009
<http://www.cpprindia.org/uploads/Image/Media%20News%202.07.2009/The-hindu-23.07.09---500--p.jpg>
- The Hindu 2009
<http://www.cpprindia.org/uploads/Image/Media%20News%202.07.2009/The-Hindu-Page-No3-23.07.09.jpg>
- Metro Manorama July 2009
<http://www.cpprindia.org/uploads/Image/MM%20Metro%2016.07.jpg%20600.jpg>
- The New Indian Express July 2009
<http://www.cpprindia.org/uploads/Image/ie%20again%20copy.jpg%20final%2012333.jpg>
- Metro manorama July 2009
<http://www.cpprindia.org/uploads/Image/MM%20Metro%2014.07.09%20500%20pixels%20copy.jpg>
- Mangalam July 2009
<http://www.cpprindia.org/uploads/Image/Media%20News%202.07.2009/mangalam%2012.07.jpg>
- Madhyamam July 2009
<http://www.cpprindia.org/uploads/Image/Media%20News%202.07.2009/Madhyamam%2012.07.jpg>
- The Hindu July 2009
<http://www.cpprindia.org/uploads/Image/Media%20News%202.07.2009/12.07.09%20hindu%20copy.jpg>
- Mangalam June 2009 <http://cppr.in/popup.php?id=21>
- The New Indian Express June 2009 <http://cppr.in/popup.php?id=20>