

Mass Rapid Transit

Definitions

Mass Rapid Transit (MRT) is an urban public transport service that operates at high levels of customer performance, especially with regard to travel times and passenger carrying capacity. It usually operates on specific fixed tracks or with separated and exclusive use of potential common track, according to established schedules along designated routes or lines with specific stops (although Bus Rapid Transit and trams sometimes operate in mixed traffic).

Context and Policies

Mass rapid transit can achieve reduced travel times through the provision of widely accessible networks, higher speed vehicles, exclusive right-of-way infrastructure, special limited-stop or express services, efficient fare collection systems, and/or faster boarding and alighting techniques. Higher carrying capacities may be achieved through larger vehicles, articulated vehicles, multiple sets of vehicles (i.e., a bus platoon or a train), and/or more frequent service. Examples include Heavy Rail Transit, Light Rail Transit, and Bus Rapid Transit (see related topics for more information).

Heavy Rail Transit systems are "Metro" and "Commuter Rail" systems "using trains of high-performance, electrically powered rail cars operating in exclusive rights-of-way, usually without grade crossings, with high platform stations" (TCRP, 1998):

- "Metro" is the most common international term for underground heavy rail transit, though it is also commonly applied to elevated heavy rail systems. Metros are the most expensive form of MRT per kilometre, but have the highest theoretical capacity.
- "Commuter rail" (or "suburban rail") carries passengers within urban areas, or between urban areas and their suburbs. Passenger cars generally are heavier than Metro or LRT, the average trips are usually longer, and the operations are carried out over part of a railway system.

Light Rail Transit (LRT) systems are metropolitan electric railway systems characterised by their ability to operate single cars or short trains along exclusive rights-of-way at ground level, aerial structures, in subways, or occasionally in streets, and to board and discharge passengers at track or car floor level (TCRP, 1998). LRT systems include tramways, though a major difference is that trams often operate in mixed traffic without an exclusive right-of-way.

Bus Rapid Transit (BRT) systems are high-quality bus-based transit systems that deliver fast, comfortable, and cost-effective urban mobility through the provision of segregated right-of-way infrastructure, rapid and frequent operations, and excellence in marketing and customer service. Bus Rapid Transit typically involves busway corridors on segregated lanes and modernised bus technology.



Photo credits: Bangkok MRT

Resources

Documents

- **An International Review of The Significance of Rail in Developing More Sustainable Urban Transport Systems in Higher Income Cities**, 2008, Jeff Kenworthy, World Transport Policy & Practice Vol 14 No 2, Eco-Logica (UK)
- **Estimating the Benefits and Costs of Public Transit Projects: A Guidebook for Practitioners**, 2002, ECONorthwest and Parsons Brinckerhoff Quade & Douglas, Inc., Transportation Research Board (USA)
- **Evaluating Rail Transit Criticism**, 2009, Todd Litman, Victoria Transport Policy Institute (Canada)
- **Rail Transit In America: A Comprehensive Evaluation of Benefits**, 2009, Todd Litman, Victoria Transport Policy Institute (Canada)
- **Suggesting Urban Mass Transit Technology for Pakistan "A Comparative Analysis of Rail Based Rapid Transit and Bus Rapid Transit"**, 2007, Intikhab Ahmed Qureshi and Lu Huapu, Tsinghua University, Beijing (China)

Recommended Links

- **Metros (UITP)** (Belgium)
- **World Metro Database** (UK)

For further information

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