

“GREAT MINDS DISCUSS IDEAS”

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**2ND NATIONAL UNDERGRADUATES
DESIGN COLLOQUIUM**

D E C E M B E R 2 0 1 8

**DESIGN
CONCEPT**

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The Importance of Sustainability in Public Transport



PROBLEM STATEMENT

Poor air quality in suburban areas

Air quality is often the poorest in urban and suburban areas where traffic congestion is the worst. This has meant that residents of these areas, especially those living in close proximity to major thoroughfares or highways, confront much higher health risks due to poor air quality.

Excessive greenhouse gas emissions

National averages demonstrate that public transportation produces significantly lower greenhouse gas emissions per passenger mile than private vehicles. Heavy rail transit such as subways and metros produce on average 76% lower greenhouse gas emissions per passenger mile than an average single occupancy vehicle (SOV). Light rail systems produce 62% less and bus transit produces 33% less.

The transportation sector in Malaysia accounts for approximately 35% of the total energy consumed nationally, and produces nearly 50 million metric tons (Mt) of CO₂ per year (2015), second only to electricity power generation. The vast majority, 85.2% of transportation emissions, comes from road transport. Due to the high rate of personal automobile ownership, cars account for about 59% of the overall emissions from transport, while freight is responsible for 27%. Although there are a roughly equal number of cars and motorcycles on the roads, motorcycles account for only 11% of the CO₂ emissions from the transportation sector.

ELECTRIC BUS



ABSTRACT

Public transportation is a shared passenger transport service provided to transit people which is available for public usage. Public transport also is one of the solution to the sustainability system. Environmental issues become the main topic on these days and one of the causes is emission from a vehicle. The purpose of this study is to understand the principles, problems, and approaches of discipline on sustainability in public transportation. The objectives of the research are to identify what is sustainability transportation impacts on environmental, to analyses the importance of public transport in terms of sustainability, and to determine the existing approaches from different discipline for attract people to use public transport. The qualitative interview was used to get primary data and data collection as a secondary data used for gather the information from journals, articles, news, and website. The research is focused on bus and scope at Lembah valley area in Malaysia. The research have found the opportunity of using public transport that become major role in sustainability system in Malaysia.

AIMS

The aim of this research is to understand the principles, problems, and approaches of discipline on sustainability in public transportation.

LIMITATION

The research is limited only at Klang valley area. It is because Kuala Lumpur and Selangor among the highest percentages of vehicle used in daily traffic. The research is only focusing on public transport which is bus.

OBJECTIVE

- To identify what is sustainability transportation impacts on environmental
- To analyses the importance of public transport in terms of sustainability
- To determine the existing approaches from different discipline for attract people to use public transport (design and technology approach)

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