

UTOPIAN SUSTAINABLE URBAN MOBILITY: A TECHNOLOGICAL INTERVENTION OR BEHAVIORAL INTERPLAY?

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Abstract: Urban mobility is suffering from plethora of disabling issues such as frequent and prolonged congestion, air and noise pollution, traffic injury and deaths and national epidemic of obesity and accompanying dramatically increased health care costs. The solution lies in shift to non-motorized and public transportation by individuals. Many a cities are toiling hard to make the transportation practices pro-environment as well as pro-individual. Thus, the matter of concern is how to facilitate this shift in transport behavior of individuals from pro-private and motorized to pro-public and non-motorized.

Present case throws light over sustainable urban mobility through UTOPIAN identity and posits a question among individuals regarding requisites of sustainable urban mobility by presenting the case of Utopia- an ideal city of urban mobility.

Keywords: Sustainable Urban Mobility, Sustainable Urban transportation, Non-motorized Transport, Transport Demand Management

INTRODUCTION

Creeping traffic, congested roads, sickening air, deafening horns and maddening rush among the citizens to reach their destination had been the most common scene of UTOPIA, some time ago. Limited public transport and large proportion of varied modes of private transport on roads made congestion, pollution and high rates of accidents as the order of the day.

Utopia: Re-designed Transport-wise

Utopia has shown vision in the field of sustainable transportation and urban livability and has implemented innovative transportation strategies such as improving mobility for all residents, reducing transportation green house gas and air pollution

emissions, and improving safety and access for bicyclists and pedestrians.

Utopia has implemented many projects that have improved livability, mobility and quality of life for its citizens, making the city a source of learning.

As cities around the world are engrossed and baffled with transport related issues that degrade the quality of urban life, it is worth taking a look at how Utopia turned its city around. It transformed the gloomy and bleak picture of city's transport system in an inspiring model to be replicated. It adopted both carrots and sticks to deal with the transport crisis. It not only gifted its citizens with better public transport facility and pro-non-motorized transport infrastructure and environment but also posed stringent measures to check and limit private transport usage. Utopia extended its Bus rapid transit (BRT) system straight through the narrow congested streets, rebuilt public places, expanded bike sharing and bike lanes, and pedestrianized its streets.

Improved public transport

Utopia as a step towards sustainable urban mobility connected almost all the parts of city keeping frequency, comfort and aesthetic sense in mind. Utopia's BRT runs north to south and centre to west, across the city. It is composed of two lines (A & B) that, together, host 54 stations, including major tourist attractions. It connected its poorest and toughest neighborhoods to not only provide residents with better means of transport but to also take care of their safety, pride and belongingness needs. Single pass system for a one way trip has also been introduced which can be purchased at any BRT station, and are the easiest way for a tourist to use the system.

Semi low floor CNG buses promise all the benefits of low floor and high floor buses, in terms of capacity,

dwelling time, safety, economy and environmental concerns. Stations and terminals are also kept in the frame. Pedestrian access, bike racking and other parking are paid due heed. Elevated boarding platform level with the bus floors makes it convenient and accessible for all. Newspapers stalls and public telephones have added life and vitality to the BRT stations. For tech-savvy generation provision has been made through a website to estimate their carbon saving, commute time and monetary savings from using the new BRT system.

Well trained in eco-driving techniques and well-equipped with fuel economy feedback gadgets BRT drivers make public transit more energy efficient. Life-size hoardings about eco-driving tips₁ could also be spotted near pedestrian lanes, parking places and public plazas to spread a culture of eco-driving in the city all around.

Improvements to non-motorized travel

Utopia is also carrying 'share the road' initiative by United Nations Environment Program (UNEP) with great zeal and enthusiasm. Bikers and pedestrians are treated as privileged users in the transport planning and their comfort and needs are well considered. A public bike sharing program has been initiated to connect Universities and other educational institutes to mass transit, along with other key destinations in the city. The scheme was started as a pilot program and expanded on its succession.

Expansion or improvements to public space

Next to transport facilities, infrastructure has also been considered to create pro-environment for individuals. To ensure safety and equity to all the users of roads, lane system has been created. Pedestrian and bike routes are connected to green spaces and public plazas. To facilitate a culture of walking and biking green spaces are being created throughout the city.

Recently, a high occupancy vehicle lane₂ has been introduced on a pilot basis, which could be further expanded on its succession. It would promote sharing of private transport among users.

Travel demand management program

Utopia believes in a balanced strategy to reach the objectives. Thus, along with reinforcement, restrictions are also placed for traffic demand management₃. It involves banning of vehicles other than delivery vans and taxis in market areas.

As, people choose their mode of transportations for urban trips based on the parking conditions at their origin and destination. Thus, limiting car parking supply and instituting parking maximums strategies have been involved to make people step out of their cars and step on pedestrian lanes and bike tracks.

The re-designing of UTOPIA as well as UTOPIANS on the line of sustainability marked an inevitable space for itself and posited a model to be learned and replicated.

END NOTES

Public Transit Eco-driving best Practices

(a) Accelerate and decelerate smoothly: Softer acceleration and deceleration make more efficient use of bus power. (b) Reduce excess Idling: Turning off the engine while the bus is parked reduces fuel consumption, improving overall MPG. (c) Avoid hard turning: Anticipating turns and smoothly decelerating into the turn, and smoothly accelerating out of it improves fuel efficiency. (d) Maintain consistent vehicle speed: Operating within posted speed limits and anticipating the flow of traffic maximizes the ability to maintain a consistent speed and optimum fuel efficiency. (e) It is also termed as HOV lane, Carpool lane, diamond lane, and transit lane or T2 or T3 lanes in Australia and New Zealand is a restricted traffic lane. It is kept reserved at peak travel times or longer for exclusive use of vehicles with a driver and one or more passengers, including carpools, vanpools, and transit buses. (f) Transportation demand management, traffic demand management or travel demand management (all TDM) is the application of strategies & policies to reduce travel demand specifically that of single occupancy private vehicles, or to redistribute this demand in space or in time. The term TDM owes its origins to US and is linked to economic impacts of the sharp increase in oil prices during the 1973 oil crisis and the 1979 energy crisis. (g) Sustainable urban mobility aims at affordability, safety, limiting emission, usage of renewable resources at or below their rates of generation, supporting competitive economy as well as balanced regional development (European Union Council of Ministers of Transport). (h) www.unep.org (i) <http://www.sharetheroad.ca/> (j) Theory of Planned behavior (k) Theory of reasoned action (l) Value-norm-belief theory

ANNEXURE 1

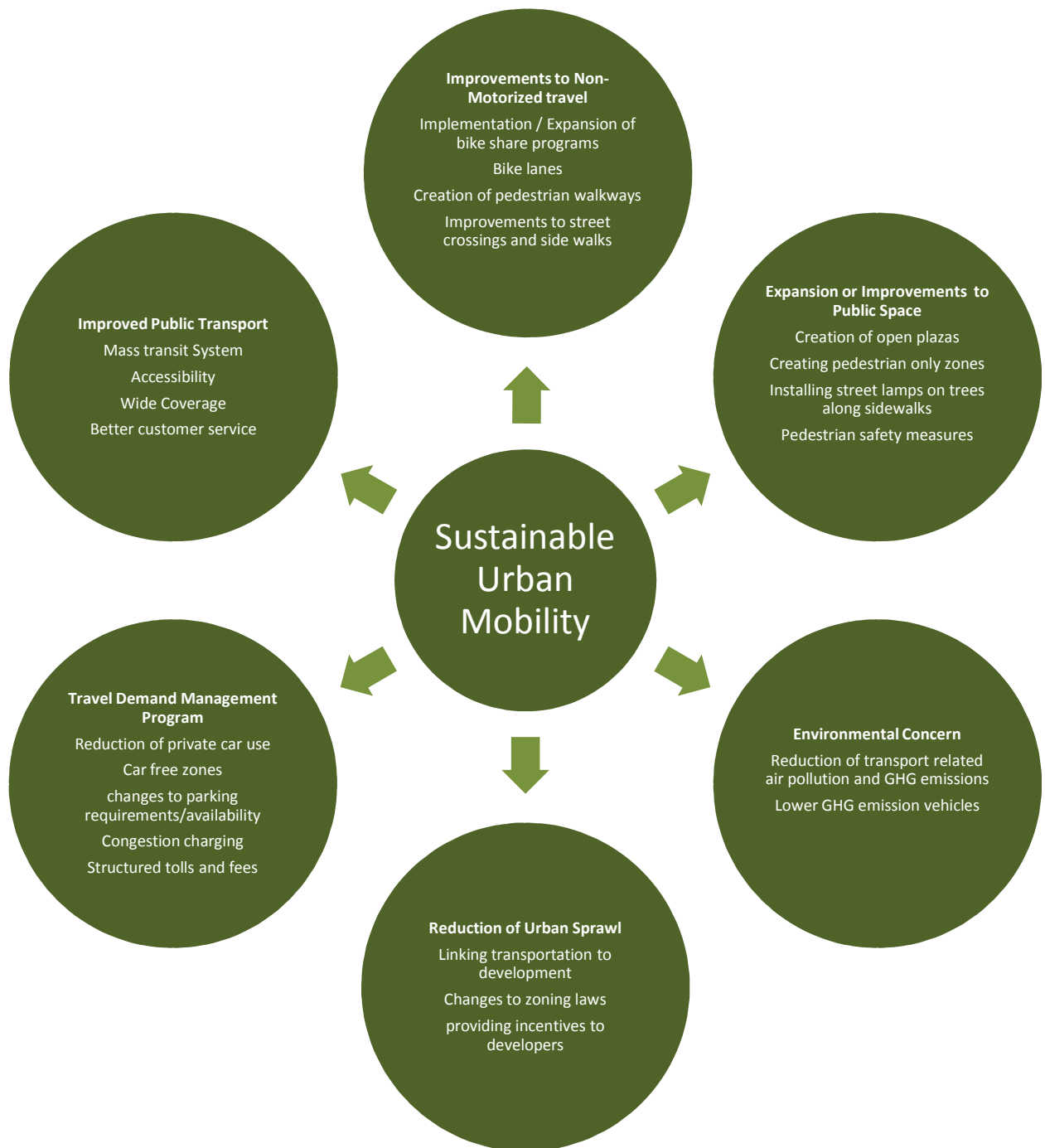


Figure 1: Constituents of Sustainable Urban Mobility

ANNEXURE 2

Teaching Note

Focus of study

The case study is designed keeping the management and environmental psychology scholars in mind. The objective is to acquaint them with the cursory view of sustainable urban mobility and its background variables.

Questions to be answered

Present case posits a map of sustainable urban mobility through a Utopian city. It covers almost all phases required for facilitating sustainable urban mobility model. It encompasses both non-motorized and motorized modes of travel. It proposes needed

intervention in the wake of increasing pollution, congestion and private transport usage by urban dwellers. It presents with various measures adopted by Utopia to make a shift in transport behavior from anti-environment as well as anti-human to pro-environment and human.

The basic question formulated through the case is (a) What lies at the base of successful introduction of successful urban mobility model? (b) Whether behavioral intervention or technological intervention outweighs the other? (c) Whether behavioral and technological inputs are complementary to each other or supplementary and why? (d) How behavioral intervention could be introduced in the area of sustainable urban mobility?