

Tehran's Mobility Pathology: An Urban Transportation View

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1 ABSTRACT

Tehran city grows as a metropolitan, but unfortunately not well-planned and even unplanned and haphazardly; as frequently migration to the city causes congestion, lack of accessibility, huge densities, harmful air pollution and mobility difficulties. A part of mobility and transportation problems in Tehran is rooted in numerous inappropriate urban design and urban planning actions and measures. For example, the sidewalk pavements and their design are not safe and suitable, pedestrian ways are not well defined and are confronting with offenses by the vehicles and motor cycles, small metal bridges on the streets water drainage canals (Joobs) are not standard, specifically for disabled and adolescences and children; many of the street and alley curbs are uneven and causes obstacles for passing; traffic lights situation aren't appropriate and in some places are unnecessary installed and causes mobility to be halted. Therefore problems such as terrible traffic jams, unnecessary waiting time behind traffic lights, traffic nodes, lack of walkability, Cycling, and even mobility difficulties for disabled and pedestrian with special needs and even without disability people could be seen.

Therefore this paper aim to explain clearly these deficiencies and their likely reasons pathologically and suggest proper remedies for that deficiencies in order to decrease accidents and casualties to make a livable city to preserve quality of life for their residences physically and mentally.

Keywords: Mobility pathology, urban disorder, lack of accessibility, traffic circulation deficiencies, traffic congestion, traffic and street design inappropriateness.

2 INTRODUCTION

Rapid and tremendous growth of Tehran due to unplanned migration from any part of country from small villages to big cities to find a job, to benefit from better services and facilities and to reach to better living conditions, especially in Three to four last decades in one hand, and the lack of a pre-defined plan for this population growth and lack of growth management because of the revolution, Imposed War and also sanctions, inflation and recession in the other hand, brought trial and error methods for Tehran's urban management and short term domicile planning decisions in different presidential periods and most important of all political management of Tehran's municipality and the Mayors different approaches to the city that followed no long term and well-tailored and thought solutions have no outcome except city disorderliness and distress which among them the mobility and transportation confusion is the worst one, which misspent thousands hours of the Tehran's Citizens time each day in traffic traps and is the main reason of various physical, mental and behavioral illnesses and disorders.

On the other hand, walkability and other means of accessibility is not in human scale and proper situation for daily use of the residents, and confusion between different means of traffic and lack of traffic separation, and even very simple disobeying of traffic rules and regulations by on foot pedestrians and motorists which is a kind of civil disobedience is obvious.

Therefore, recognition of this sophisticated mobility phenomena require a precise pathological diagnosis first and in the second step demands multi-dimensional Socio-Economic, cultural and institutional - managerial solutions which seems not so easy in a short period of time.

In the following section of the paper, first, the problem will be stated and the different probable scenarios will be proposed in the shape of hypotheses and then according to a descriptive – analytical methodology the hypotheses will be tested on the basis of existing data and statistics. The accepted hypotheses could be supposed as an acceptable scenario to the problems.

3 PROBLEM STATEMENT:

Mobility is the focal point of urban transportation and accessibility, is at the core of urban mobility. It is verified and obvious that mobility (as part of transportation) couldn't continue "as a business as usual" and

should be transform to sustainable one, but we must be aware that, as Marcus Says:” Sustainability is not enough” (Marcus; 1998’ 103) . The most reasons are as follows:

- sustainability is not a goal for a programme – many bad programmes are sustainable – but a constraint; its absence may limit the usefulness of a good programme;
- stamping a program by sustainability stamp and verify it , allowing not to be put to discuss or to be criticized because it suggests the possibility of a conflict-free consensus on policies , although it may be not so complete and perfect as Masdar City in Abu Dhabi.
- Sustainability is both an honorable goal for carefully defined purposes and a camouflaged trap for the well-intentioned unwary. (Marcus ;1998;104)

It is a reality that in recent decades so many urban transportation plans were implemented and constructed in Great Tehran such as huge highways , freeways , two stories bridges , metro lines expansion and so on ; which all counts for moving towards sustainable mobility by the government , but all is an easement for mobility of motorists and private cars (which unfortunately in recent years has a tremendous growth) of effluents part of society , therefore we observe external effects to the detriment of low income and poor layers of the society ; such as more air pollution , more congestion, because of promoting of more private vehicles use , more sound pollution , spending longer hours in traffic jams , increasing more inversion of atmosphere layers , respiratory diseases such as asthma , allergies and even blood cancer which affect adolescents and children mostly.

At a glance to Tehran, it will be easily understood that in old and traditional part of the city in comparison to the new – built up part of it; still there is more possibility for on foot mobility, walkability and even cycling, although the infrastructure is frustrated, pavements and sidewalks are not in proper situation to be used, there may be find various unwanted physical obstacles, sometimes motor cyclists offenses to the pedestrian ways, and so on. It means that in new part of the city the motorists movement realm is dominant, the sidewalks are rare, there is no biking routes and on foot accessibility is very weak , except some small places which because of their traditional importance , specially in north part of Tehran, tried to reconcile the new means of transportation and on foot ones .

As we mentioned above in both traditional , old and also Modern and new- built part of the city, mobility has different pathological deficiencies that tried to suggest proper treatment for the deficiencies .

4 GREAT TEHRAN STATUS QUO AND URBAN CONTEXT ANALYSIS

Tehran, the capital of Iran, is a growing metropolitan city with a population of just over 8 million and covering nearly 600 square kilometers. It is the seat of central government and is the most important political and economic city in the country.

The city has grown in population and size over the past thirty years from being a relatively small city with a population of 0.7 million in 1941 to being one of the leading megacities of the region. The Imam Khomeini International Airport, the Mehrabad Airport, the central railway station and four intercity bus terminals located there makes Tehran an important local and international transit hub.

Today the population of greater Tehran is estimated to be around 14 million, making it one of the regions’ megacities. The daily influx of people, mainly commuters, brings the ‘daylight’ population of Tehran up to more than 15 million more than a fifth of the whole country’s population. The organic expansion of the city and its urban sprawl and wide catchment area has increased demand for transport; resulting in a complex and inefficient transport system. Since the late nineties, the extreme traffic congestion has gradually become a major challenge for the city authorities, and the city is also suffering from high levels of air pollution. This becomes worse at certain times of the year as Tehran is surrounded by mountains causing temperature inversions that trap the pollution over the city. (Allen; 2013; 4) .

By the end of the 1990s, despite having a public bus company and reasonable rail system, the lack of investment and inefficient organization of public transport was not delivering acceptable levels of service to an increasingly mobile public. As more people found better alternatives to public transport, the number of motorized trips went up, exacerbating congestion and air pollution problems and by beginning of the twenty first century the travelling public had become increasingly dissatisfied. (Ibid. 4).

National government started work on a transportation master plan for Iran at about this time, using outside consultants, looking at the investment needed to satisfy the growing demand and to try plan better for the future. With Tehran as the capital city and also the main urban centre for generating wealth, it was important to develop a transport master plan for Tehran that would also support the national transport plan.

The approach of the Tehran Municipality is noteworthy as they have tried to create a transport solution that will deliver a strategic vision for the city for 2025 and beyond. The focus is on high capacity mass transport. The backbone of this plan is a strong commitment to rail (supported at national level) but this is complemented with Bus Rapid Transport (BRT), improved regular bus services, as well as cycling and walking improvements. City authorities have tried to develop a comprehensive strategic plan which illustrates ‘Tehran in 2025’, based on the higher level strategic plan, ‘Tehran Comprehensive Strategic Development Plan – 2025 Outlook’. (Allen 2013, 4).

Pessimistically, but based on existing reality of the daily current traffic of Tehran at the moment, (April 2017), not only the increased amount of existing motorized route could not provide enough capacity for existing vehicles and sometimes you are facing with great parking in highways (specifically in Rush Hours) without any movement, but only, in spite of high prices of cars day by day, numbers of private cars increased exponentially, and it brings very sad and horrendous message with itself:” More, More, gigantic and vast traffic routes are still unable to swallow the increasing cars ... “.

Constructing more roads tends to address the symptoms of a cause, rather than the cause itself. (khodabakhsh; 2014; 76).

It is estimated that more than 3.5 million vehicles travel on Tehran’s road network and today the municipality estimates that some nineteen million daily trips are made in Tehran (adopted from Hashemi, 2010a). Twenty two per cent of trips are made by bus, twenty three per cent by shared taxi, ten per cent by metro, ten per cent by minibuses, seven per cent walking and cycling (NMT) and the rest by private car (twenty eight per cent). These vehicles were responsible for eighty eight per cent of local air pollution annually (adopted from Hashemi, 2010b).

5 UNCONTROLLED AIR POLLUTION, ANOTHER SIDE OF THE MOBILITY COIN IN TEHRAN

A problem with air quality, the relative and absolute (tonne/year) contribution for each emission source in 2005 could be seen in following table in 2005. Mobile sources include light duty vehicles and private cars (LDV), motorcycles, buses (public and private), trucks, minibuses and motor-vans. According to the study performed by an Air Quality Control Company in Tehran, the contribution of light duty vehicle to air pollution has been considered to be close to 50 per cent of the mobile sources.

Emission	Mobile	Stationary
	Tonnes per year %	Tonnes per year %
CO	1,354,652, 99%	18,222, 1%
SO ₂	6,142, 10%	57,173, 90%
NO _x	109,917, 70%	46,253, 30%
THC	155,609, 71%	64,761, 29%
PM	18,777, 9%	8,444, 31%

Table 1: Mobile and stationary sources of pollution. Source: <http://www.ess.co.at/WEBAIR/TEHRAN/tehran.html>, last accessed 16 June 2011.

6 HISTORICAL URBAN EXPANSION AND TRANSPORT DESIGN NETWORK

According to Fereydoon Firoozi, before 1786 Tehran was an agrarian community and a small village outside of Ray, the capital of Seljuk Dynasty was located on a main road, along the southern way of Alborz mountain and a part of Silk Route. But the establishment of the Qajar Dynasty brought soldiers and courtiers to the town, and this attracted more people and added a consumer aspect to the area. (Khodabakhsh;2014;17).

This was the beginning of trade and traditional industries such as millinery, shoemaking, hosiery making, and blacksmithing, as well as the manufacture of munitions, which triggered economic and demographic concentration in Tehran. With a population of 15,000 at the end of the 18th century, the population grew around tenfold by 1869, the first census of Tehran showed a population of 155,000. In 1930’s when the city restricting wall demolished to allow further expansion of Tehran and following it in Pahlavi Dynasty the first new western adopted urban street design initiated and implemented in 1932, Tehran’s population was

310,139 and after 1341 it increased to 900,000 which was encounter with the first phase of Rural – Urban Migration in Iran after Iran's land Reform which followed by oil income revenues in country budget and its investment in cities and specifically in capital city of Tehran which directly resulted in Urban – Rural gap and speeding up the migration flow to Tehran.

The fast growth of Tehran's population due to immigration caused the uncontrolled expansion of the city in all directions. The growing city absorbed and destroyed a significant portion of the existing suburban green spaces, gardens, and surrounding villages. According to Madanipour, the city managers felt the need to control the growth of the city, but the municipality didn't have the required legal and financial means to deal with this issue. Consequently, a legal agenda was created in 1965 to form the Urban Planning High Council and set up comprehensive land use and urban development plans. (Ibid; 2014; 27).

In 1965 Victor Gruen firm in association with the Iranian architect Abdolaziz Farmafarmaian provided the first comprehensive plan of Tehran. According to Madanipour, in their studies the consultants documented "high density, especially in the city center; expansion of commercial activities along the main roads; pollution; inefficient infrastructure; widespread unemployment in the poorer areas, and the continuous migration of low income groups to Tehran, due to the country's economic structure," as the city's main problems. (Kodabakhsh, 2014, 28).

The final proposal redirected Tehran's development from a north-south axis to an east- west axis through a new highway and subway network.. It included a number of satellite towns, which were meant to mitigate pressure on the city and provide local centers for the urban clusters of Tehran. The comprehensive plan was approved in 1968. (Ibid; 2014; 29).

A transportation network, which included motorways, a rapid transit route, and a bus route, connected the first ten districts. High-density residential areas were located on the rapid transit nodes to turn them into activity nodes.

Out of the proposals of the comprehensive plan, according to "Madanipour" only a few were implemented, including" a network of freeways to connect the disjointed parts of the sprawling metropolis; zoning as the basis for managing the social and physical character of different areas; and the introduction of floor area ratios for controlling development densities.(Ibid; 2014; 29).

The city of Tehran includes an irregular road network, 2700 km in length, of which 14% are highways and 27% are arterial roads. Every day there are 15 million trips on the network with an average speed of 21km/hour per vehicle (public and private), and the percentage of private vs. public vehicles (such as taxis) is estimated at respectively 52% and 58%. Many reasons for the traffic congestion and the high levels of air and noise pollution can be found in Tehran. Nearly 4 million cars and over 4 million motorcycles are driven in Tehran [6]. More than 400,000 cars in use are over 25 years old and more than 1.5 million vehicles are over 7 years old. Although a program to replace deficient vehicles has existed for many years, nonetheless during this same period the number of old vehicles (based on the informal definition given above) has continued to rise. There are 2.5 million vehicles in service that have not received a certificate of technical examination. Newer vehicles also introduce high levels of polluting agents into the air due to lack of maintenance and due to the fact that the vehicles that are produced nationally are of lower quality. Also, inadequate development of public transportation has led to unnecessary trips and has substantially increased the number of daily trips made by personal vehicles. Geographically, Tehran is surrounded on three sides by mountains that slow the circulation of air, causing the air pollution to remain stagnant over the city. From a social point of view, Tehran is one of the densest cities in the world. This density is the main cause for innumerable trips within the city. Thus Tehran is one of the top countries in the world for air and noise pollution.(Safaie & chavoshi ; 2012; 446-447).

As was mentioned before in the last 37 years ago, due to Islamic Revolution, Imposed war and consequently politico- economic and governance instability , authorities only was seeking fast and immediate remedies for the problems and deficiencies and many of the proposals , and approvals of comprehensive plans faced with lack of budget and don't implemented on time and consequently it worsen the conditions and in this chaos all the urban problems , and specifically transportation and mobility problems come to its unbearable and brutal phase.

7 STREET DESIGN DEFICIENCIES AND WALKABILITY

The legislation of pedestrian master plan in most pioneer cities of developed countries turns pedestrian and walkable environments into an important indicator of urban development (Mofidi and Kashani Jou, 2010); however, This approach is still confronted with difficulties in developing countries like Iran. A review of Tehran's comprehensive plan from 1969 (first comprehensive plan) (Habibi and Hourcade, 2005) to its newest version in 2007 reveals that pedestrians are neglected in the city's vision.

The street, as an ancient component of the built environment, not only provides accessibility and connection to different destinations in cities, but as a public realm, it also contains a range of activities and plays a significant role in the life of cities. The phrase that has been offered by Jane Jacobs effectively describes the importance of the street: "Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull" (Jacobs, 1961).

As walking means the presence of people, walkable streets can greatly contribute to the wealth, health, and sustainability of the city through raising the economic value of offices, retail businesses, and houses, improving both social interaction and social security while enhancing the sense of place (Zayed, 2016). (Motamed & Bitaraf;2016;77-78). Therefore any kind challenges to pedestrian and sidewalk accessibility are a threat for the sustainability of the cities. These harmful challenges are as follows:

- Lack of pedestrian activity
- Lack of sidewalk maintenance
- Lack of pedestrian planning
- Lack of political and financial support for pedestrian planning and
- Lack of administrative and technical capacity to implement pedestrian planning (Cowley;2006;71).

It should be noticed that the above terms unfortunately in Tehran were neglected, and therefore transforms to challenges; and mostly, have no meaning for the local government and urban authorities.

Design factors (Physical characters), location factors, user's factors, lack of proper maintenance, and social capacity building for using the sidewalks properly are among the deficiencies of sidewalks design and planning.

7.1 Design factors (physical Characters) :

- Path Width: a measure in meters of the width of the path that is available to pedestrians.
- Surface Quality: a description of the quality of the surface of the path. Excellent quality means a continuous, smooth but skid resistant surface, without cracks and bumps or weed intrusion.
- Obstructions: a measure of the number of obstructions per kilometer on the path being assessed. Assessment of this factor is essential to determine the access available to people with disabilities. Obstructions may be permanent (e.g. poles, signs, chairs etc.) or temporary (e.g. bins, parked cars etc.). Stairs are considered an obstruction if no alternative is available for people with mobility disabilities.



Source: Zarghami et al. (2015)

- **Crossing Opportunities:** the type and number of facilities provided to assist in the safe crossing of roads and paths by pedestrians. Includes median refuges, pelican crossings, guarded crossings, crosswalks, underpasses, and overpasses. 'Delay in crossing' is also a characteristic of this factor.
- **Support Facilities:** the presence of facilities that assist pedestrians during their journey and includes tactile paving, colour contrast kerbing, provision of rest stops, kerb ramps, lane markings, signage, landings on long ramps etc.(Galin ; 2001; 48)

7.2 Location Factors:

- **Connectivity:** the degree to which the path provides a useful, direct and logical link between key departure points and destinations.
- **Path Environment:** a measure of the quality of the path environment dictated by its surroundings. The degree of 'pleasantness' of the surrounding environment will often relate to distance from the roadway.
- **Potential for Vehicle Conflict:** a count of the number of potential vehicle conflict points along the route including intersections and driveways. Conflict points to be measured per path kilometre. The potential for pedestrian conflict increases with increased intersection and driveway frequency. (Ibid; 2001; 48).



Source: Zarghami, et al. (2015)

7.3 User Factors :

- **Pedestrian Volume:** a count (or estimate) of the number of pedestrians using the path expressed as an average daily count.
- **Mix of Path Users:** an estimate of the various groups who use the path as a percentage of total pedestrians. Groups include pedestrians, cyclists, roller-skaters, etc. When assessing this factor, consideration should be given to the various types of pedestrians, including recreational pedestrians and pedestrians 'with a purpose' i.e. people walking to work, to shops etc.
- **Personal Security:** qualitative measurement of the degree to which the path is safe for users. Characteristics of this factor include the provision of adequate lighting (from both direct and indirect sources), path visibility from the surrounding environment, sight distance etc.(Galin, 2001, 48-49).

8 LACK OF PROPER MAINTENANCE:

- **The pavements unlevelled installation:** The pavements are not leveled , some of them are not in its place, the pavement material are sometimes different.
- **Excavating installations canals:** These canals digging by different agencies such as electricity , water supply , drainage , gas company , telephone companies and so on. They leave inattention for some days and after the end of the work causes uneven routes and seldom return to the fist situation for pedestrians to use them with peace of mind.
- **The pavements are not well- maintained for disabled or vision impaired persons in such a way that either the sidewalks are not usable at all ,or it is difficult and is risky to use it alone and without a person to accompanying them.**

- Installing round cylinder- shaped metal rods: at the both side of sidewalks to prevent motor cycles intrusion to the sidewalks, which itself, is a dangerous obstacle for the blinds, wheel chaired and even adolescents.



Source: Zarghami et al. (2015)

9 SOCIAL CAPACITY BUILDINGS FOR USING THE SIDEWALKS:

- The sidewalks and pedestrian ways usually are underestimated as important and necessity means of walking and on foot mobility. Behavioral habits on providing, maintenance and using the sidewalks are neglected easily and sometimes you may observe that using the sidewalks are not considering so important; and you have another options in substitution: “Directing to the margin of motor way and moving there “if there is no sidewalk or if there is any obstacles or constructions to make using it impossible.
- Using the narrow sidewalks by motor cycles which are in hurry or need to access their shops, or deliver any goods to shops and homes suppose a very usual habit, without bringing in mind that it may causes terrible accidents for the pedestrians.



Source: Zarghami et al., 2015

- Colportage in sidewalks or using the sidewalks for storing some of grocery or green grocery shops or dealers are very usual and accepted habit , and in hot summer times some sun shades are itself serious harms for pedestrians head and face.
- Mostly there are no specific indicated routes for the bikes and in spite of hard efforts of governments and NGO’s to propagate cycling, there is few streets to be customized for. Meanwhile uneven topography of Tehran in center to north of Tehran is not encouraging to use the bikes.

10 MOTORIZED MOVEMENT DEFICIENCIES (TECHNICAL, OPERATIONAL AND CULTURAL REASONS):

Motorized Mobility in Tehran is mainly private car dependent and as was said previously, the amount of car is exponentially increasing day by day. The motorized traffic condition will be most inappropriate when we add different technical and operational problems. It has been tried to categorize these problems here according to empirical study and close observation of the author in his daily engagements in the traffic congestions.

11 TECHNICAL NEGLECTS ABOUT SOME OF THE MAIN CROSS SECTIONS OF THE CITY :

Unfortunately, because of the rapid growth of the city in last three decades some new development districts are like the new attached parts to the city without considering the easement of their traffic conditions. For Example , it was tried to control the traffic between the to parts by the corners that have only traffic lights

and no bridge or underground passing while there are two crossing highways and the traffic lights should decrease and halt the cars which have high speeds.!!!?

Another technical problem is in fact mechanical, about the old models and out of order cars in Tehran which not only are one of the main reasons of air pollution in Tehran, but also, are one of the reasons of road accidents, traffic congestions and marginal effects of traffic in Tehran. The owners of the cars are mostly poor people who use the cars as a means of making a butter and bread for their family and have no financial source to renew their cars.

12 OPERATIONAL INATTENTION ABOUT THE PROPER SETTING OF TRAFFIC LIGHTS TIMINGS OF STOP AND MOVE:

As you may know, the traffic lights of Tehran have timers to show the red and green light duration to regularize the traffic circulation and help the drivers and pedestrians as well; but malfunction of the timers which unexpectedly and unordinary decrease the numbers, causes very serious problems for drivers and pedestrians too; and causes accidents between the cars, cars and pedestrians and also unexpected traffic fines for drivers which violate the line.

13 CULTURAL BEHAVIOR WHICH SEEMS TO BE IMPROVING RECENTLY:

Cultural behavior is in relation to driver's habit of driving and also pedestrians violent to the driver's rights. Drivers habit is involving not driving in the lanes, illegally take overs, change directions without signal light and suddenly, zigzag driving, illegally speeds, parking in forbidden places, entering one way streets and alleys and no attention to pedestrian rights on zebra crossings talking by cell phones or checking the massages and so on.

Pedestrian's bad habits are mainly in crossing the streets when the traffic light is green for the cars and Create real dangers, both, for themselves and the drivers.

Fortunately in last decades the media warnings, billboards, direct and indirect traffic educations and in addition increasing the traffic fines have positive consequences in the cultural dimensions and culture of driving, however there is a long way to reach to the standard and optimum level.

14 CONCLUSION AND SUGGESTIONS:

The paper shows that lack of mobility in Tehran and its relevant Pathological deficiencies are multi-dimensional and the reasons are mainly physical, Technical (constructional), operational (manipulating) and cultural as well.

Uncontrolled population growth due to hierarchical migration from rural areas to the capital (Tehran) and also natural population growth (high birth rate) in between and tremendous expansion of the city (from six main city District in First Pahlavi era to 22 huge City districts now) which shows an exponential rate of growth in both population and city area, have engaged city management and authorities with the conditions that its control is very difficult and any possible prescriptions for it, is only a short prevention and relief and not a definite treatment.

The worst imagination of Tehran traffic and mobility pathology is when, the technical, operational, cultural and behavioral malfunctions and deficiencies, and even financial shortages be added to the ever growing metropolitan of Tehran.

Therefore, any improvement in population migration control, correction and improvement of traffic rules and regulations, traffic education of the people, alleviating traffic congestion nodes and obstacles, walkability improvement, providing better environment for walking and cycling and preserve the rights of citizenship for all the city inhabitants help to be more successful in diagnosis of incurable pathological mobility problems that we are now facing.

Then the optimum solution of the mobility and traffic issues in Tehran could be sought in serious and immediate cooperation of the inhabitants, city authorities, urban experts and real attention to the recommendation and comments of the city experts.

Then as the ultimate cure of the deficiencies is not an immediate task and take a long time to be done fundamentally. But short term treatments could be prescribed for the city, which seems to decrease some of the existing paralyses condition of mobility difficulties.

Design factors, location factors, users factors are among the factors which don't need any long term planning decisions for their improvements or corrections; and it is not necessary to consider specific management capacity buildings for them in a long term process.

Designers first of all must think to the easement of mobility users and pedestrian; and design streets, sidewalks and city furniture as friendly as possible. Street Designs idea should not be done in air, and should not be mandatory and obligatory, as well.

Location factors are very important, because of the conditions that dictate to the planners and designers and make a challenge to design accordingly. Here controlling the conditions and looking for some solutions, to work, in such a situations is a keen professional decision. That is, how to design despite the limitations of location conditions?

User's factors are behavioral, social and ethical facts. They refers to the understanding of the importance of mobility, its ease of circulation, the advantages and disadvantages of obeying the rules and regulation, and awareness that, the benefit of a well-designed and operated mobility systems distribute among the all community groups and not only an small part of them. On the other hand, it should has a cultural aspect and a well – formulated training program to be planned to teach the inhabitants in different age groups, the right way of urban mobility activities and the right and wrong of their behavior, in relation to the use of urban mobility dimensions.

Urban authorities view to the urban mobility's difficulties and urban management systems and its function should be changed and re-organized in the ways that consider the critical role of the mobility in the city, which is like the blood in the arteries of the human being bodies. Our urban management system in the city, needs to be renovated and equipped by the scientific and applied means of traffic and mobility monitoring, evaluating; and then implementing the necessary applicable strategies and approaches; decisively, to set priorities to solve mobility problems one by one in a hierarchical basis and try to decrease the intensity of inhabitant's mobility deficiencies as soon as possible. Hopefully in most of the cases, they can be solved very easily and doesn't need very complicated and long term consulting or planning measures; however its implementation and constructional phases may take long times, e.g. building a bridge in a crowded intersection or removing traffic nodes by geometric correction of street's kerb, and, providing setbacks for the buildings, shops and so on.

It could be said that the diagnosis of the mobility problems and their categorization is half of the solution and inspire the likely solutions which could be selected to solve the problem. In addition the nature of the deficiencies require different approaches and strategies as the solutions, which range from the short time to long time solutions and some of them was suggested before.

Urban mobility issues have a complicated nature and require holistic and systematic solutions of all the stakeholders, authorities, urban managers, inhabitants, city experts, architects, urban planners and all beneficiaries to play their critical role in providing an integrated and comprehensive strategies and approaches to solve the mobility problems in a way that a real sustainable and transit – oriented transportation be planned in Tehran.

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