



INTEGRATING LAND USE AND MOBILITY PLANNING FOR IMPROVED LIVEABILITY CASE OF KARACHI CITY



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CASE OF KARACHI CITY**

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ACRONYMS LIST

BOT – Build Own Transfer
BRT – Bus Rapid Transit
CBD – Central Business District
CDGs - City District Governments
CDGK - City District Government Karachi
GOP - Government of Pakistan
IVSAA - Indus Valley School of Art & Architecture
JICA – Japan International Cooperation Agency
KCR – Karachi Circular Railway
KDA - Karachi Development Authority
KDPPA – Karachi Development Physical Planning Agency
KIT - Karachi Improvement Trust
KMTS - Karachi Mass Transit Study
KMTA – Karachi Metropolitan Transport Authority
KSDP – Karachi Strategic Development Plan
LGO - Local Government Ordinance
LRT – Light Rail Transit
MPD - Master Plan Department
MPGO – Master Plan Group of Offices
MQM – Muttahida Qaumi Movement
MRV - Merz Randal Vattan
MRVP – Merz Randal Vattan Pakistan
NMT – Non Motorized Transport

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Introduction

We are in the age of smart and sustainable cities, of resilient and inclusive cities. The way cities are being conceptualized, planned, designed, retrofitted and managed is in many ways diametrically different from how urban planning was approached even a decade or two ago. Focus is now on micro rather than macro level planning and planning is strategic rather than based on master planning. Planning is participatory rather than happening behind closed doors. Various sectors of urban growth and development are being interfaced rather than having a silo approach to planning. A critical trigger to this new understanding of urban planning and sustainability is climate change, where the realization that activities happening in cities are the major contributors to global warming and thus climate change is now shaping the contours of climate friendly urban design.

What is important to understand is that optimal benefits of urban planning can only be found by forging a convergence between various aspects of urban development rather than planning in isolation. Unless one establishes positive parallels and linkages then objectives of optimal liveability cannot be achieved. Unfortunately, in the case of Pakistan and Karachi city that is the focus of present research, such correlations are not being created when it comes to larger land use and mobility planning. To be cited are the Bus Rapid Transit/Light Rail Transit projects that have been initiated in cities like Lahore, Islamabad, Multan, Peshawar and Karachi. Critical interfaces have not been created with larger objectives of urban liveability improvement, thus robbing these much needed interventions of the optimal potential and capacity to contribute to sustainable urban growth. None of these interventions have embedded within them the considerations of Transit Oriented Development (TOD) for example, considered as the most effective way of spreading the benefits of mobility sector investment into a larger agenda of urban economic rejuvenation, environmental improvement and inclusive urban growth.

This study and related research has been structured within this context. An effort has been made to explain what it means to dovetail mobility and urban land use planning. The historical process of urban and mobility planning in Karachi has been traced and some learning points have been highlighted on the failure to find an integrated approach to urban mobility planning. A detailed comparative analysis has been done between the mobility planning directions as brought out in the first and latest master planning exercises for Karachi city. The Transportation Strategy of the City of London has been taken up as case study on effective and viable mobility planning in terms of how mobility planning finds critical points of convergence and integration within the larger urban planning vision and agenda for the city. In the end, some innovative and visionary academic work of youth has been documented to help highlight and disseminate possibilities of integrated planning that could find a space within the official planning processes in the city.

It is hoped that this pioneering work would help generate a dialogue and discourse on this important topic so that appropriate interventions can be sought in the ongoing Karachi Breeze BRT project and even generally to encourage that this understanding of integrated planning finds a space in our spheres of policy and planning.

Farhan Anwar
Urban Planner,
December, 2019

SECTION 1

Urban land use and transportation planning for Karachi

Before discussing some options for converging the objectives and planning directions for urban land use and urban mobility planning in Karachi, it would be instructive to highlight and bring in proper perspective the major efforts at urban master planning and transportation specific planning for the city, undertaken till date. Generally, we had a non-holistic approach to planning where the various elements of urban development are considered in isolation. This approach that has roots in a number of causal factors – multiple levels of land ownerships and policy controls, political and institutional fragmentation, rapidly increasing non-regulated and non-documented informality are some critical fault lines that create this disconnect.

In this Section, the planning processes will be clustered together and some learning points will be extracted.

1. Urban land use (Master) planning

In the pre-partition era, The Bombay Town Planning Act was made in 1915 and as Sindh was part of the Bombay presidency at that time, it became applicable to Karachi. This Act was primarily meant for setting up and regulating new neighborhoods, as well as for streamlining the provision of public and community facilities. Following are discussed the post-partition urban and master planning interventions

The Greater Karachi Plan (1952)

In response to the challenge posed by the influx of 600,000 refugees who had occupied all open space in the city center and the designation of the city as the first capital of the newly independent state, the government was anxious to develop a plan for the city's future growth and development. As a response to the need of institution building, in 1950, the Karachi Improvement Trust (KIT) was established that was later upgraded to become the Karachi Development Authority (KDA) in 1957. In 1952, KIT with the assistance of a Swedish consulting firm Merz Randal and then on the North Karachi hill. Vattan (MRV) prepared a

Though the plan in its letter and spirit could not be implemented, however, owing to the recommendations of this plan, the refugee settlements in the inner city were bulldozed and since no options for new housing were provided by the government, squatter settlements started taking shape with the consolidation of what came to be known as the informal sector in housing. This development had a huge impact on how the city grew and developed in the coming years

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master plan for Karachi. This plan can be termed as the first post-partition attempt at a master plan for the city. It envisaged the creation of a new administrative area that was to be linked with the old city by fast roads. It proposed the development of a Federal Capital at Gadapit also proposed a federal secretariat, legislative buildings and a University around a large independence square. The plan was not implemented mainly owing to the continuing political instability in the country at that time, and lack of finances to facilitate plan implementation.

The Greater Karachi Resettlement Plan (1958)

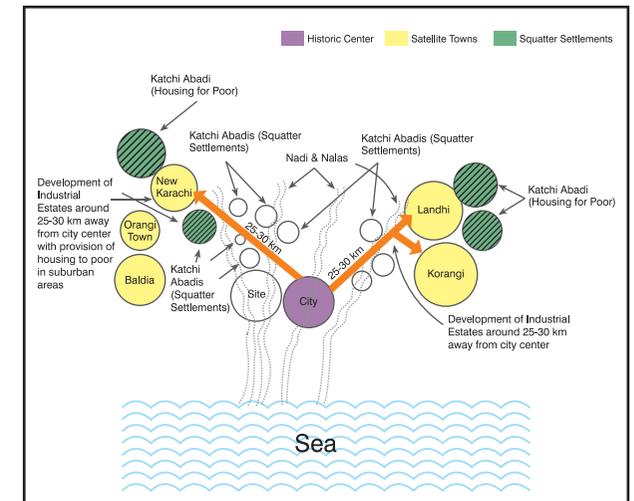
This plan was developed after Ayub Khan established military rule in Pakistan and a decision was taken to shift the country's capital from Karachi to Islamabad. The plan was prepared by the Greek consulting firm, Doxiades Associates and consisted of developing two satellite towns of the city where industrial centers were proposed to be developed. Landhi-Korangi to the east and New Karachi to the north. It was recommended that the refugee population be shifted to these townships with facilities for housing and employment provided for them.

provision of housing and infrastructure as the pace of industrialization was slow and consequently the new satellite town could not be settled as planned.

Though the plan in its letter and spirit could not be implemented, however, owing to the recommendations of this plan, the refugee settlements in the inner inner city were bulldozed and since no options for new housing were provided by the government, squatter settlements started taking shape with the consolidation of what came to be known as the informal sector in housing. This development had a huge impact on how the city grew and developed in the coming years.

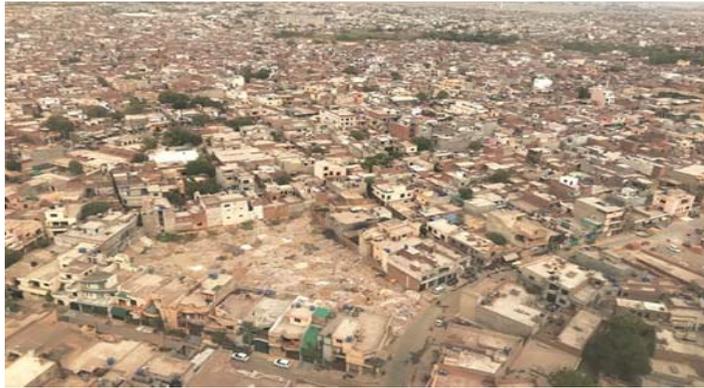


Source: Parhlo.com



Source: *Planning Failure of Satellite Town: A Case Study of Korangi, Karachi, 2017*, Tania Ali Soomro, Mohsin Ali Soomro

By 1964, the plan was abandoned despite the



Korangi Low Income Housing

Source: *Planning Failure of Satellite Town: A Case Study of Korangi, Karachi, 2017*, Tania Ali Soomro, Mohsin Ali Soomro

The Karachi Development Plan (1974-85)

In 1967, the government of Pakistan requested the United Nations Development Program (UNDP) to assist in the preparation of a master plan for Karachi. In 1968, the UNDP agreed and a semi-autonomous organization known as the Master Plan Department (MPD) was created.

Most experts agree that the Karachi Development Plan 1974-85 was the best planning document prepared for Karachi City, as it highlighted well the core planning and development challenges facing the city and also indicated with great accuracy the emerging growth trends

Most experts agree that the Karachi Development Plan 1974-85 was the best planning document prepared for Karachi City as it highlighted well the core planning and development challenges facing the city and also indicated with great accuracy the emerging growth trends. However, because of the non-implementation of this master plan, the gaps created in provisions of adequate housing, transport and urban utilities by the government were left to be filled by the informal sector that expanded with various interest groups becoming suppliers of the physical, social

and financial requirements of the city.

The Karachi Development Plan 2000

This plan was finalized by KDA in 1990 with the assistance of the UNDP. At the core of it, the plan consisted of a computer model that could monitor the developments in Karachi so as to facilitate financial investments. It suggested a detailed urban development scenario for 1986-1991 and 2000 using the data base and the model to simulate the effects on the consumption and welfare of the urban population of a number of demographic, financial, legal, socio-economic and planning factors. It also focused on institutional development that included the setting up of an independent Karachi Division Physical Planning Agency (KDPPA). However, in terms of implementation, the fate of this plan was no different than the preceding ones. The proposed monitoring and related planning could not be carried out in the absence of the relevant data, for the provision of which the

Greater Karachi Resettlement Plan fails to get Implemented – Consequences for urban mobility of the poor

Transportation became another immense concern that arose due to the non-availability of proper road network connecting Korangi to the inner center. Each day trucks packed with people rode between Korangi and the city center. A great number of people had to travel every day, changing three buses from Korangi and rest of outskirts of Karachi to work at the city center and nearby areas. Only the poorest people were being moved out of the city center and the transportation costs added more to their monthly expense. Some of them could not even afford the bus fares. Instead of becoming self-sufficient citizens, the resettlement resulted in an increase in their expenses and commuting time. Being frustrated with the prolonged travelling time and high fares, people start moving back to the city center. They built new huts in the same neighborhoods that the government was working so hard to clear.

Source: *Planning Failure of Satellite Town: A Case Study of Korangi, Karachi, 2017*, Tania Ali Soomro, Mohsin Ali Soomro

plan proposed no system. The plan also did not adequately assess the role of the very significant and powerful informal sector that had established itself by then and had a critical contribution and impact on the growth and development patterns in the city. This plan also enjoyed no legal cover.

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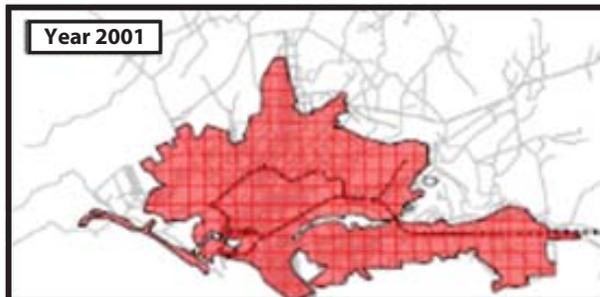
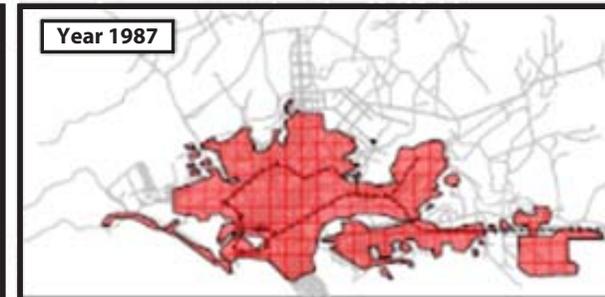
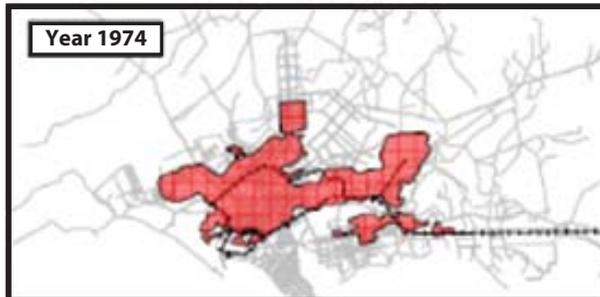
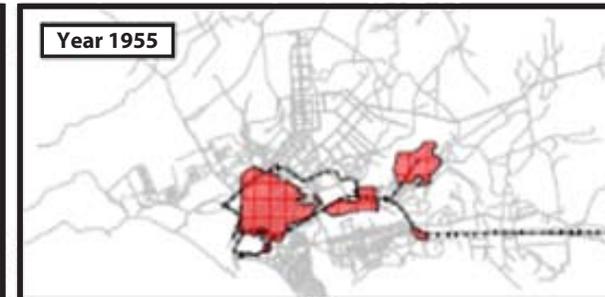
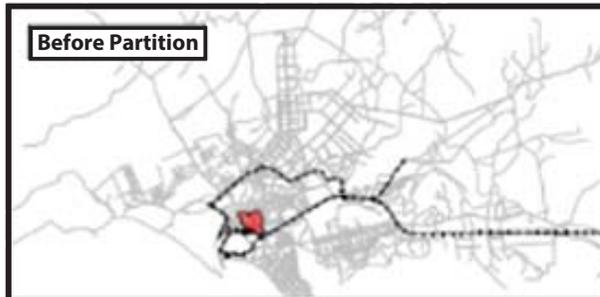
Source: *Express Tribune Blog*

Karachi Strategic Development Plan 2020

In 2001, the government of President General Pervez Musharraf, introduced a new local government system. The 2001 Local Government Ordinance (LGO) created autonomous Tehsils/Towns (Sub-district) Municipal Administrations (TMAs) and City District Governments (CDGs), and made them exclusively responsible for municipal services in both the rural and urban areas of their jurisdictions.

The KDA which had been responsible for the earlier planning exercises stood annulled with its functions transferred to the newly established City District Government Karachi (CDGK). In 2007, the CDGK through the offices of the Master Plan Group of Offices (MPGO) appointed a local consultant, Engineering Consultants (Pvt.) Ltd. to formulate the Karachi Strategic Development Plan 2020 (KSDP 2020). The Plan, funded under the President's Tameer-e-Karachi Program,

was an exercise undertaken on a much reduced scale as compared to the previous planning initiatives, both in terms of the time spent on preparing the document and the finances involved.



Source: KSDP 2020

The Plan aimed, as it put it, to set out a strategic framework and an overall development direction and future pattern of the city for the next 13 years. It sought to establish CDGK as the apex planning institution with legal authority for planning and development controls over all land and buildings within the city. It focused its recommendations on integration of economic and fiscal planning with spatial planning recommending public-private partnerships for large real estate development including water front

development. The plan was approved by the City Council and as such enjoys legal cover (though being disputed by the Provincial Government) as compared to past endeavors.

ANALYZING THE PLANNING INTERVENTIONS

The various planning exercises undertaken to date when analyzed within the context of how the city has developed quite clearly indicate that these planning endeavors have had limited impact in influencing the development patterns in the city. There are a number of reasons why this has happened. Some of the key contributing factors are discussed as follows:

The planning process has remained mostly detached from the existing ground realities and no real effort has been made to base a planning exercise on lessons learnt from the past. The planning process has remained mostly detached from the existing ground realities and no real effort has been made to base a planning exercise from lessons learnt in the past. Every new planning document has brought a new direction to the planning approach while in the intervening period no effort has been made to continuously update the data base. Master planning has been treated as a one-time effort rather than as a continuously evolving process. As a result, most of the planning assumptions and recommendations were based on incomplete, faulty and outdated data.

Absence of continuity

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Absence of implementing and financing mechanisms

All the planning exercises in Karachi have been undertaken under the auspices of KDA that has never had any legal or administrative controls on the many other land development agencies functioning in the city. Similarly, the planning authority has never been the financing agency or authority for ensuring implementation.

Absence of political mandate

Other than the recently approved (City Council) Karachi Strategic Development Plan 2020, no other plan has enjoyed legal cover or mandate. This has been mainly due to the fact that land has come to be associated with corruption, political patronage and has since long been considered as a financial commodity rather than as a means to deliver social good. Providing legal cover to the planning document deprives the political and bureaucratic entities of the discretionary powers that they would otherwise enjoy and through which they can by-pass rules and regulations. These discretionary powers are essential to buy and reward political support and use land as a financial commodity.

Absence of stakeholder consultation

There has been extremely limited public input that has gone into the preparation of the plans. During the KDP-1973-85 and the KDP-2000 for example, key stakeholders that included transporters, shop keepers, estate agents, brokers, dealers, religious and political groups, professionals, developers, businessmen were not engaged in any meaningful consultative process.

2. Transportation Planning

The various transportation sector related master plan recommendations and other related studies have been sourced from the Study for Karachi Transportation Improvement Project in the Islamic Republic of Pakistan prepared by the Japan International Cooperation Agency (December 2012). The content here highlights some key recommendations related with urban transportation coming out in the master plans and some studies and reports prepared independently

MRVP Plan (1952)

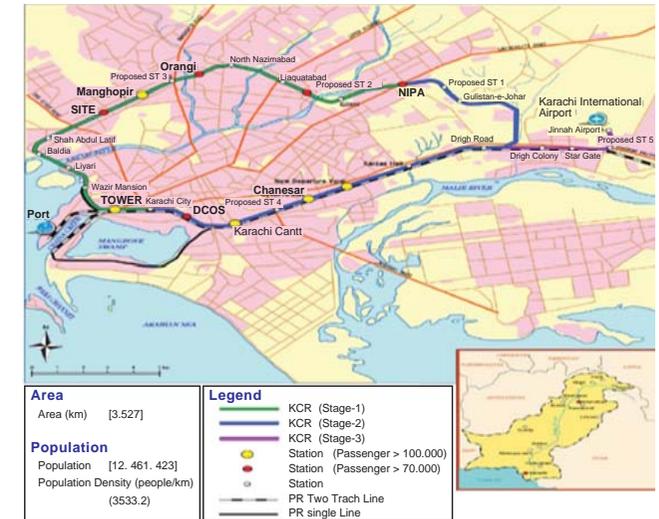
Prepared by a Swedish company (MRVP), the plan is the first master plan which proposed mass transit system including Karachi Circular Railway (KCR) and several radial branches. The urban development after the master plan followed the urban structure as designed in the master plan. One of the most important implementation of the master plan was KCR, which was constructed in 1960s and opened in 1969, although the actual alignment of KCR was smaller than the one proposed in the plan. Since there were many level crossings with roads and the access to stations was not proper, KCR failed to attract commuters and the service level became poor. The service of

KCR was reduced to bare minimum by 1999 to keep the track operational, until land slide in Gulistan-e-Johar area led to its complete suspension in 2007.

Karachi Development Plan 1974-1985 (1974)

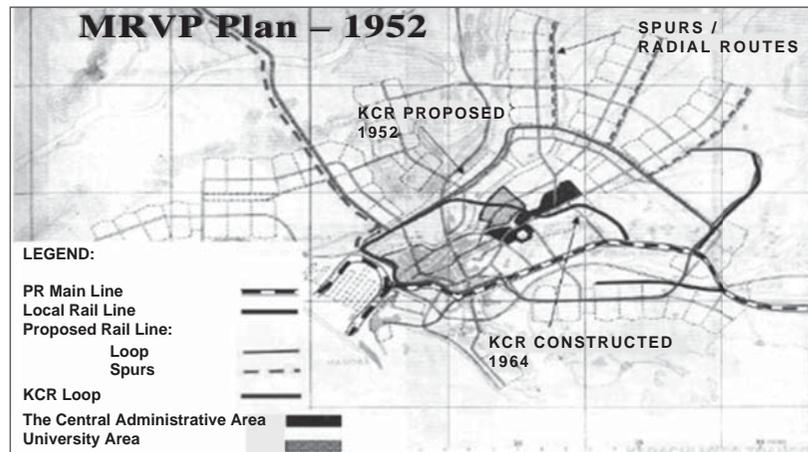
This plan was prepared by Karachi Development Authority with the corporation of United Nation when the population in Karachi was approximately 4.4 million (1974). Diesel powered trams were operated in Saddar when the plan was prepared. The number of car-owning households was as small as 36,000 (1971). In the urban transport program, it said: Because Karachi's road

system provides a capacity far greater than that needed today, few improvements would will be needed to make it capable of absorbing the demand under the restrained conditions. For mass transit system, three alternatives were studied in the final report: 1) improvement to existing rail, 2) existing rail with light rail and rail rapid transit, and 3) existing rail with light rail. The existing rail (KCR, main line, Malir branch, and Korangi branch) was common in the three alternatives.



Source: Special Assistance for Project Formation (SAPROF) for Karachi Circular Railway Project in the Islamic Republic of Pakistan – Final Report,

The light rail in the Plan 1975 - 1985 meant an urban railway using public street space similar to conventional tramways, while the rail rapid transit meant the railway system having the rail track which is separated from road system. The conclusion of the alternative analysis was that it was too early to introduce railway system in Karachi. In the public transport program, the report concluded:



Source: CDGK

“No major new light rail facilities are recommended at this time, but the right-of-way of the existing diesel-powered trams should be upgraded, and the trams should be rebuilt with new engine.”

Karachi Mass Transit Plan (1990)

Karachi Mass Transit Study (KMTS), supported by the World Bank, was carried out by international consultants during 1987-90. The final report of KMTS was submitted in August 1990 and approved at various levels by the Government of Pakistan (GOP), as well as the World Bank. Transit-ways in the total length of 87km including elevated sections were proposed in the report. The proposed transit-ways were designed as bus ways that can be converted to light rail system.

This report recommended the establishment of an autonomous Karachi Metropolitan

Transport Authority (KMTA) as the implementation agency of the proposed mass transit corridors. KMTS introduced the concept of Light Rail Transit (LRT) as a railway system with lower capacity than heavy rail or metro system because of the smaller composition of trains but higher capacity than tramways because of the elevated or segregated track.

Karachi Development Plan 2000 (1991)

The report of Karachi Development Plan 2000 was prepared in June 1991, one year later than the submission of the final report of Karachi Mass Transit Study (KMTS), August 1990. The report just reviewed and supported the mass transit plan in KMTS and there was no modification to the plan. The population of Karachi in 1990 was approximately 7.8 million.

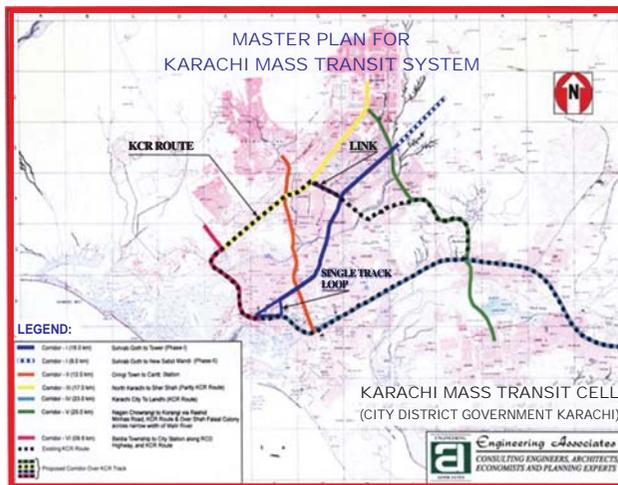
Notification of Mass Transit ways (1995)

Based on the final report of Karachi Mass Transit Plan (1990), the Government of Pakistan (GOP) by its notification issued in 1995 clearly mentioned the routes of six corridors as National Mass Transit ways/strategic transit ways of Karachi Metropolitan City. KCR was notified as the seventh corridor.

Other Studies

In 1970s, there were several studies conducted for mass transit development in Karachi.

JICA conducted studies about electrification of KCR. SOFRERAIL French consultants also conducted the improvement of KCR and main line. In addition to those studies for KCR, a subway system between Tower and Liaquatabad along M. A. Jinnah Road together with electric trolley buses was studied by the Rapid Transit Cell under the Federal Ministry of Communications. Proposed projects in these studies were not implemented.



Karachi Strategic Development Plan (KSDP) 2020

There were **16 objectives** for the transport policy in KSDP 2020. These objectives seem to be a mixture of the statements of different levels. KSDP 2020 set forth three principles for mass transit program as follows:

- It should have maximum coverage with minimum input and maximum output
- It should be built with minimum investment and shall have a short completion period
- It should also have maximum outreach and be compatible with bus travel cost



Karachi Mass Transit Corridors – Routes

The notified National Mass Transit Ways/ Strategic Transit Ways were called as Karachi Mass Transit Corridors, which comprised of the following six corridors.

Corridor-1: Tower to Sohrab Goth (15.2km)

Corridor-2: Cantt Station to Orangi (12.2km)

Corridor-3: New Karachi to Board Office, Board Office to Banaras Chowk, and Liaquatabad to Manghopir Road along KCR

Corridor-4: Karachi Cantt to Landhi along Pakistan Railway Main Line

Corridor-5: Nagan Chowrangi to Shahrah -e-Faisal along Rashid Minhas Road, and to Landhi

Corridor-6: Tower to Baldia Town along KCR and RCD Highway

Corridor-7: Karachi Circular Railway

KSDP 2020 RECOMMENDATIONS

There are some recommendations by sector in KSDP 2020. The following are those of Transit Improvement.

- Improvement in bus transport shall be effected by adopting such measures as rationalizing the bus routes, reserving high volume routes for large buses, providing bus stops, transit terminals and other physical improvements
- Replacement of existing bus stock with environment friendly fleet shall be effected
- Bus fare structure shall be rationalized
- Parking and garage facilities shall be provided to mini bus, taxi and rickshaw services

The following are recommendations about Mass Transit in KSDP 2020

- A segregated transit system shall be built in order to facilitate travel to the CBD, industrial areas and the work centers
- The Karachi Circular Railway shall be extended to cover sub-urban areas for maximum coverage and utility
- Bus rapid transit shall be re-introduced on major roads
- The feasibility of constructing light rail transit in the form of a combination of underground or elevated service on priority I and II corridors shall be examined

ISSUES FROM THE REVIEW

The Study for Karachi Transportation Improvement Project in the Islamic Republic of Pakistan, gives a review that focuses a bit on the proposed Karachi Mass Transit Corridors, but then also analyzes some issues of general concern that highlight well the inconsistencies and lack of overall synergies that have defined the planning process

Changes in Urban Condition along the Corridors

After the notification of the Mass Transit Master Plan by Government of Pakistan (GOP) (1995), elevated structure of the Corridors became more difficult and costly due to the construction of flyovers. Corridor-6 became impossible due to the construction of flyover at the end of RCD highway. In addition, construction of buildings and encroachment are observed along the corridors

Disorganized Transport Strategy and Policy

In an urban transport plan, its projects and programs should be well organized under a clear structure of public statements such as strategy, object, policy, and so on. The typical structure in a transport plan is such as goals – objectives – policies. In some cases, the word of “vision” and “strategy” are used. This kind of planning structure is not clear in the transport sector in KSDP 2020. There are 16 objectives, three principles, and some recommendations, but they are only a mixture of public statements of various level. It is necessary to establish the policy structure for the transport plan in Karachi.

Failures Repeated for Priority Corridors

Every attempt to materialize the priority corridor I & II had been failed. There are individual reasons of the failure in each project, which seem to be rational. However, it is necessary to review the principal aspects of the project scheme such as BOT and PPP. Since there are few examples of mass transit system which is financially sustainable without financial support from public sector in the world, more attractive schemes for private sector should be considered instead of posing too much demand on investors.

Duplication of Mass Transit Corridors

The Corridor-4 runs in parallel with KCR along Shahrah-e-Faisal Road. The Corridor-6 also runs in parallel with KCR between Tower and the crossing point of KCR and RCD Highway. Since the term “Mass Transit” usually means transit system with high capacity, these parallel routes are obviously duplication. It would be rational if Corridor-4 and Corridor-6 are branch lines of KCR and use the same route along the parallel section. In addition to the Corridors, BRT routes are proposed along KCR in the BRT study in 2006. It is necessary to re-arrange the network to avoid duplication and ensure coordination between CDGK and Pakistan Railways.

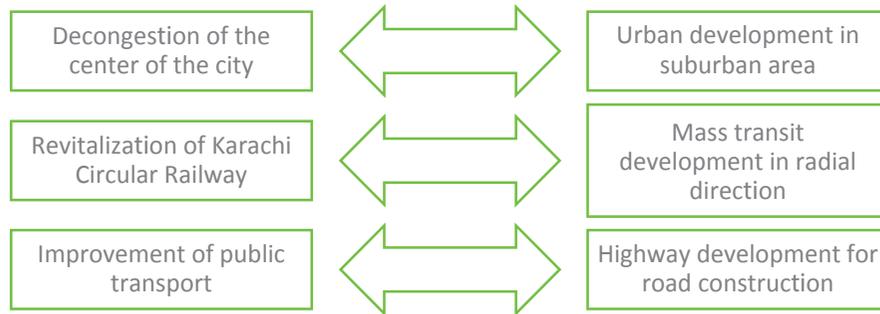
Lack of Successful Transport Projects

Karachi has introduced several bus projects to improve public transport. The Metro Bus was very successful initially. However, the modern and clean bus fleet has become outdated and its customer oriented services have become same as that of other bus services. The Urban Transport Scheme (UTS) was introduced in the early 2000’ s but resulted in failure due to lack of support by the Government and changes in CDGK. The pilot project of CNG Green Bus is very new but it faces financial problems. If the history of project failure is repeated, people will take it for granted that any project initiated by the government will fail. It is necessary to implement a public transport project in successful manner.

The Study for Karachi Transportation Improvement Project (KTIP)

Japan International Cooperation Agency (JICA) in 2010, in the KTIP Study, did create some scenarios for linking mobility with urban development that are shared here

Formulation of Master Plan based on scenario analysis



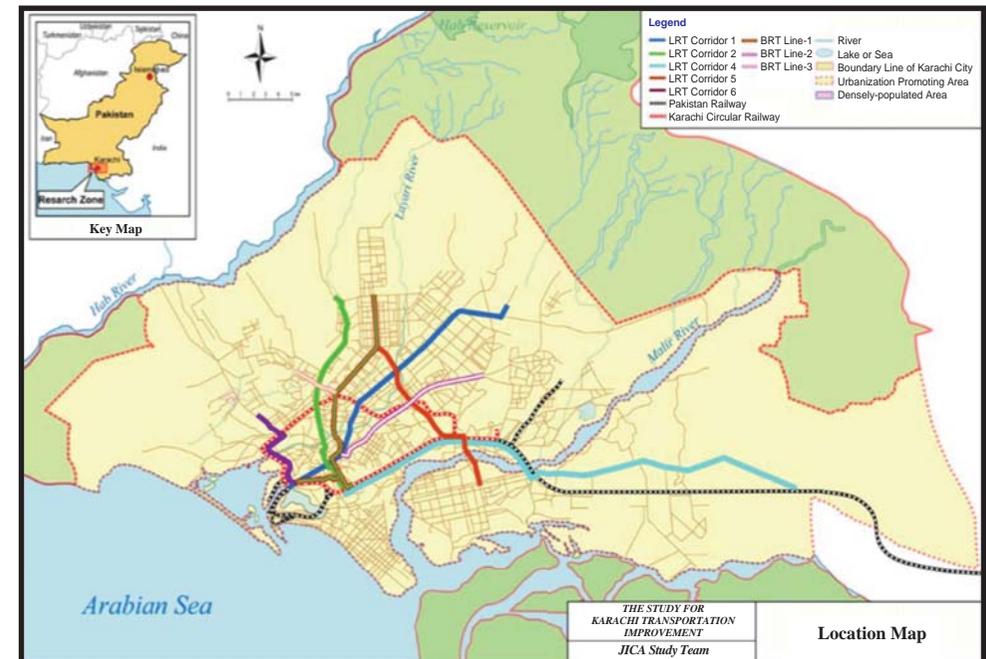
Concept	Intensive transport development in the center area to solve the serious congestion	Transport development in the suburban area to support the city expansion
Advantage	Economic benefit by decongestion is very large	Development cost is lower than that of the city center. Public transport share in suburban area will increase
Disadvantage	The scale of land acquisition and resettlement is large and cost will be expensive	Passenger flow from suburban area will overflow within the center of the city

To cope with these challenges, it is necessary to establish the priority area of urban transport in view of not only mass transit system, but also urban development.

Urban development scenario

The performance of urban transport system depends on its relationship with urban structure, and the development of urban transport systems should conform to that of urban development. The table below shows the two possible scenarios of urban development.

Scenario	Priority development in the center of the city	Land development in suburban area
Image		



Source: The Study for Karachi Transportation Improvement Project, Inception Report, 2010, JICA

CONCLUSION

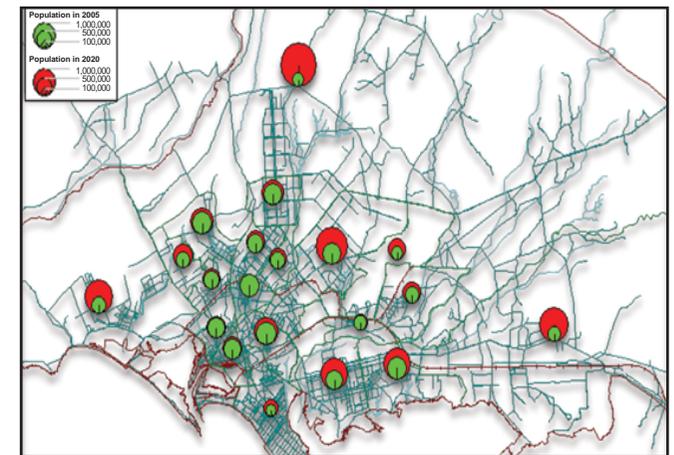
It would appear that with respect to planning, significant efforts have been made to provide the city with a focus and direction for development – both in terms of city wide master and mobility planning. However, the planning efforts have not succeeded in catalyzing change on ground as the political economy construct governing the city has continuously failed to provide an enabling legal, policy, institutional and regulatory space to make that happen. In fact, it has played the opposite role by derailing efforts for a viable change.

If we look at the transportation sector, it is obvious that within the master planning exercises, the core focus has been on public mass transit. That is not surprising as given the traditional ‘master planning’ approach that defined these planning exercises, the focus is more on ‘macro level’ interventions rather than on bringing the scale of strategic planning to the ‘micro level’ – which in fact is now the new paradigm in strategic urban planning – more on this later. If we do a comparative analysis on the master planning exercises, then it is indicated that other than the most recent planning exercise – KSDP 2020, all the preceding ones have connected urban physical growth scenarios and recommendations with supporting mobility options – identifying modes of travel and the travel routes.

This was needed as the sprawling nature of city landscape anticipated that the city would spread far and wide in a planned manner and as such needed mobility options to facilitate that horizontal spread. This understanding is before the age of sustainable growth when sprawling city patterns are now being discouraged and a more compact city growth model with vertical rather than horizontal spread is being promoted. So while it is not the case that connections have not been established within urban land use and mobility planning, the issue is that the city has mostly followed growth patterns that though have taken some inspiration from the planning recommendations, have never manifested on ground within the confines of the larger integrated growth models that were being recommended. As such, while the city unravels in the anticipated growth corridors, the DNA of this growth cycle has disabled rather than enabled the mobility scenarios that were modeled. Now lets look at what is meant by this growth cycle DNA.

In the MRVP Plan, Gadap is being identified for growth within the understanding that Karachi would remain the capital city of Pakistan, while in the Dioxides Plan, new settled enclaves of Landhi-Korangi and North Karachi are being recommended to house Karachi’s anticipated push into large scale indus-

trial and manufacturing sector – both the industries and associated human settlements. None of the two anticipated scenarios happened the way they were envisioned. While Karachi very soon transferred the role of capital city to Islamabad, the pace of industrial growth as mapped out in the Dioxides Plan never gathered the momentum that was anticipated. While the peripheral areas in the city got settled but not by the high end land use that was being envisioned but by low income poor community housing that were settled mostly by partition period migrants that were bulldozed from the inner city in the late 50’s and early 60’s by the government.



Source: *Special Assistance for Project Formation (SAPROF) for Karachi Circular Railway Project in the Islamic Republic of Pakistan – Final Report, May 2009, Japan International Cooperation Agency, Nippon Koei Co. Ltd. Yachiyo Engineering Co. Ltd.*

Their travel needs were not considered a priority focus within the scope of the ad-hoc development initiatives taken in that time and so the recommended mobility projects also remained only in the pages of the planning documents.

This unfortunate and growing profile of social injustice and inequity is at the core of a lack of government focus on projects having a public good element to them – such as public mass transit. Then the way the city developed without an effective legal, policy and planning umbrella – ad hoc growth and increasing footprint of a non-regulated and highly politicized informal sector, it has become increasingly difficult to plan public mass transit systems having the required access and facility. This becomes evident in the analysis of the Karachi Mass Transit Corridors in this Section. High value of traffic corridors identified for LRT or BRT mobility were built upon with flyovers or the route widths got constricted owing to illegal development.

All the major mobility related interventions –

Karachi Mass Transit (1990), KCR, and the presently ongoing Karachi Breeze BRT are examples of the sorry political victimization of such initiatives. This has either happened in struggles for control at the vertical scale (Federation and Province - Province and City) or the political straitjacketing on a horizontal scale also in the political sphere – PPP and MQM contestation and now PPP and PTI contestation. Transport and mobility is not the only development sector that has suffered in this naked struggle for power and control over resources but it probably is a sector that has suffered the most. For a city of over 20 million population, we presently don't have and have never really had a public mass transit system. Because of political tussles, institutions that are supposed to navigate the ship have been stripped of their mandates, with relevant powers and functions spread all over the place and have become technically bankrupt and tainted with high levels of corruption and political interference.

So whatever great plans we keep coming up with, will they ever get implemented in the way being envisioned remains a big question mark! Critical to this concern is the ongoing Karachi BRT Breeze project.

This realization also brings into this discussion and discourse of how unfortunately systems that were working have been run to the ground rather than being upgraded and integrated with other mobility options – the

Karachi Transport Corporation, the KCR, Mohammadi Tram Service are some sad reminders of the continuous decline in service delivery when it comes to the transportation sector in Karachi.

In the end, what this Section brings out is a huge void between plans and the realities on ground. Within this chasm has been witnessed the interplay of powers and controls, being exercised by political entities that are part of the power dynamics that has and is shaping the unfortunate physical, social and economic contours of this city. The continued political instability has meant that no policy or planning vision finds a long term footprint. Informal sector has moved in to fill the service delivery vacuum and the sector lacks any kind of regulation or control. It means that the critical institutions of civic governance are on a downward spiral of service delivery decline. When the state fails to provide an enabling space for collaborative sustainable urban growth, it becomes increasingly difficult to attract alternative service providers or financial partners such as within the private sector or communities. Donor agencies and other foreign financing and technology drivers are also shy to invest and partner. So for now this analysis indicates that the city finds itself in a viscous circle of urban service delivery and live ability status decline that can only be reversed through a show of political will and consensus building.

SECTION 2

How master planning has interfaced with mobility planning Case Study - MRVP 1952 and KSDP 2020

There is limited, if any, discourse of quality available discussing in detail the correlations and implications of the larger urban planning decisions and the actions taken on mobility planning relevant to Karachi city. In this Section, a PhD Degree Thesis of Sofie Malm - Mobility discourses in past, present and sustainable planning: The case of Karachi - submitted to the School of Architecture and Built Environment, Department of Sustainable Development, Environmental Science and Engineering, Stockholm, Sweden is being sourced to develop a discussion on the interface between overall urban and mobility planning in Karachi.

In her thesis, the author has, by using the methodology of Discourse Analysis, investigated sustainable mobility in the first and the current city plan of Karachi, namely the Greater Report on Karachi 1952 (more popularly known as the MRVP Plan) and Karachi Strategic Development Plan 2020 respectively. This research work, it is felt is useful in also understanding how the quality and scale of urban scale planning has changed – since creation to the present times - Which, it is sadly indicated, has not been a process that has evolved for the better.

The Context

Sofie Malm has established the basis of her work by highlighting how decisions in mobility planning have a significant impact on how the urban growth processes evolve and map out in any city. As she states, 'mobility and cities are closely connected to each other; you cannot have one without the other. Examples from Curitiba, Brazil, and Stockholm, Sweden, show how the introduction of their respective public transport systems greatly influenced the future development of the cities by affecting their urban structures, institutional set-ups and people's way of life (Weingaertner, 2005). This gives ideas of how mobility can shape a city: that they are closely interlinked. Additionally, Priester, Kenworthy and Wulfhorst (2013) argues that mobility is affected by several different factors such as the spatial structure, existing transport supply and the population's individual mobility behavior (as well as economic, political and cultural conditions). Therefore mobility does not only shape a city, but is also shaped by the city. Furthermore, policies connected to the urban environment can be seen as both a reflection of the contemporary understanding of what a city is, as well as shape these understandings and the city itself (Cochrane, 2007). Mobility is thus linked to both the city and the people within it, and for example city structure and norms of behavior both shape and are shaped by mobility.

Sofie identifies a very critical understanding that decisions in mobility planning are heavily influenced by the social norms that provide a context to the planning process. As she rightly documents that exploring what is understood as 'good' or 'desired' mobility and for who is the key into seeing how priorities are made when planning for mobility in cities. Different views on people, the city and mobility changes the way we move. This raises the importance of investigating what this view is, how mobility is perceived and what consequences it has for the future city and for whom

"Capturing ways of seeing mobility thus widens our language for engaging with questions of mobility and its political and social reality and possible futures" (Jensen, 2011)

What issues are presented and what strategies are put forward to solve these issues of mobility can be seen through the pre-assumptions and social norms described in them. According to Bradley (2009) it is important to scrutinize the social norms that underpins planning strategies before a transformation to a more sustainable and just society can be started. This is because assumptions and norms can either be a driver or barrier to sustainable development, and favor or disfavor different groups in society'.

This understanding is important to raise within the context of Karachi, as decisions in mobility planning bring out the question of who benefits and who stands out. As gets highlighted in the Thesis document, 'this can be connected to current Karachi, where construction of expressways to liberate congestion on roads leads to the immobility of pedestrians due to lack of pedestrian bridges (Hasan, 2015). The freedom for some to move indirectly exclude others' freedom to move, they are not free in the same way (Sheller and Urry, 2006). In general the social inequality of current mobility systems is getting more and more substantial and many recent studies point towards not everyone have equal access to mobility (Hannam et al., 2006). Searching for the distribution of possibilities for mobility can reveal social inequalities through identifying what type of mobility, for example mode of transport, is prioritized or seen as fundamental to society'.

The main research questions that were taken up for investigation in the Thesis are listed below:

- What are the problems and what is made problematic?
- How are these problems represented: can they be thought about differently?
- How is the better (mobility) society presented in the plans?
- What pieces of information is put forward as important regarding mobility?
- How do the plans relate to social equity and environmental concerns?
- What social groups and norms for behavior are present in these problem formulations?
- Whose desired future is described?

Analyzing the plans

The two (2) Master Planning documents analyzed are:

- Report on Greater Karachi Plan 1952 (MRVP)
- Karachi Strategic Development Plan 2020 (KSDP-2020)

The evaluation has been then interfaced with ongoing challenges in achieving sustainable mobility in Karachi. Documented as follows are excerpts from the thesis that look into the two plans with respect considerations or otherwise of interfacing mobility planning in the larger planning recommendations.

The Greater Plan of Karachi - 1952

In 1947 the Swedish-British company Merz Rendal Vatten Pakistan (MRVP) got assigned to make the first master plan of the assigned

Besides from gravely underestimating the population growth, the economic situation of the vast majority of immigrants did not conform to the predicted living standards in the plan. The difficulty of planning for the economic situation of the immigrants is also apparent in the second plan for Karachi, the Greater Karachi Resettlement Plan by Doxiades, which saw it as an impossible task to provide housing for people with such low purchasing power (URC, 2010)

capital: Karachi in newly formed Pakistan. The Swedish company Vattenbyggnadsbyrå (VBB) was the company out of the three, which had previous planning experience and were therefore the ones who mainly constructed the plan.

Though the main authors all were Swedish they were highly influenced by British planning ideologies of that time. Pakistan had at the time just become its own country and the goal of the plan was to write it as a learning document on how to conduct city planning.

The plan is thus characterized by the post-war optimism that permeated Europe, with a big optimism that a technological revolution would happen in Karachi (Lars Malm 2015, pers.comm. 15 February). The plan sought to link the old Karachi and the new administrative/university area through fast transport, both public transport and express-ways. Human resources were presumed to be expensive and an example is the designed light-rail system, where it was important to have bigger metro-cars in order to minimize the number of personnel needed, and there-by reduce costs. There was an assumed increase in standards, single-family houses in suburban areas were planned for the majority of the expected population: 2.75 million out of 3.5 million people. The remaining was to live in the existing, denser city center. The city was to be decentralized in the sense that functions and services were to be found in each neighborhood, but in order to connect the city and create a more uniform (labor) market, cheap and reliable transport was to connect the whole city.

The Plan has not been implemented to any

great extent in Karachi today. Karachi has however to some extent followed the suggested road network, which made development along similar corridors as predicted in the plan (Ahmed, 1992).

Political struggles and unforeseen immigration can be identified as the main reasons to why the plan was not implemented. Focus and resources were shifted to Islamabad and the shortage of affordable housing made people occupy land and build informal settlements. Besides from gravely underestimating the population growth, the economic situation of the vast majority of immigrants did not conform to the predicted living standards in the plan. The difficulty of planning for the economic situation of the immigrants is also apparent in the second plan for Karachi, the Greater Karachi Resettlement Plan by Doxiades, which saw it as an impossible task to provide housing for people with such low purchasing power (URC, 2010).



*For whom the plans could not cater to
Source: Farhan Anwar*

Uniform labor market - The idea of being able to travel quickly from one area to another was not only thought to create a uniform labor market, it would also be positive for personal and cultural encounters.

The main axis - The new town, which was the administrative and university area, was to be connected with the old town through fast transport, both public transport and roads. This would create a main axis that was connected to the suburban neighborhood units.

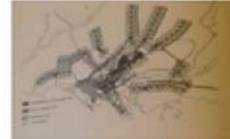
Different functions in different specified area - In the plan the different industries, commercial and administrative units were decentralized, but all functions were to be put on the main traffic routes to be more accessible.

Safe, fast and cheap transport - An efficient transport system takes regards to both speed and safety. Therefore traffic separation was a key in this plan. Highways were to be signal free and local streets were to restrict fast driving. Important was also the light rail system for the city and in the city center walking was to be the main mode of transport.

Community life - People were to live in residential areas large enough to provide the area with sufficient functions in form of culture, education and shopping. These would be part of larger neighborhood units the could hold more rich and diverse center, as well as larger functions, such as hospitals for example.

Walking distance - The maximum walking distance was to be one mile (1.6km) and everyone who wished to live close to their work was to be able to do so.

Differentiated density of population - The majority of the population was to live in less dense terraced houses in the suburbs, but the density would be kept and the center to be "the compact heart of the city".



A responsible authority



The City by the sea



The Heart of Pakistan



Flexibility

RELEVANCE TO MOBILITY

Land planning: The neighborhood units

One of the main proposals of the Plan was that the inhabitants of the new capital were to live in neighborhood units and residential zones. Neighborhood units would have a common city center where larger functions, such as care-centers and industries or administrative functions were to be found; they were sought

A clarification of the difference between residential zones and neighbourhood units from the plan. In the suburbs each residential zone would consist of 2500 people whereas in the higher density inner city one residential zone was to be of 5000 people.

	Inhabitants	Type of functions (examples)
Residential Zone	2500 (5000)	Culture, Shops, Schools, Mosques, services that were used daily or weekly. Local transport by walking or bus.
Neighborhood	40 000	Main center. Hospital (shared between several units). Transport to the rest of the city. Industries/ other employment opportunities.

to be more or less self-containing. It was also in these centers where a rail or bus station would be situated that would connect the different areas and the inner city. Common functions, such as bazaars and primary schools

Due to this idea of decentralization of housing and functions to the outer parts of Karachi, these areas were thought to develop and become independent or self-containing and most of the functions were to be reached through walking

were to be found in each residential zone at walking distance for everyone, whereas the neighborhood centers would be reached by local

buses or active modes of transport.

Due to this idea of decentralization of housing and functions to the outer parts of Karachi, these areas were thought to develop and become independent or self-containing and most of the functions were to be reached through walking. What was not to be decentralized was amusement, which was to be kept in the inner city, and even though this could lead to congestion, it was still thought to be an important factor of urban life. In general, walking was expected to increase and cars to decrease when moving closer to the city center to avoid congestion. Apart from good connections between the neighborhoods and the inner city the University was to have the best communications in the whole city.

Transport planning: The transport system and road network

Transport was seen as crucial for a city to ensure accessibility to its different functions and opportunities. Speed and high capacity was also seen as the key into a functioning urban traffic system. Traffic separation was promoted in the plan, highways would be signal free with advanced infrastructure for intersections, flyovers, underpasses and differentiated pedestrian and bicycle infrastructure. Within the neighborhoods there would be the local streets where space was shared by all modes and hence speed was restricted. The public transport system is promoted as the backbone of the system several times and a

light rail system was to be built that would transport people in a fast and efficient way. A good public transport system was also seen as key in order to keep the roads and the city center from becoming congested. The plan also discusses how augment the capacity of people on buses and rail with fewer working staff, as labor would become more expensive in the future.

The different modes of transport proposed were cars, bikes, public transport and walking. Even scooters (motorcycles) were mentioned as something that might be convenient for the city. Only 1% of the population was predicted to be able to afford a car, but still congestion was something that was highly unwanted.

Walking was to be the main mode of transport within the neighborhoods and city center. Bikes are not explicitly mentioned but come up in drawings showing that they are considered. However animal driven transports are never mentioned. Functions such as school and services were within each neighborhood unit, whereas the fast rail bound public transport system was there to serve workers and create a uniform labor market

were within each neighborhood unit, whereas the fast rail bound public transport system was there to serve workers and create a uniform labor market.

The Karachi Strategic Development Plan 2020

Master Plan Group of Offices (MPGO), which is also a part of City District Government Karachi (CDGK), is a body established for and has conducted this master plan (at the time of preparation of this thesis, the City and Towns District system of local governance was in place in Pakistan). One of the successes of the Karachi Strategic Development Plan 2020 (KSDP-2020) is that it is the first plan in Karachi's history to have legal status (MPGO, 2007, p. III).

The program was previously between 2007 till 2020, but has now been extended till 2030 and will be applied to the neighboring districts of Karachi (MPGO, 2007). In the plan four plausible scenarios were examined and the scenario multi nodal, which aims to densify its outer fringes, was chosen over the "do nothing", consolidation and complementary growth scenarios. The multi nodal scenario means decentralization of services and creating stronger centers, instead of only relying

On the path towards the vision, Karachi should adhere to the following guiding principles:

- Sustainable growth that is economically feasible, environmentally viable, socially and culturally acceptable
- Creating an inclusive city, social justice and poverty reduction
- Safeguarding quality of life, people are at the center of the vision

(MPGO, 2007, p28-29)

on the Central Business District (CBD), which today has 50% of the job opportunities in Karachi, and therefore one of the main issues of congestion (MPGO, 2007).

According to the Plan the problems that have arose due to the failure to enforce previous plans are: urban sprawl, wide spread Katchi Abadis/slums and gross deficiencies of required infrastructure/utilities, which constraint the potential opportunities of Karachi (MPGO, 2007). The Plan has an overall vision of making Karachi into: "A world class city and an attractive economic center with a decent life for Karachiites".

This vision has been translated into an agenda for priority setting on what Karachi needs, namely:

- Karachi Needs a Pulsing, Vibrant Heart and Have Areas of High Amenity
- Karachi Needs to Provide a High Quality of Life for its Citizens
- Karachi Needs to Have Clear Strategies for Coping with Growth
- Karachi Needs to Foster Competitive Industries
- Karachi Needs to be Organized on Good Governance

(MPGO, 2007, p31-32)

The list of recommendations

The KSDP 2020 presents a list of recommendations that gives suggestions about what actions or programs should be undertaken in order to achieve the objectives of the plan (MPGO, 2007). A summary of the recommendations in the Plan that has relevance to mobility is shared here. These are actions or programs that should be undertaken by the city. The magnitude and range of the different recommendations differs widely, from developing new urban centers, implementing a park-and-ride strategy as an example. However, there are no indicators or pointers given on how these should be followed up on or how to measure if actions taken against a point is successful or not. Instead the list can be interpreted as possible areas to investigate, but there is no indication of where to start or what in the list should be prioritized.

Components of the plan regarding mobility (summarized by the author/ Sofie Malm)

Land Use	Transport
<ul style="list-style-type: none"> • Spatial growth strategy • Promote mixed use developments • Permit and guide densification and vertical development of existing residential areas • Develop new urban centers • Incorporation of existing goths (villages) into the urban fabric • Transport infrastructure • Development of City's entry points • Decentralization of financial district • Special purpose zone along Karachi northern bypass • Reservation of land for public amenities 	<ul style="list-style-type: none"> • Transportation policy objectives - towards a comprehensive strategy • Park-and-ride • Transit terminals • Traffic management • Parking rationalization • Roads and highway improvements • Radial road improvements • Local improvements • Ring roads and bypasses • Road widening scheme • Pedestrian improvements • Air quality deterioration from transport vehicles • Noise pollution from transportation • Energy conservation • Transportation and pedestrianization in the CBD • Safety audit • Traffic Operation Program to Increase Capacity and safety (TOPICS) • Traffic Management Plan for other Land Owning Agencies

Land planning: decentralization

There is an overall aim to become a polycentric city with several centers of gravity, instead of just one main attractor as it is today: the Central Business District (CBD). This would relieve congestion as the CBD is accounted for 50 % of the work opportunities in Karachi today, which is the identified source to the congestion problems (MPGO, 2007). Karachi is a very big city, and hence there is recognition to create new areas of attraction around the city, as well as have differentiated functions at different places.

Transport planning: Transport & Roads

Regarding the transport sector there is an overall aim to improve transit by targeting road infrastructure, public transport, road traffic conditions and traffic management (MPGO, 2007). There has been a lack of previous planning in the past and there is thus no system to stem from:

“There has never been an overall Karachi urban transportation plan, so highways and other improvements are not part of an integrated regional vision.” (MPGO, 2007, p.18).

The overall aim becomes a bit scattered, but pointers of where they are going can be found in their concrete suggestions towards

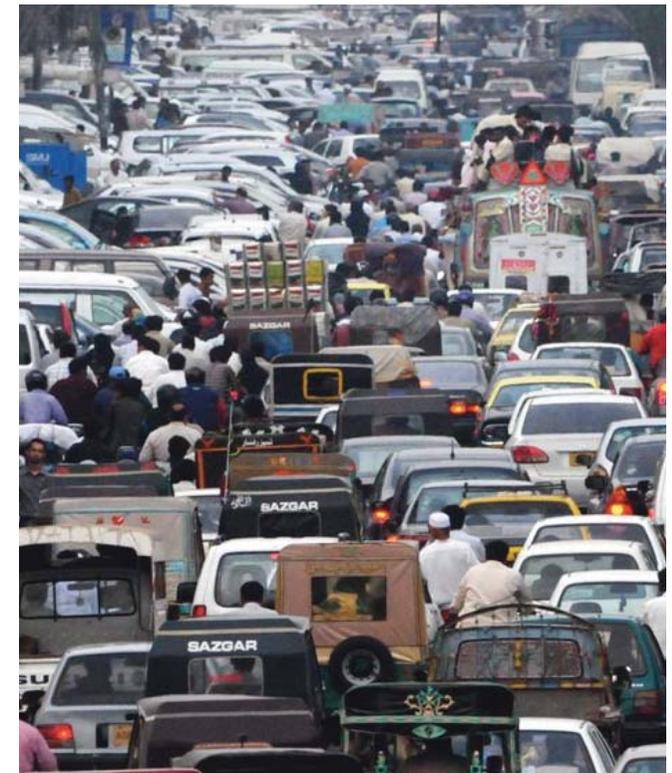
each of the four areas: road infra-structure, public transport, road traffic conditions and traffic management. When it comes to road infrastructure there are a lot of undergoing road improvement projects where focus is on improving intersections and construct underpasses, “flyovers and bridges to improve traffic” flow. Road space will increase by 134% in the next plan, but due to the total increase in land (mostly undeveloped) it will be only 9% of the total land area in 2020. In 2006 there were 93.4 km of land dedicated to roads, which accounted for 18% of the total land use in Karachi (MPGO, 2007).

The section concerning public transport is divided into two parts, first is about public transport and the second is about mass transit. The mass transit previously mentioned has been replaced with a new study by JICA.

The aim of public transport is to implement high capacity buses where needed, rationalize the fare structure and replace the existing bus stock. The road traffic condition is mainly referring to congestions, and will be handled by physically removing physical obstacles (street hawkers, wrong parking among others), but it is also connected to

safety and that for example safer crossings and pedestrian paths. There is also a more soft part connected to management, which implies better planning, management and financing.

The section concerning public transport is divided into two parts, the first is about public transport and the second is about a mass transit. The mass transit, previously mentioned has been replaced with a new study by JICA



Source: Shehrii-CNT

Comparing the analyses of the two plans

Sofie Malm has then carried out a comparative analysis of the two plans in terms of their relevance to sustainable urban mobility considerations. She feels that the two plans have some similarities when it comes to problem definition, the idea of “good/desired” mobility and how they relate to environmental issues and social concerns.

While a common feature in the two plans, which is also seen as a big driver of development, is congestion,

While a common feature in the two plans, which is also seen as a big driver of development, is congestion, she feels that this issue is not tackled through strategies of fewer vehicles on the roads and the space given to cars is not questioned. Her analytical review brings out the understanding that the active and public modes of transport are regarded in the plan as an important part of the city (how important compared to cars could be discussed)

plan as an important part of the city (how important compared to cars could be discussed).

She states, ‘the two plans are based on different visions and core priorities, nonetheless were they made in completely different time periods and for a different population size. Despite the different contextual issues, there are some general elements that can be identified and compared with the overall sustainable mobility paradigm. Fuel efficiency is not something that was discussed in the 1950s, and is also less discussed

in Pakistan as mentioned earlier, even though the local environmental issues are discussed. When it comes to modal shift both plans wants to promote walking and public transport, which is seen as positive. On the other hand, neither of the plans suggests actions to actively curb car use, and what overall effects the approach will have is therefore unclear’

For the KSDP 2020 Plan, the overriding vision of making Karachi a ‘World Class City’, is seen as having problematic implications. Sofie argues that building a world class city does not directly imply better conditions for the people in it from a socio-ecological perspective, but it is dominating when it comes to what drives development. Mobility is a commodity, but there is no regulation to restrain mobility, even if it has a negative impact on other sorts of mobility.

The car is a symbol for economic growth and should be privileged when looking at both plans. When it comes to public transport bigger and formal systems are better, even though the city has always and still is depending on the informal sector for jobs, housing and transport. The existing system is in conflict with what a world class city should be. Using less energy intense modes and travels less, which are more affordable and sustainable, are deprioritized in the long run. Similar lines of development can be found in other developing countries. In the 1990s the mobility culture of Beijing, a previous non-motorized city, changed rapidly towards a more car oriented mobility with less biking and walking as a consequence.

“A world class city is a city of expressways, it is an event city, it has high rise, it is a city of malls, and it is a city where investments determines the shape of the city, and it is a city where there are projects instead of planning.”

Arif Hasan

The driving forces were to replicate the western modern ideals, and to construct transport infrastructure to prove that China was an emerging power (Zhao, 2010). A world class city is used synonymously with economic growth and in practice socio-ecological elements are forgotten and seen as a barrier towards growth. Since neither of the two restricts car use, rather promotes it through the plans of a well-developed road network, there is a possibility that social and environmental problems arise (or would of arisen) in the future, in Beijing. Neither of the plans sees the car as a negative line of development, rather positive and that it has a place in turn in conflict with the sustainable mobility direction of modal switch, where a restriction in car use is desired. Even though Karachi hasn’t been identified as a non-motorized city, it has many of the characteristics of one described in Priester, Kenworthy and Wulfhors (2013)

Sustainable mobility indicators	1952	2020	Comments
Efficiency increase/ pollution reduction	-	x	Switching to low CO ₂ intense fuels was not on the agenda in the MRVP plan
Modal shift/Walkability	x	x	Both plans promote active modes of and public transport, but neither restricts car use. The MRVP plan promotes walkability to a greater extent than the KDSP-2020 plan
Distance reduction	x	x	Decentralization and land use policies is suggested by both plans so that for example closeness to services is promoted
Substitution	-	-	None of the plans discuss solutions for non-travel
Traffic separation*	x	x	Both plans want separation of faster modes of transport through expressways.

* Traffic separation is not identified as either working towards or contradicting sustainable mobility as it can contribute in both directions

The transport system was to a large extent non-motorized but the trend has turned and modes such as walking, bicycling and animal driven carts are becoming less and less visible. Direct forbiddance of animal driven carts is stated in the plan, walking and bicycling is also indirectly forbidden since there are no facilities for and the construction of expressways limit the mobility of these modes. Karachi is as other non-motorized cities very dense. Other positive environmental effects are the relatively low energy use per capita for transport, however even a small rise in private vehicles (as in Karachi) have devastating effects on the transport system and cause severe congestion. A widening of roads and construction of signal-free expressways can therefore be perceived as highly necessary to deal with congestion as they

have a low car use compared to other cities.

According to Sofie, the current plan (KSDP 2020) is more or less seeing the present situation as a problem, and the solutions therefore are focused to "fix" it rather than to use it as part of the solution.

It is therefore difficult to take the solutions presented in the MRVP plan and directly apply them to current Karachi, as many of the solutions are connected to each other. However, there are opportunities to for example make the informal system more accessible by mapping it as has been done in Nairobi (Badger, 2014). There is an existing transport system, but because it is not promoted through for example providing insurance or given dedicated bus lanes and a need to

pay bribes to the police, it cannot function. Through renewing urban policies and running the bus system under public private partnership (PPP), costs can be cut and security and reliability enforced (Sultan and Macário, 2008). However, there is a risk of corruption and systems run by the government are rarely seen as a solution. With new forms of governance, such as PPP, and the introduction of technological aid new solutions can be tested.

Even if many of the solutions in the KS-DP-2020 can be seen as a way in the right direction there are no measurable goals of what is prioritized; what is realistically achievable and should be pursued. Planning should have long-term visions but also short and long-term actions of how to achieve them (Albrechts, 2010). These can be shown as indicators, hands on measurements, on development and the goal. An example is Stockholm environmental program, which has reachable objectives and shows whether they will be fulfilled or not, accessible for all through a webpage. A reason to have reachable objectives is also to avoid unwanted path dependency. Rapid construction in the city leads to path dependency in different ways, express roads and the construction of low-density suburban houses increases fuel consumption and acts as a barrier for other modes such as walking and public transport. Therefore it can be hard to promote public transport and walking in retro perspective when people are already dependent on their cars, since the priority will be (as it is today) building more roads.

CONCLUSION

What comes out as a larger understanding when deconstructing the two plans is that the first one (MRVP) in many ways was forward looking while the most recent (KSDP 2020) looks backwards. A core recommendation of the MRVP Plan was that the inhabitants of the new capital were to live in neighborhood units and residential zones. In the MRVP Plan, walking was to be the main mode of transport within the neighborhoods and city center. As is stated in the thesis, 'neighborhood units would have a common city center where larger functions, such as care-centers and industries or administrative functions were to be found; they were sought to be more or less self-containing. It was also in these centers where a rail or bus station would be situated that would connect the different areas and the inner city.

Common functions, such as bazaars and primary schools were to be found in each residential zone at walking distance for everyone, whereas the neighborhood centers would be reached by local buses or active modes of transport. Now all this to a great extent finds a resonance with the 'smart and sustainable city' of today, where the core of the strategic urban planning framework is the 'smart neighborhood' - that

is walk able, sociable and to a large extent self-sustaining.

When there is a need to move out of the neighborhood, easy access is made available to fast modes of public mass transit as is also recommended in the MRVP Plan.

This planning logic is well documented in the thesis – 'Due to this idea of decentralization of housing and functions to the outer parts of Karachi, these areas were thought to develop and become independent or self-containing and most of the functions were to be reached through walking. What was not to be decentralized was amusement, which was to be kept in the inner city, and even though this could lead to congestion, it was still thought to be an important factor of urban life. In general, walking was expected to increase and cars to decrease when moving closer to the city center to avoid congestion'.

The MRVP Plan also talks about neighborhoods having local streets where space is to be shared by all modes and hence speed is restricted. The public transport system is promoted as the backbone of the system several times and a light rail system was to be built that would transport people in a fast

and efficient way.

A good public transport system was also seen as key in order to keep the roads and the city center from becoming congested. The Plan also discusses how to augment the capacity of people on buses and rail with fewer working staff, as labor would become more expensive in the future. As such there is a clear correlation with mobility planning leading to generating greater economic growth.

The Plan however, did not anticipate the massive waves of migration from upcountry and as such did not plan for slums and squatter settlements and placed faith in the political commitments of the government of the day. Unfortunately, other than a grave underestimation of the population growth, the economic situation of the vast majority of immigrants did not conform to the predicted living standards in the Plan.

According to Sofie, the current plan KSDP 2020 is more or less seeing the present situation as a problem, and the solutions therefore are focused to "fix" it rather than to use it as a part of the solution

In the KSDP 2020, while there is a lot of talk about introducing public mass transit, however, contrary to a critical understanding of smart growth, the Plan promotes further urban sprawl of the city. Generally, the 'world class city' vision of Karachi seems to run counterproductive to making viable the modes, services and infrastructure associated with smart and sustainable urban mobility. The Plan also failed to account for the rapidly changing public services dynamics in the city and planned in isolation to the realities on ground. As such, while the Plan is getting finalized, the actions on ground are pushing the city's growth contours in the opposite direction and that includes the transportation and mobility scenario too.

The Thesis looks into this when it says that 'during the time of the plan, the number of paratransit vehicles and private motorcycles has increased, showing how fast the transport system in Karachi changes, but in the wrong direction. There is a deterministic view that the plans for a BRT should be built, that a city the size of Karachi could not do without one. The BRT will not stem from the existing public transit system, but will be a new system with a different system of governance and financing. The way the public transport system should be is reflected in the thinking of 'bigger is better' and it stems from the view that a world-class city should have a BRT system.

In general an increase in mobility is wanted, and therefore high mobility is perceived as desired. This will be done through public transport and private vehicles and therefore there are also investments in roads and cars.

Congestion is not wanted, and the solution is building more and wider roads with less stops. However, this actually leads to problems for other modes and has made even the shortest travels impossible to effectuate by foot (Roland DeSouza 2015). There has also been an increase in pedestrian accidents since there are not many proper walking facilities, which makes crossing the road a dangerous task (Hasan, 2015). At the same time the space allocated to roads will be increased by 134% from year 2006 to 2030 (MPGO, 2007). This indicates a pro-car bias and given that mainly richer people have cars, also a pro-rich bias.

SECTION 3

London Transportation Strategy – A Case Study in Optimizing urban liveability benefits through mobility

This section will look at the Mayors Transport Strategy (2018) for the city of London to highlight some key strategic planning interventions that have been identified to link mobility planning with improved urban growth – particularly in terms of creation of increased job opportunities and housing with a high level of liveability. While London and Karachi do not find compatibility in many ways, it is felt that the principles and approaches that the Mayors Transport Strategy (2018) works with to interface mobility and land use planning, optimizing of economic and environmental benefits can be applicable and relatable in the context of a reformed governance construct even within Karachi, which is the larger objective of this Study anyway – place the landmarks, way finders and road posts for moving towards the much needed institutional and policy reforms.

Some relevant content of the Mayors Transport Strategy (2018) is being referenced here, that is more relatable to the mobility context in Karachi to help explain how within a strategic planning framework, interfaces and synergies can be created between improved mobility and the larger, more holistic objective of improved urban liveability.

The Vision

The core focus and vision of the Transport Strategy, as indicated in Policy 1 states that, 'The Mayor, through Transport for London (TfL) and the boroughs, and working with

The core focus and vision of the Transport Strategy, as indicated in Policy 1 states that, 'The Mayor, through Transport for London (TfL) and the boroughs, and working with stakeholders, will reduce Londoners' dependency on cars in favor of active, efficient and sustainable modes of travel

stakeholders, will reduce Londoners' dependency on cars in favor of active, efficient and sustainable modes of travel, with the central aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041'

The overall Strategy Vision looks at coupling improved mobility planning by transitioning to increased walkability and cycling with enhanced urban prosperity and economic growth. The Strategy states that 'making streets work for people will provide huge economic benefits not only through revitalizing town centers and attracting business to London, but also by freeing up space for the essential freight and commercial journeys that keep London's businesses functioning. Improving the efficiency of freight and commercial traffic, alongside reductions in car use, will help to keep London's streets operat-

ing well for the benefit of the city's businesses and the Londoners who rely on them.' The Crossrail 2 project, expected to be opened by the Mayor in 2030 is considered essential to London's future and will unlock around 200,000 new homes, and support upto 200,000 new jobs.

Focus on – the Healthy Streets Approach

A new type of thinking is required to put into practice the theory of reducing car dependency and increasing active, efficient and sustainable travel. It requires an understanding of how Londoners interact with their city and what defines their quality of life, with particular attention to the streets where daily life plays out. Whatever mode of transport Lon-

doners use, the quality of the experience of using London's streets helps to define the quality of their journey. Eighty per cent of Londoners' trips are entirely on streets, and all tube and rail journeys rely on good street access to stations. A good street experience is therefore key to providing attractive public transport options of whatever mode.

The wider role streets play in virtually every aspect of London life also provides an enormous opportunity to use the Mayor's strategy for transport to improve Londoners' broader experience of their city. Streets are where Londoners spend their time and meet other people – they make up 80 per cent of the city's public space.

Proposal 1

The Mayor, through TfL and the boroughs, will improve and manage London's streets to create a high quality public realm that encourages walking and cycling by all Londoners by:

- a) Creating 'Liveable Neighbourhoods' to improve the public's experience of walking, cycling and using public transport and to increase opportunities to use streets as public spaces and for play and to encourage fewer trips by car.
- b) Providing 'Healthy Routes' to create attractive, safe and accessible walking

routes to schools and other local destinations, such as shops, health services and parks, with a particular focus on improving conditions for children, older people and disabled people.

- c) Providing more secure, accessible cycle parking, particularly in residential areas, town centers, public transport interchanges and at key destinations.
- d) Improving the accessibility of streets for older and disabled Londoners through measures including removing obstacles, widening pavements for wheelchair access, introducing tactile

paving, raising sections of roadway to make crossing easier, providing seating, mitigating the impact of street works and, where possible, ensuring on-street cycling facilities cater for the wide range of cycles used by disabled people.

- e) Reducing the severance caused by roads and railways, which can separate people from local services and limit social interaction, community engagement and active travel.
- f) Ensuring any scheme being undertaken on London's streets for any reason improves conditions for walking and cycling.

They are places where people live, shop and work, where children play, where communities connect and where businesses can thrive. The experience of being on London's streets is particularly important for older people, the very young, disabled people and those living on lower incomes, who disproportionately feel the negative impacts of living in a car-dependent city.

Improving public transport and assisted transport services for older and disabled people will help a wider range of people to become less car dependent, and improving streets to increase active travel levels, reduce road danger, improve air quality and reconnect communities will be vital towards reducing unfair health inequalities.

The Healthy Streets Approach provides the framework for putting human health and experience at the heart of planning the city. It uses ten evidence based indicators to assess the experience of being on our streets. Good performance against each indicator means that individual streets are appealing places to walk, cycle and spend time. Improvements against all the indicators across the city's streets will radically transform the day-to-day experience of living in London, helping to fulfill this strategy's overall aim of creating a better city for more people to live and work in.

THE TEN HEALTHY STREET INDICATORS

Improving air quality delivers benefits for everyone and reduces unfair health inequalities.

London's streets should be welcoming places for everyone to walk, spend time in and engage in community life.

Making streets easier to cross is important to encourage more walking and to connect communities. People prefer direct routes and being able to cross streets at their convenience. Physical barriers and fast moving or heavy traffic can make streets difficult to cross.

A wider range of people will choose to walk or cycle if our streets are not dominated by motorised traffic, and if pavements and cycle paths are not overcrowded, dirty, cluttered or in disrepair.



Providing shade and shelter from high winds, heavy rain and direct sun enables everybody to use our streets, whatever the weather.

People are more likely to use our streets when their journey is interesting and stimulating, with attractive views, buildings, planting and street art and where other people are using the street. They will be less dependent on cars if the shops and services they need are within short distances so they do not need to drive to get to them.

Walking and cycling are the healthiest and most sustainable ways to travel, either for whole trips or as part of longer journeys on public transport. A successful transport system encourages and enables more people to walk and cycle more often. This will only happen if we reduce the volume and dominance of motor traffic and improve the experience of being on our streets.

A lack of resting places can limit mobility for certain groups of people. Ensuring there are places to stop and rest benefits everyone, as people will be more willing to visit, spend time in, or meet other people on our streets.

The whole community should feel comfortable and safe on our streets at all times. People should not feel worried about road danger or experience threats to their personal safety.

Reducing the noise impacts of motor traffic will directly benefit health, improve the ambience of street environments and encourage active travel and human interaction.

Source: Lucy Saunders

So right from the start – in the visioning process a new direction to mobility planning is being given – moving from motor vehicle dependency to promoting Non-Motorized-Transport (NMT), improved walkability – a direction that has huge implications to how the overall urban design of the city would need to change and adjust. The Strategy gives critical importance to the interface of mobility planning and overall urban growth. It states that ‘the role transport plays in facilitating growth presents an opportunity to shape London into a city that works well for everyone. This strategy aims to ensure that regeneration and new development schemes incorporate the Mayor’s principles of Good Growth, including local people in local decisions to provide the greatest benefit for everyone.

Transport has a role to play in delivering growth that satisfies the following principles:

The Transport Principles of Good Growth

- Good access to public transport
- High-density, mixed-use developments
- People choose to walk and cycle
- Car-free and car-lite places
- Inclusive, accessible design
- Carbon-free travel
- Efficient freight

Transport and Good Growth- Shaping the city and the type of growth

Working with Good Growth Principles, the Strategy identifies how transport can be used to help deliver homes and jobs in a way that will improve quality of life. Two separate focus areas are indicated:

- a) Shaping the type of growth in London, using transport services to create high-density, mixed-use places where people can walk and cycle to local amenities, and use public transport for longer trips
- b) Shaping the city, using transport to support and direct Good Growth, so the potential for new jobs and homes in under-developed parts of the city can be unlocked

According to the Strategy, ‘Good Growth means ensuring that people living in new housing in central, inner and outer London have options other than to drive to the shops, to school or to work. It means offering people across London – existing residents and new ones – the benefits of walking, cycling and public transport use that have been available in some parts of London for years. Applying the transport principles of Good Growth will mean that, as London grows, a greater proportion of people will live in locations that are well connected to employment and other opportunities by walking, cycling or using public transport’.

Documented as follows are selected sections of the Mayors Transport Strategy that discuss strategies for coupling urban mobility planning and good growth where they also find a relevance to Karachi:

1. Improving access to public transport

By mode of travel, the amount of time spent being physically active during an average journey is:

<1 minute

by public transport
8-15 minutes

on foot
17 minutes

by bicycle
22 minutes

Residential, commercial and other development should encourage walking, cycling and the use of public transport and minimize the use of the car. Fundamentally, this means that development should be suitably located where there is good access to public transport.

Developing in these locations will create high-density, mixed-use places where local amenities are within walking and cycling distance, and public transport options are available for longer trips. Using the Healthy Streets Approach to plan for this kind of active lifestyle will result in a more compact city, and also make the best use of scarce land. People living in more densely developed places are less likely to depend the car for their journeys, and more likely to use public transport, walking and

cycling to get about. Moreover, the better people's access to public transport, the more likely they are to use it on.

2. Creating high density, mixed use places

Land around stations provides opportunities to create high-density, mixed-use places – new communities that are well connected to local amenities and to jobs and locations further afield. This makes the most of past investment in public transport, and the benefits of future public transport investment can be enhanced by providing new homes (including affordable homes in a range of tenures) and jobs nearby. There are almost 600 rail and Tube stations in London, and opportunities for development around these stations should be explored, such as converting land use from low-density uses (retail parks, storage, parking, etc.) to high density, mixed-use development. Such change can act as a catalyst for the regeneration of town centers and neighborhoods, and play a role in revitalizing high streets.

Planning policy and decisions that seek to locate high-density housing within walking distance of stations mean residents will not only be well connected by rail or tube to employment opportunities, but will almost always be better connected to schools, hospitals and shops by public transport, walking or cycling.

High-density development further from stations can be supported through improved bus and cycle

links; such networks can dramatically increase the catchment the confidence that other forms of public transport will be available in future.

A major benefit of bus transit is that, by providing fast, reliable, sustainable bus connections from the outset, it can kick-start housing development ahead of investment in rail links to serve the area. This may require a different approach to planning less well-connected areas to provide investors with the confidence that other forms of public transport will be available in future.

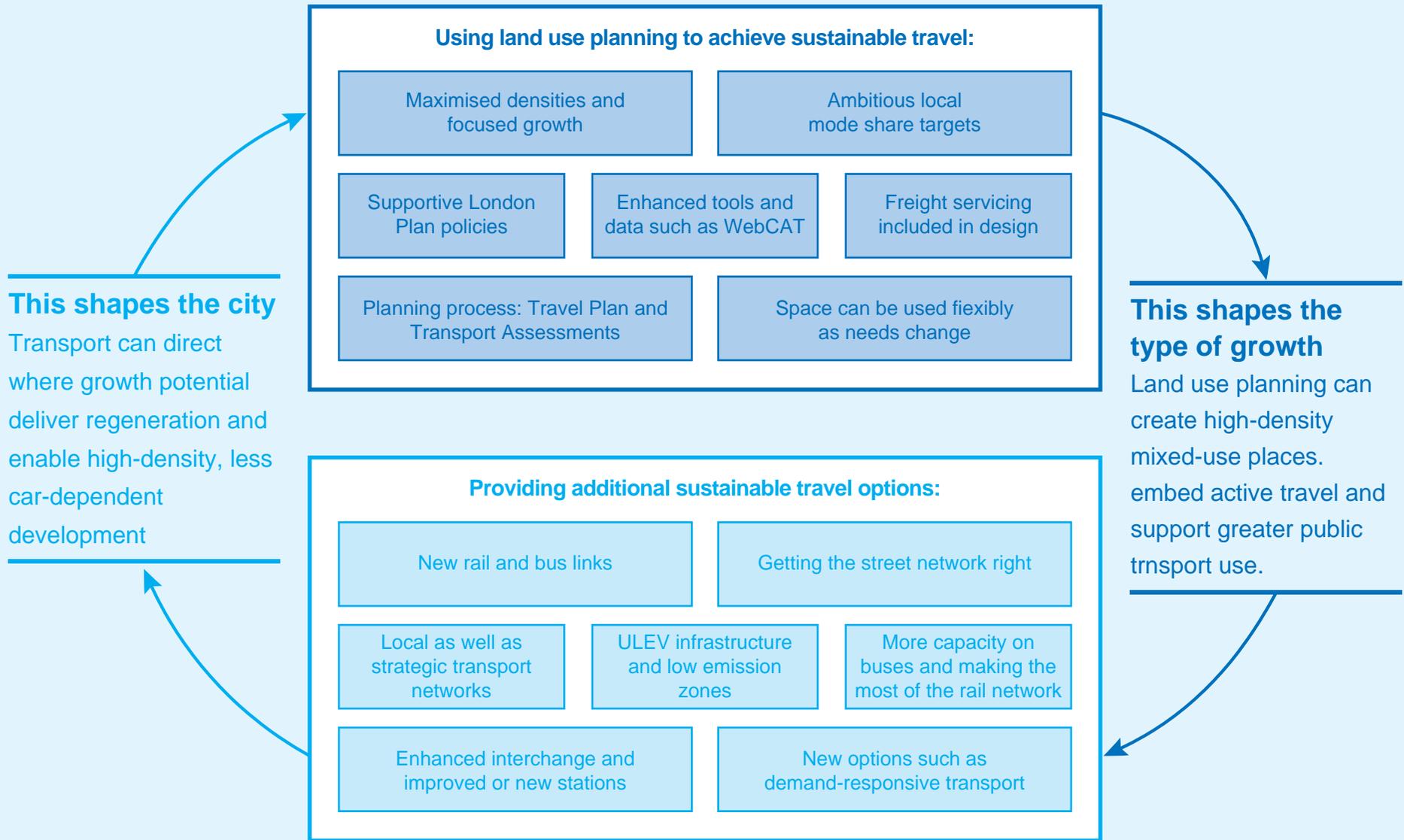
3. Unlocking growth potential through improved bus services

Improvements to London's bus network since 2000 have greatly improved connectivity for many parts of London and as a result have supported population growth across the city. Without this widespread uplift in access to public transport, housing densities would have been lower at many developments. Equally, if London is to deliver enough homes to meet demand, the intensification of existing suburban residential land will have to play a role in growth. The bus network, is therefore, one of the greatest enablers of development potential.

This is particularly true for locations away from the immediate catchment area of rail and Tube stations. New types of services, quality and capacity not just of the rail network, but other modes too, including buses.

DELIVERING GOOD GROWTH

Good land use planning enables the delivery of enhanced and increased public transport and active travel provision. Transport services and infrastructure in turn shape the city through enabling high-density development and liveable neighbourhoods where people want to live and work. This is the cycle of Good Growth.



Source: Mayors Transportation Strategy, 2018, Greater London Authority

CONCLUSION

For Karachi we do not have a transport strategy, and among other reasons, the core reason for this is that we do not have a centralized planning and physical development authority mandated with mobility planning in Karachi. As opposed to this critical policy and planning vacuum, London city is served by the Transport for London (TfL) authority working directly under the office of the Mayor of London with a clear mandate to steer the transport and mobility sector in the city. This strong mandate and capacity of the city of London gets reflected throughout the strategy building process and the guiding mission that gets rolled out in the London Transport Strategy.

Karachi can learn a lot from this document. Other than ensuring the existence of a centralized authority that can then bring out such a document for Karachi, is the building of a critical understanding of having a larger vision. A vision where mobility planning is not just about transporting people from point A to B but of strategically integrating mobility planning with the larger agenda of improved urban livability – of generating greater financial prosperity, improving the environment, cutting down on the carbon footprint, building greater social capital, inclusive growth and urban resilience.

What this Strategy document brings out well is that very simple and relatable messages can have extremely transformative impact. Example is the Healthy Streets Approach that brings the agenda for improved mobility into the streets and neighbourhoods of the citizens of the city. A

very important understanding that is totally missing in our context is that such processes are not carried out behind closed doors. The vision has to be based on consensus of all the city stakeholders and the plans and projects get embedded into a larger campaign for a more liveable city where strategies for communicating with all city stakeholders all throughout the process – from conceptualization to implementation – are embedded deeply within the planning process.

Then a critically important realization is that improved mobility, particularly if it is more dependent now on promoting non-motorized forms of transport cannot be possible without a complimentary process of restructuring the urban design of the city – again that important link between mobility and the wider urban land use planning. Then very instructive is how you structure the planning framework for delivering on sustainable urban mobility. This is reflected well in the Good Growth planning framework that has been shared in this Section – focusing on land use planning to achieve sustainable travel. How you work with built spaces in terms

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of urban design based interventions and in developing options of growth and development for less developed parcels of land. Pre-empting the implications of greater access and planning in advance rather than having to go for fire fighting interventions to tackle unplanned for and unanticipated development scenarios.

Such learnings however cannot be translated into informed action on ground in the city of Karachi in the present fragmented and dysfunctional governance construct. Projects implemented in the absence of a larger vision, without having in place the viable policy, institutional and regulatory foundations and framework will never achieve optimal benefits, rather may end up rendering the space for future interventions or reforms even more complicated. To have such a functional governance construct in place requires a serious show of political will and consensus building. Only then can we structure a holistic roadmap for large scale participatory processes for improved mobility

Such learnings however cannot be translated into informed action on ground in the city of Karachi in the present fragmented and dysfunctional governance construct. Projects implemented in the absence of a larger vision, without having in place the viable policy, institutional and regulatory foundations and framework will never achieve optimal benefits, rather may end up rendering the space for future interventions or reforms even more complicated. To have such a functional governance construct in place requires a serious show of political will and consensus building. Only then can we structure a holistic roadmap for large scale participatory processes for improved mobility.

Investment in the public transport system, particularly the rail network, is critical to enabling employment growth in central London (enabling housing densities akin to those associated with light rail). Bus transit services generally consist of enhanced vehicles and infrastructure, for example high capacity buses running on dedicated carriageways, but can also take the form of continuous bus priority. A major benefit of bus transit is that, by providing fast, reliable, sustainable bus connections from the outset, it can kick-start housing development ahead of investment in rail links to serve the area. This may require a different approach to planning less well-connected areas to provide investors with the confidence that other forms of public transport will be available in future.

4. Using transport to support and direct Good Growth

Creating high-density, mixed-use places will require transport investment to be fully aligned with the growth strategy set out in the London Plan. The draft London Plan shows that the city's growth potential is concentrated in the CAZ and within its town centers and Opportunity Areas; there will also be growth potential from the managed intensification of suburban areas. This means maximizing the capacity of the existing public transport network, extending the network to open up new areas for homes, optimizing land use around stations and radically improving conditions for walking and

cycling, supporting higher densities. Each of London's areas is unique and will require tailored transport to support growth.

Opportunity Areas

Planning for London's growth corridors and Opportunity Areas (designated through the London Plan as areas with particular development potential) should embed best practice in Good Growth. Strategic planning for Opportunity Areas should ensure that unnecessary journeys by car are discouraged, partly through restricted parking (including mandatory car-free/car-lite developments), limited access for vehicles by time of day/vehicle type, and very low speeds, with traffic calming measures. Providing shared access to a car club instead of private parking bays in a new development (or in an existing residential street) is just one example of how car dominance can be reduced and space freed up for other infrastructure to support active travel.

Developments within Opportunity Areas should be well designed, compact, safe, walk-able neighborhoods with good access to facilities and services from the outset. Live-work areas can reduce the need to travel, and efficient deliveries and servicing infrastructure should be integrated within the site to reduce vehicle movements.

Central Activities Zone

Investment in the public transport system, particularly the rail network, is critical to enabling employment growth in central London. In addition, the vitality of central London depends on a

good public realm and a healthy and clean environment, including measures to reduce traffic dominance, improve air quality and deliver far better provision for walking and cycling.

Suburban London

Many parts of suburban London also have the capacity to support new development, especially where there are good connections to central London and town centers. However, it is important that the development of the suburbs is achieved in a way that is not dependent on the car. To support this, the transport network needs to reach all parts of London, using the bus network in particular to better connect areas, but also creating a public realm that encourages greater levels of walking and cycling. To deliver new homes and jobs in suburban London, full use needs to be made of London's transport network. This means extending the public transport network in a selected number of places to support major development opportunities but crucially, it also means getting more out of the existing network, by upgrading the quality and capacity not just of the rail network, but other modes too, including buses.

SECTION 4

Visioning for Integrated Planning – Public Space Design and Improved Mobility

In the city of Karachi, it is highly unfortunate that the city's very first public mass transit plan that is actually finding a space on ground is devoid of the critical interfaces between mobility and urban planning. A number of vital requirements of sustainable urban mobility planning have been neglected. However, even at this late stage, benefits can be leveraged and interfaces created. For this Study, some innovative design ideas are being shared where conscious efforts have been made to dovetail the requirements of urban space design with improved mobility and the other way around.

The selected design ideas find a context in the Final Year thesis work of students of the Department of Architecture of the Indus Valley School of Art & Architecture (IVSAA), Karachi. The basic design focus is on urban public space design where embedded within the work are considerations where either the urban design interventions are coupled with improved mobility planning and design or the other way around.

Aamina Aamir's thesis locates its design intervention at the Hyderi Market Station of the Green Line Karachi Breeze BRT project to treat the station as a node for hosting public interaction and connection based on the design considerations of safety, accessibility and sustainability. Aamina thus identifies and creates a vision around a critical planning gap in the Karachi Breeze BRT project – finding interfaces between mobility and urban space design.

Rida Ilyas's thesis also blends public space design with improved non-motorized mobility. Rida picks the space of Benazir Bhutto Park and designs it as a comfortable, accessible and multi-use public space. In doing so, she highlights a very important shortcoming in our public space design (or lack of design!) and that is issues of accessibility and comfort. Example how accessible such spaces are for people of special needs? Bringing out issues of universal access. Then also how elements of universal access and design can lead to making such spaces more inclusive rather than exclusive thus adding to the social capital in the city.

Aaminah Soomro's thesis pick on the theme of urban void spaces. Spaces that if not properly managed can lead to disrupting the urban fabric. The site chosen being a space along the Lyari Expressway where the focus on design is both on creating a vibrant public space and on catalyzing neighborhood rejuvenation through introducing multiple public spaces, public thoroughfares and even a vocational training center. Thus spaces along transit ways that often become spaces of negative actions become spaces for area rejuvenation.

Samrah Aamir's thesis aims to regenerate spaces underneath "flyovers that are dead. It aims to allow every space to have multiple interfaces by rerouting traffic and pedestrianizing spaces that will improve the connections among the commercial and residential areas, resulting in recreational activities, economic development, positive changes in crime levels and accidents, improving accessibility by developing system of way-finding through axis and nodes, introducing user-target functions that improve economy and sense of belonging. Samrah in this way picks a space typology – Flyovers - that is increasing in numbers in Karachi and offers a vision for productive, socially vibrant land use optimization.

Mohaddesse Fatima Khan's thesis looks at an alternate way of dealing with neighborhoods where public spaces are usually affected from the damaging land use and functional alterations, such as built spaces rising within urban open spaces, and private and commercial appropriation of public property. She uses an inclusive design methodology to ensure that the ethos of the public space remains intact even if it is to house built structures within it due to scarcity of land in these densely populated neighborhoods. Her context specific design intervention also brings out strongly the public space nature by facilitating greater footfall that gets managed properly, and provides opportunities for social interaction and recreation to people from all age groups and gender types.

Malahat Ali's thesis looks at restoring and reactivating a built heritage space in the old city/downtown area of Karachi – Daudpota Building in Saddar. She then also designs it as a public space with her design also looking into facilitating the footfall in the space – the visitors and issues of parking and circulation. Malahat again has picked on an aspect of urban growth that has a huge potential of making the city more pedestrian friendly by creating cultural and heritage districts, tourist walking trails with the added benefits of improved environment and enhanced economic vitality. Unless we find viable adaptive reuse options for our rich built heritage spaces, we will lose them very soon. So an interface created between mobility and urban design/planning can help us protect and rejuvenate our heritage spaces.

MERGING MOBILITY PLANNING WITH URBAN SPACE PLANNING AND DESIGN

Some design ideas



GREENLINE TRANSIT NODE AS AN IMAGEABLE PUBLIC SPACE

Project by: Aamina Aamir
 Project Location: Hyderi, North Nazimabad, Karachi.

Project Theme:

This thesis explores the concept of Imageability and challenges the negative beliefs, identity and emotions associated with transitional nodes in Karachi. It looks at accessible, sustainable, safe and experientially rich urban design to create an inclusive and attractive environment for all its users. The aim is to attract non-transit users and create an interaction between them and transit users thus providing a healthy environment and mindset for the 42% of our local population that use public transportation on a daily basis. A developed node such as this attracting a vast user group would then promote the development of several facilities within walkable distance triggering what is known as transit oriented development, setting a precedent for future transit stations in Karachi.

Use of multiple bridges and ramps to make the entire facility handicap friendly providing the same experience for all users.

ACCESSIBILITY



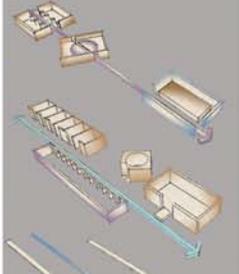
Use of paven tiles to harness kinetic energy from the footsteps of the pedestrian heavy facility towards a smart city growth.

SUSTAINABILITY



Using high plantations to behave as visual and sound buffers between the pedestrian and the vehicles to provide a sense of safety and relaxation.

SAFETY



CONNECTION TO WATER

CONNECTION TO CITY

ACCESSIBLE

REIMAGINING WATER FRONTS AS URBAN PUBLIC SPACES

Project by: Rida Ilyas

Project Location: Benazir Bhutto Park, Karachi.

Project Theme:

This project aims to use placemaking as a tool to evolve an existing, non-livable public space of the city into a livable space through the exploration of the three fundamental layers of spaces; primary, necessary, optional and social. To create a optimised existence of different functions through spatial relationships of these three layers and avoid over prominence of one in a mix- used development. It aims for an understanding of how urban public spaces can be made into livable spaces to create communal integrity, character and generate a sense of place in the city.





Steps, bridges and safe pedestrian paths were drawn from every corner of the site to allow pedestrians and residents from the area to safely access the site.

SITE-ACCESSIBILITY



Constant human activity is created in the form of pedestrian passerby's, commuters and residents in the space allowing continuation of urban activity.

CONTINUITY



The site after intervention would serve as a community enhancement element in terms of vocational training as well as spatial language allowing it to be an effective space in the locality.

ENHANCEMENT



Project Theme:

Ruptures in the surfaces are abundant in any city, where growth, restructuring and decline produce urban voids: spaces which disrupt the urban fabric of cities. De Sola-Morales uses the term terrain vague to identify the nature of these residual spaces within our context, expelling the relationship between the absence of use, mobility and activity, and a sense of freedom and expectancy. These are spaces of pause but also of promise, possibility and expectation. This thesis explores the potential of infrastructural voids as means of bringing back urban continuity through an integrated approach which looks into architecture, landscape and infrastructure holistically, rather than considering all three entities in isolation. The site chosen at the LYARI expressway deals with an existing info void, large in scale where the programs deals with multiple public spaces, a public thoroughfare along with a vocational training centre to aid the neighbourhood.

LEFTOVER URBAN SPACES AS URBAN PUBLIC SPACES

Project by: Aminah Soomro
Project Location: Lyari Expressway, Karachi.



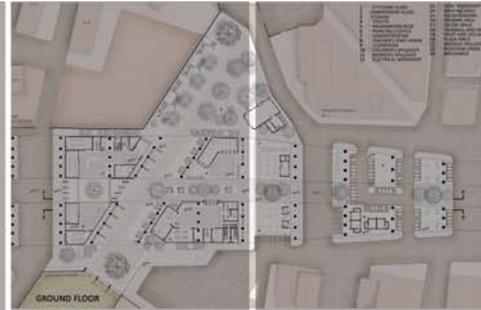
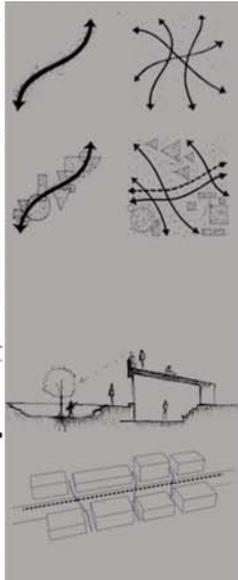


ENGAGING SPACES

COMMUNITY HEART

SKELETAL STRUCTURE

SAFETY/COMFORT



Project Theme:

Transforming urban pockets into meaningful community spaces
 Mushrooming infrastructural development has surfaced a number of urban pockets or leftover urban spaces in Karachi. Lacking ownership, such spaces are often encroached, misused and vandalized. The thesis aims to re-think these spaces as dynamic community spaces without eradicating the diverse social and economic activities that are already functioning within them. It aims to better organize these activities, while providing opportunities for new activities that can benefit life in the surroundings. The setting is the portion of space underneath the NIPA flyover. Jan Gehl's theory of public space becomes a basis for transforming this underutilized and misused space into a meaningful community space.

LEFTOVER URBAN SPACES AS URBAN PUBLIC SPACES

Project by: Samrah Aamir
 Project Location: Nipa Bridge, Gulshan, Karachi.



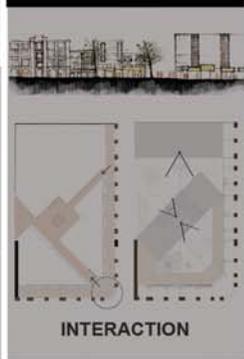
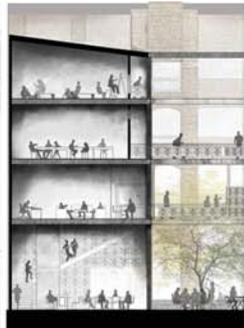
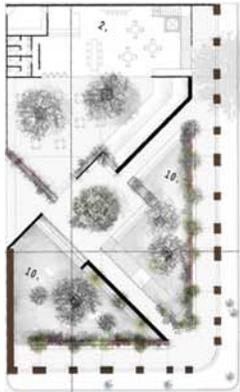


URBAN PUBLIC SPACES IN DENSE URBAN FABRICS
 Project by: Mohaddesse Fatima Khan
 Project Location: Lyari, Karachi.

Project Theme:

Due to scarcity of land in densely populated areas of Karachi, urban open spaces for public use such as parks and playgrounds are increasingly becoming home to built structures to accommodate the various need based functions ranging from institutional to commercial and catering to diverse set of users. At the same time, however they are defeating the very purpose of the public spaces they inhabit, which is to serve areas for communal sociability and recreation. The thesis aims to address this spatial paradox in one of the most densely populated areas of the city i.e Lyari. The intent is not to erase these territories from the public realm but to rethink their architectural characteristics in a way that they do not erase the social value of public spaces.





INTERACTION

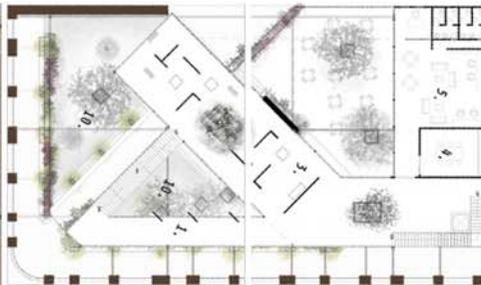


To use the existing facade and structure of the heritage building to create an entirely new experience allowing the heritage to stand unharmed yet utilised.

RE-USE



CELEBRATION



RE-ENVISIONING HERITAGE BUILDINGS AS A PUBLIC SPACE

Project by: Malahat Ali

Project Location: Daudpota building, Saddar, Karachi.

Project Theme:

'Every citizen has had long associations with some part of the city and his image soaked in memories and meanings.'

-Kevin Lynch

Built environment is reflective of our socio-cultural values and thus architectural heritage becomes one of the tangible expressions of our cultural heritage; providing a sense of identity and continuity. Consequently, either the social values associated with the structures are disregarded in the light of rapid urbanization and commercialization happening in the city or in a stark contrast they are preserved as frozen time capsules, resisting change. In addressing these two extremes, this thesis explores the theory of palimpsest as a strategy of intermediacy in preserving the city's past, which views the notion of time as juxtaposition of layers and embraces the change with time, while respecting and continuing its social and cultural integrity.

Climate Efficient Urban Mobility and Smart City Growth - Project Brief

The project aims to initiate a narrative on sustainable urban mobility and interface with overall urban planning in Karachi city. The project has focused on influencing decision making for appropriate action. The core emphasis now is on promoting sustainable modes of mobility and Shehri-CBE has recently launched an **'Accessible Streets & Public Spaces'** campaign. This campaign focuses on highlighting mobility challenges faced by pedestrians and people with special needs. A **strategic roadmap** has been developed and is being followed by actions on ground, on how we can move towards having 'accessible' streets and public spaces in Karachi where our streets/sidewalks, public spaces can be designed to make them accessible and walkable for pedestrians and people with special needs.

Shehri-Citizens for a Better Environment was formed in 1988 (based in Karachi City), as a non-political, non-commercial, non-governmental organization (under the Societies Registration Act XXI of 1860) by a group of concerned citizens to provide the citizens with a platform to effectively voice their concerns in determining their future and taking action in arresting the deterioration in their living environment and proper reform with a view to improve the same. Shehri-CBE has succeeded in bringing together on one platform, government officials, academics, citizen activists and the media to discuss issues and seek solutions to make Karachi a sustainable, tolerant, healthy and prosperous city. As Shehri-CBE has progressed in its work, it has been able to carve out a niche and establish a unique name and expertise for itself specifically in issues related with urban land management.



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