

Contents

1. Editorial
2. Cities mobility and accessibility
3. The contribution of informal transport to urban mobility
5. Sustainable mobility strategies for developing cities
7. Urban mobility in Morocco
8. The Bangalore masterplan, an attempt to perform strategic planning that integrates the principles of sustainable development
10. Reform of the transport sector in Gauteng Province in South Africa
12. News on cooperation
- Publications



Competition between small taxi and buses, Casablanca, Morocco - Patricia Varnaison-Revolle.

Mobility and urban development

The 2007 Conference of our professional association “AdP Villes en Développement” was coordinated and moderated by Xavier Crépin, Executive Manager of ISTED and an AdP member. This bulletin brings together the papers given at the conference, the full proceedings of which will appear on our website: www.adp.asso.fr.

The relationship between mobility and urban development is a complex one. Francis Beaucire, a professor at the ENPC, shows that the relationship between the two involves accessibility. In addition, he mentions the three travel speeds which combine with each other: that of dense and compact pedestrian traffic (3 km/h), that of trams ((10-12 km/h) which provides coverage of the urban space and that of the car (20-25 km/h), which permits “dedensification”. Each of these types of mobility has generated spatial forms which take advantage of the travel speeds in order to “maximize” social interaction.

Urban governance aims to generalize accessibility. Mobility is therefore at the heart of urban development, particularly in developing countries where, as Xavier Godard from INRETS reminds us, walking is by far the dominant mode. Personal transport modes (private car, motorized two-wheelers) come next, followed by public transport within which

“informal” transport plays an important role, particularly in Africa (minibuses, shared taxis, motorcycle taxis). This sector will definitely continue to play a role in the urbanization of the outskirts of cities for several decades. The problem for large public transport companies is to design and construct structural routes which are compatible with multicentric patterns of urbanization.

The Ministry of the Environment and Sustainable Development and Planning has asked Systra to produce a guide that proposes a strategy for sustainable transport policies in developing countries. Hubert Metge, from Systra, comments on the results of a comparative study of fifteen cities that was conducted for this guide. The consultant, Olivier Toutain, then describes the Bangalore Masterplan, which was an attempt to base strategic planning on a multimodal system including the metro, rail services and exclusive busways. After this, Patricia Varnaison-Revolle, from the CERTU, considers the case of Moroccan cities, where improving urban transport is a priority. The situation in South Africa has been described by Yves Mathieu, from Missions Publiques, based on his experience of 13 metropolises in the Gauteng province. ■

Claude Jamati

President of AdP Villes en Développement

Cities, mobility and accessibility

Francis Beaucire, Professor at the ENPC
francis.beaucire@wanadoo.fr

Cities are the place of high levels of interaction, achieved through mobility, whose configuration is dependent on accessibility. Today, in the framework of sustainable development, we need to find ways of dealing with the fact that high mobility levels have to cope with energy costs, in relation with changes in public action with regard to the mobility governance.

Accessibility

The concept of accessibility is far from abstract: it refers to the effort that is required to reach a set of resources from a given location – it represents a potential. Resources consist of jobs, shops, health, educational, cultural and sporting facilities, sites and landscapes and also, quite simply, people (family and friends or random encounters).

This potential, which results from the spatial distribution of resources, is one of the characteristics of locations which those who live in them or frequent them may, or may not, take advantage of, and which may add to their value in a variety of ways (a high level of accessibility increases the value of a location, i.e. cost of land; it also represents the certainty of being able to take advantage of an equivalent resource if one is lost).

Accessibility cannot be reduced to this geographical relationship between a location and the position of resources. The location-resource link requires an investment on the part of those who need or desire the resources in question. On one hand, there is the need or desire to access the resource

which motivates the trip (this brings in geographical mobility, that is to say a set of trips that are justified by a resource use programme), and on the other hand, there is the ability or willingness to make the investment required to obtain this access.

Investment is made up of factors which vary: access time (which can be monetized), monetary cost, physical and cognitive load. It is necessary for the need or desire to be greater than the level of investment required in order to bring about the trip which makes the resource use programme possible.

We can accept that, generally, a high level of accessibility encourages the movement of individuals and goods and, at a collective level, results in a high level of interaction between social, economic (trade) or cultural (living together) in nature. Cities are the location of high levels of interaction, which is brought about by mobility, the configuration of which is dependent on accessibility.

Speed and form

We are well aware of the three travel speeds which apply to the majority of the population and which

ultimately result from three systems of travel that appeared successively and which today are superimposed and even combined. Each of these systems has generated the spatial forms that exploit the speed in question in order to maximize social interaction. For centuries, with a speed of 3 km/h, the pedestrian city was dense and compact (density being limited by the fact that construction techniques were unable to produce high buildings and by the agricultural stores in closed urban environments). Prior to modern times, demographic growth was low, and when it occurred, new cities were built.

The second speed, that of trains and trams, increased the generalized speed (as a result of dense networks and social pricing) to 10 or 12 km/h, but only within the area immediately adjacent to the lines. The city spread out along the lines, because the massive rural exodus brought a proportion of the rural population into the cities (industrial and tertiary sector jobs) in a context of rapid demographic growth. Put another way, a transport system provided access to the suburbs at the same rate (or almost the same rate) as the population increased (the density within the

existing urban space did not increase sufficiently to absorb the new population and maintain the urbanized area at the same size).

In the long term, this equivalence between the growth of the population and the networks maintained the level of accessibility to resources. It is the increase in speed which guaranteed this, and which led to a new type of proximity which was distinct from that of spatial closeness, namely “temporal proximity”.

The second age of speed, that of the motorcar, is equally well understood. Here, a third level of speed, between 20 and 25 km/h, became general. In a very different demographic context, with no growth or almost none, higher speed permitted dedensification of the urbanized area and, because the population was not large enough to fill all the space, its spatial fragmentation, without any reduction in the accessibility of resources. This dedensification marked the fulfilment of two social aspirations, one economic (moving outside the central zone of property pressure in order to access land or more land), the other motivated by pleasure (leaving the overcrowded and polluted city).

What remained fairly constant and which divided the urban population into the three (those living in the centre, the inner suburbs and the outer suburbs), reducing pressure on land without compromising access to resources, which were

themselves redistributed in order to maintain or improve this sort of “reciprocal adjustment of functions” which is the dynamic of the urban space... was accessibility.

We must not forget that if trip duration was the factor that limited the expansion of urbanized areas during the last century, it was because the other factors that enter into the general cost did not make their presence felt, in particular energy.

In other, still more general, terms (and terms which are even more open to criticism), the first high speed system of mass transport, in the mid-nineteenth century, was in phase with the urban demographic growth which accompanied the first massive change in the working population (shift from the primary to the secondary sector). Overall, the economic efficiency of the urban social interaction was not reduced, rather increased. The second mass transport

system, which was twice as fast, which arrived in the mid-twentieth century, was in phase with energy which was in abundant supply and less and less expensive in terms of equivalent hours of work.

In both cases, trip distances increased, and the morphology of the “space within reach” depended on transport systems, one collective and the other private.

But today we need to find ways of dealing with the fact that high mobility levels (high speeds, long distances, maintained accessibility, contained property price pressure for 25 to 50 % of the urban population) have to cope with energy costs. The issue of accessibility and the economic and social efficiency of the urban social interaction is therefore once again on the agenda. We do not even need the environmental question in order to bring the problem to a head: the

price of energy is once again becoming a limiting factor.

The governance of urban mobility

The economic efficiency and the cultural effectiveness of the urban social interaction depended a great deal on the reduction of social inequalities through the use of the transport systems which provided the best accessibility. The process with which the majority (never all) of the urban population, workers and employers first of all, was able to take advantage of the opportunities provided by the increase in the level of accessibility occurred over one generation. But the rapidity of this process was the result not only of economic growth but also of the intervention of the public authorities, which financed infrastructure and supported social pricing. The idea of a generalized speed for (almost) everybody was created and implemented by the public authorities.

In a way, public measures produced generalized accessibility (almost everybody had access to any place), leaving the economic actors, the households and firms, to take up the opportunities – which they did.

The question of maintaining a generalized level of travel (in which inequalities with regard to the ability to move will remain low or become smaller) has thus been raised as a result of changes in public action in the governance of travel and its fragmentation (less public decision-making, less State intervention, more small decisions in the hands of local authorities). In contrast with what was the long-term tendency in the last half century, it is also necessary to consider accessibility in terms of a return to or an increase in spatial discrimination (as well as the outcome of multiple, fragmented, contradictory public actions). ■

The contribution of informal transport to urban mobility

Xavier Godard, researcher at INRETS

xavier.godard@inrets.fr

Mobility figures vary depending on the urban situations and their dynamic. Levels of motorized mobility tend to be low in most developing cities in comparison with the most developed cities. Walking, together with the impact of poverty which excludes part of the population from daily public transport use, corrects this tendency but forces urban dwellers to make only short trips. This is acceptable if basic facilities and services are located in residential districts, which is no doubt the dream of planners in order to achieve sustainable mobility. But this pattern limits the opportunities of access to the city, whether for jobs, specialized services or the network of social relationships: this situation does not seem to comply with all the dimensions of sustainability.

The equilibria between transport modes are moving in favour of private modes, the private car and, in some countries, motorized two-wheelers, to the detriment of public transport, which can be said to be in crisis in spite of the incantations heard in many forums.

The major contribution of informal transport to public transport is absolutely

obvious in many cities on many continents, but it is in Sub-Saharan Africa that the phenomenon is the most massive as this sector is responsible for most motorized travel. It is given many different names: informal, popular, transitional, but we prefer the term informal. This activity is conducted on a small scale (with a large number of small, independent, transport undertakings) according to certain rules and takes place within a minimal collective organization, frequently managed by unions of drivers. Depending on the case, several types of vehicles may be used: minibuses everywhere, but also shared taxis (the *woros woros* of Abidjan) or motorcycle taxis (the *zemidjans* of Cotonou).

Informal transport has played a role in the urbanization of the outskirts of cities and it may continue to do so in the coming decades. Often, this type of transport originally provided rural or interurban services entering the urban

area from the outside. The institutional system of the large mass public transit companies was not able to satisfy all the demand, or respond quickly enough to the rapid urban change which created the major conurbations.

These observations about the inadequacy of institutional transport based on large firms and the dynamic of informal transport must lead to the search for complementarities between the many forms of transport that are available, either firms or independent operators, giving priority to each where it is effective.

The task is therefore to design and construct primary mass transit routes which fit in with polycentric urbanization, and guide informal transport towards more local services or feeder services for these main routes: this is a type of organization which has been proposed for Nairobi (BRT and *matatus*) by a joint American and Kenyan team.

As informal transport tends to move to those routes where

demand is highest, the public authorities are compelled to acquire the ability to regulate them in a way that favours this complementary role. Although necessary, repressive rules are not enough to ensure such regulation which should also be based on the competitiveness of mass transport on the identified routes: speeds, frequencies, quality of service... and affordable fares.

The need for an organizing authority is apparent from these observations, but is it obvious that the French model as it stands could not provide the answer as it ignores the potential of informal transport. Transport authorities have been set up in Dakar (the CETUD in 1997), in Abidjan (the AGETU in 2000), in Lagos (the LAMATA in 2002), each time taking a different form. Projects are in gestation in the Maghreb, but they are difficult to bring to fruition.

The most successful experiment is in Dakar. This has

the following positive aspects:

- An organization in which firms (buses, urban trains) coexist with the informal sector minibuses (rapid coaches) and taxis;
- The organization of the minibus sector (allocating routes to Economic Interest Groupings, introduction of ticketing..., as a result of the replacement of the fleet financed by the World Bank: delivery of 505 new Tata vehicles in 2005-2007, after many years of negotiations. But the reform should be extended and strengthened.

But it also has some institutional difficulties:

- The CETUD lacks the strength to implement its policy: it does not have the power to allocate licences to the operators, unlike the AGETU in Abidjan, but this is perhaps wiser when one is aware of the difficulties facing the AGETU which is contested by the municipalities.
- The seats of decision-making are disconnected between the CETUD and

The modal split of public transport, 1998 (%)

	Institutional transport			Informal transport				Total
	Bus	Rail	Total	Minibus	Shared taxi	Other	Total	
Africa								
Algiers 2004	3	3	6	77	4	13	94	100
Cairo	39	9	48	52	N	N	52	100
Capetown	10	64	74	26	nk	N	26	100
Casablanca	72	—	72	28	nk	N	28	100
Tunis 2000	72	28	100	N	N	N	N	100
Latin America								
Mexico City	13	14	27	48	25	N	73	100
Sao Paulo	77	23	100	nk	N	N	—	100
Asia								
Bangkok	94	6	100	—	—	—	nk	100
Delhi 2000	92	N	92	N	N	8	8	100
HCMC	55	45	100	N	N	nk	nk	100
Jakarta	64	2	66	34	N	nk	34	100
Manila	21	3	24	73	3	N	76	100
Teheran	44	-	44	27	29	N	56	100

N: none or negligible - nk : not known

Source : Godard 2005, based on UITP data

The relative shares of the different types of public transport in Sub-Saharan Africa, 2000 (%)

	Institutional transport	Informal transport					Total Public transport
		Motorcycle taxi	Individual taxi	Shared taxi	Minibus	Total informal	
Abidjan	32	—	18	21	29	68	100
Accra	13	—	-	27	60	87	100
Adis Ababa	27	—	1	—	72	73	100
Conakry	3	—	—	52	45	97	100
Cotonou	2	90	2	-	6	98	100
Dakar	5	—	10	15	70	95	100
Dar es Salam	3	—	3	nk	nk	97	100
Douala	2	30	—	60	8	98	100
Harare	5	-	—	nk	nk	95	100
Lomé	—	55	—	35	10	100	100
Nairobi	30	—	—	—	70	70	100
Ouagadougou	25	—	—	75	—	75	100

N: none or negligible
nk : not known

Source : Godard 2005, based on UITP data

the Republic President: the creation of Dakar Dem Dik based on informal transport in the first months, the plan to move the railway station, the project for a tramway or tram-train between Dakar and Thies...

- The proposal of a busway (BRT) initiated by the

ITDP, is still not properly integrated within the planning process.

Informal transport is a reality, planners must integrate it within strategic planning which is more reactive and that links transport, the location of activities, urban planning and, of course, road construction (an essen-

tial component which determines transport supply). Particular attention must then be given to the interchange stations that make intermodality possible. ■

References:

Godard X (under the direction) of (2002)

Les transports et la ville au sud du Sahara, Le temps de la débrouille et du désordre inventif, Karthala-Inrets Godard X. (2005)

Kyoto et la double trappe dans laquelle tombe le transport collectif institutionnel, RTS, ed. Lavoisier, pp. 225-242.

Sustainable mobility strategies for developing cities

Hubert Metgé, Head of the Transport Planning Department, SYSTRA, and Aurélie Jehanno, study leader

hmetge@systra.com - ajehanno@systra.com

SYSTRA, which this year celebrates its fiftieth birthday, has since its foundation been developing the expertise it offers central governments and local authorities in developing countries. It is for this reason that the Directorate for International Economic Affairs at the MEDAD French Ministry for Ecology and sustainable planning and development asked the Transport Planning Department to produce a guide outlining a strategy for putting in place sustainable travel policies in developing cities¹. The publication, which is planned for the end of 2007, targets the executives in these cities who are responsible for urban and transport policies, as well as those working for donor organizations and in the area of decentralized cooperation.

Following comparative study of fifteen cities with contrasting profiles², several priority areas for intervention were identified.

These are:

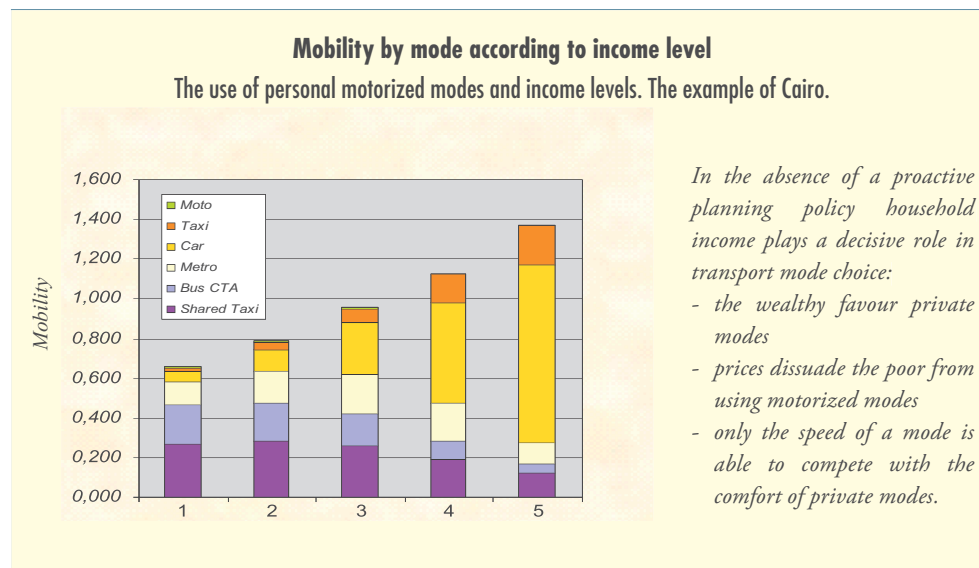
1. Putting in place a stable institutional framework (developing transport authorities and clarifying responsibilities).
2. Providing for the long-term funding of transport infrastructure and services.

3. Integrating urban and transport policies in order to orient and manage urban development in a way that is consistent with travel issues.
4. Developing the road network and improving its maintenance with a view to controlling the sharing of road space.
5. Limiting the anticipated explosion in personal transport modes.
6. Launching a process of developing an effective network of exclu-

sive right of way public transport which is dense, hierarchical and capable of evolving towards heavy modes while at the same time operating with informal modes in a complementary way.

The first two points (1 and 2) require a **genuine decentralization of power, responsibilities (when they exist) and resources**. Consequently, although at world level a process of decentralization has been under way for twenty years in the political, administrative or fiscal spheres, this is frequently insufficient as the transfer of responsibility from the State to local authorities is not always accompanied by the corresponding resources. This raises the vital issue of own resources, starting with fare revenue, in order to cover operating costs as much as possible, or the development of resources from property (value capture) in order to fund transport infrastructure.

The integration of urban policies (3) (in particular land use) and transport is essential. This must be done as early as possible in order to **use transport infrastructures to guide urban development and encourage urban densification around the routes**. In addition, anticipation and reserving rights of way as early as possible reduce the costs of constructing some infrastructure making the burden bearable for local authorities with limited financial capacity is limited (e.g. preserving some rail rights of way in Cairo for heavy urban modes, starting by creating an exclusive right of way bus route which could then be converted into a tram route...). This point militates in favour of better coordination between the



work of urban planning and transport departments. Long considered the domain solely of personal motorized modes, roads (4) should now be perceived as the preferred setting for public transport and environmentally-friendly modes. **All road investment should therefore make allowances for modes that provide an alternative to the car (PT, environmentally-friendly modes). Moreover, the construction of the road network is the first part of a policy for eliminating shanty towns, or preventing their development.** In fact, in the second stage it is from this road network that other urban services such as water supply, drainage, public transport or the management of solid waste can be developed.

In the major developing cities, the development of public transport networks is the dominant part of strategies to achieve sustainable transport (5 and 6) and access to essential opportunities for all (jobs, health, education, ...). It should involve the creation of a hierarchical and effective network. In view of the heritage of these cities, the first stage will be the

organization of the informal sector, the creation of a bus network (whatever system is selected for its operation), the creation of mass transport routes, the consolidation of this network... The keywords of this development are: intermodality, fare integration, network density and complementarity. The network should be designed for a thirty-year horizon in order to achieve a dense network rapidly.

The development of public transport should be combined with attempts to limit the use of private motorized modes by acting on pricing (e.g. urban tolls, parking) and demand, by attempting to maintain present-day practices and rationalize them (car-sharing...), while modifying traffic plans in order to favour environmentally-friendly modes.

Faced with the high speed of urbanization in the world and the associated environmental challenges, radical changes are expected in our urban system of references. These include the design and purpose of the road network which must once again find its role in guiding urban development and providing

shared infrastructure. The promotion of a strategy of sustainable transport is leading to the re-emergence of a concept of the general interest, with a preference for collective or non-polluting modes which use up less space over private motorized modes. ■

1. The target cities have populations of more than one million. At this level, and even more with a population of 2 million, there is a tangible threshold effect as regards transport planning, and urban management in general. See Gilles Antier, *Les stratégies des grandes métropoles*, Armand Colin, 2005.
2. The studied cities include: Bangkok, Bogota, Cairo, Caracas, Casablanca, Conakry, Curitiba, Dakar, Dubai, Hanoi, Manila, Moscow, New Delhi, Rio de Janeiro, Seoul, Teheran, Zagreb.

Urban mobility in Morocco

Patricia Varnaison - Revolle, CERTU, Morocco
Patricia.Varnaison-Revolle@equipement.gouv.fr

Urban mobility demand in Moroccan cities is increasing even though in Casablanca half of all trips are still made on foot. However, urban public transport is in crisis and informal transport is developing alongside it. In response to this state of affairs, the Moroccan government is in the process of defining an urban transport strategy, but major obstacles still remain.

As in many developing countries, urban travel is increasing considerably in Moroccan cities:

- The urban population is increasing, by between 16% and 35% between 1994 and 2004 depending on the city;
- Personal travel has almost doubled in 30 years in Casablanca. In particular, women are travelling more;
- The size of households is falling, the need for housing is increasing, the city is expanding;
- Slum eradication programmes are forcing the inhabitants of the medinas to move to the suburbs.
- The cities are expanding, so the length of trips increases... this is the spiral of the increase in the number of trips and their length which is difficult to reconcile with sustainable development.

Walking is the dominant transport mode

- More than half the trips made in Casablanca are on foot.
- Two-wheelers decreased greatly between 1975 and 2004, as did public transport.
- However, a new market has developed, that of informal transport using large and small taxis. In

2004, informal transport carried as many people as the buses.

- Although there are still few private cars, the occupation of public space by cars is increasing (private cars + taxis).

Moroccan cities are beginning to experience traffic problems

Apart from Casablanca where traffic problems are greater, the difficulties are pretty much restricted to peak periods and only involve certain nodes in the major cities. However, the road network suffers from a lack of hierarchization, a shortage of signalized intersections which considerably increases congestion, and user behaviour problems (compliance with priority rules, consideration for pedestrians and two-wheelers).

But Morocco still has only a small number of cars

Car ownership rates are still low, particularly outside Casablanca: 27 vehicles per 1000 inhabitants in Tangiers, 120 in Casablanca. The margins of increase are very large: car ownership in South Korea rose from 25 vehicles per 1000 inhabitants in 1985 to 306 vehicles per 1000 inhabitants in 2000. Over the same period, the rate in Turkey increased from 27 to 93 and in Bra-

zil from 86 to 120 (source CCFA).

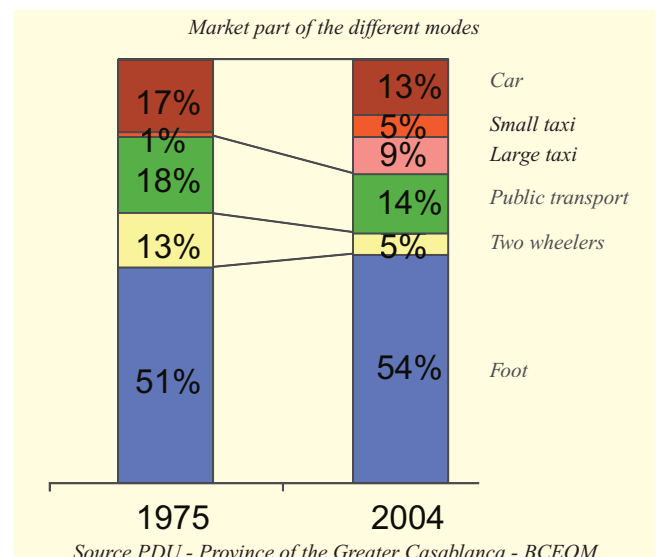
Urban public transport is in crisis

In the early 1960s, the large cities in Morocco set up departments to operate public transport networks. From 1985, the public authorities wished to open up these networks to the private sector. The initial idea was to provide a higher quality private service, in order to attract the middle classes, with a two-level network. The private concessionaries were thus expected to carry only seated passengers. The public transport department continued to provide mass transport, with many standing passengers, schoolchildren and students with price reductions of approximately

75%. In practice, this system worked well to begin with and encouraged groups who did not previously use the bus to do so. But quite quickly the concessionaries started to take standing passengers and then reduced the prices, and then only provided services on profitable routes, leaving the other routes and social pricing to the transport departments. During the same period, the public authorities made minimum investments: no monitoring of the concessionaries, concessionaries without a contract, leading to a marked deterioration in the service and finally the abolishment of the transport authorities (Casablanca in 2004, Rabat at the present time...).

Informal transport has developed alongside

The failure of the public transport system encouraged the emergence of informal transport: small and large taxis account for 14% of the trips made in Casablanca. However,



the large taxis are the only ones to serve peripheral and newly urbanized areas.

Initiatives have been launched but four main obstacles remain

The institutional organization is unsatisfactory

The Urban Travel Act makes municipalities responsible for transport, but responsibilities overlap considerably in the field. Today, there is no conurbation authority to organize and manage public transport, or to plan urban travel in the medium and long terms.

The need to consider management and operation before investment

The natural tendency is to plan major projects such as

metros, trams and radial roads. However, margins for improvement with regard to bus and intersection operation are very great at a lower cost.

The technical capacities of departments are poor

The lack of technical expertise in the area of urban transport is evident at all levels (municipalities, central government, consultants...). There is little exchange of experience, it is rare to capitalize on studies, and knowledge is not disseminated. The transport profession lacks prestige.

The funding of operation is forgotten

Municipal funding is principally concentrated on the

roads. There is very little public funding for bus operation, in spite of public service obligations, particularly with regard to compulsory fares and routes. Central government does not yet fund the projects. In response to this state of affairs, the Moroccan government is in the process of defining an urban travel strategy.

An organization, an action plan and funding are being devised and are due to be announced at the seminar on urban travel in the Mediterranean to be held in January 2008 in Skhirat. ■

Sources:

Assistance given by the World Bank to the Moroccan

government to help it to develop a comprehensive policy for travel in Moroccan cities (2006-2007).

The French PAD Morocco programme decentralized cooperation between Rabat and Greater Lyon. "Support for the long-term strengthening of the City of Rabat's project management capacities in the area of travel and urban public transport" (June 2007-end 2009).

The Bangalore Masterplan, an attempt to perform strategic planning that integrates the principles of sustainable development

Olivier TOUTAIN, Consultant
otoutain@yahoo.fr

Bangalore is one of India's fastest growing cities and its computer services capital. The economic boom has led to unprecedented urban and social transformations.

In less than ten years, this change has had a spectacular impact on lifestyles, consumption, the living environment, transport and customary points of reference, whose current models are closer to the American dream than the asceticism of Ghandi.

The urban boom has also had a considerable impact on the physical growth of the conurbation which, unconstrained, is expanding in all directions at a rate of 22 km² per year by pushing back the urban limits, which increases infrastructure costs. At the same time, it

has led to an explosion in personal transport, which is increasing at an annual rate of more than 10%. With the arrival of almost 600 additional motorized vehicles per day, Bangalore holds the record for growth in this area among Indian megalopolises. This trend has been considerably

stimulated by a pro-car policy (flyovers, road widening) and a lack of effective management of access, trips and parking in the city centre.

The resulting rise in congestion in the centre and on major roads, and the increase in travel times will soon compromise

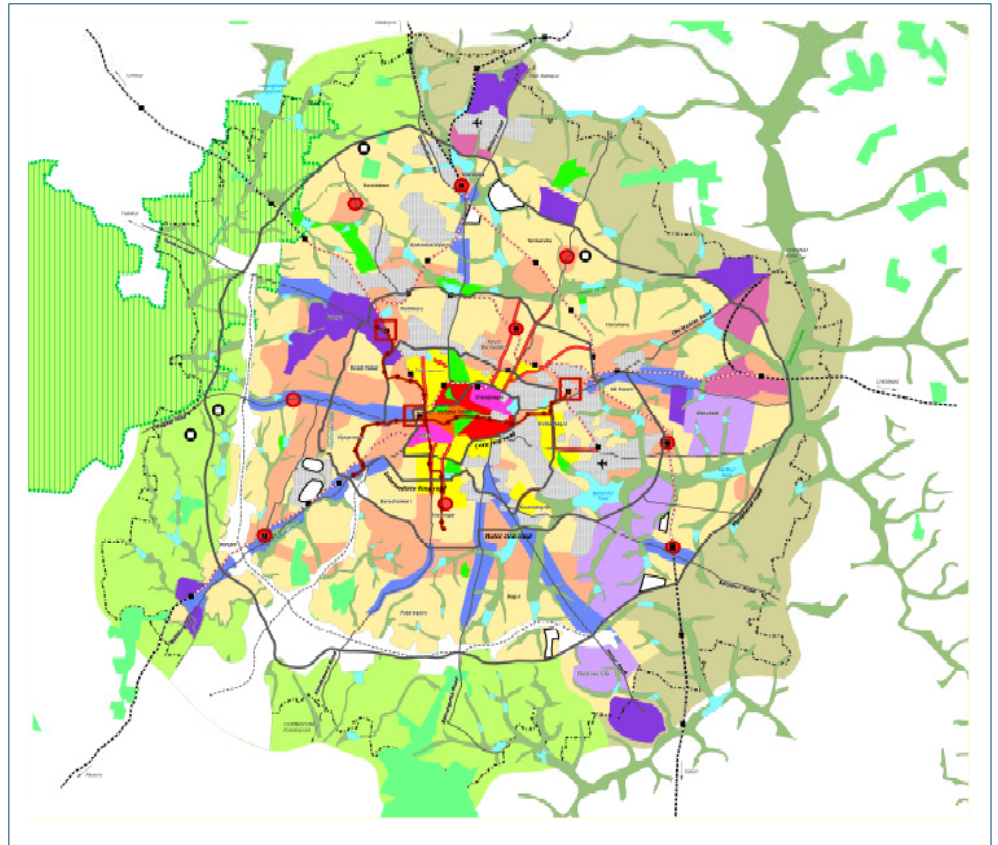
the travel of the majority of the households in Bangalore, particularly those who travel by bus (41% of the population). As the performance of local authority services deteriorate, some of the demand is transferred to personal transport, which is increasing dramatically. This is a vicious circle which ultimately can only result in deadlock...

This is the context in which a French team¹ was asked by the local authorities in 2003 to produce a Masterplan for Bangalore. Starting from an analysis that highlighted the danger that growth in the hi-

tech capital would stall and in the light of precursory signs of this, the urban planners proposed adopting the principles of sustainable development. By promoting the strategic planning of the Indian Silicon Valley and the debate on urban models, the advocated policies were completely counter to Indian town planning practices which are uniform and unreceptive to urban development strategies.

This approach places the emphasis on environmental protection and limiting spatial expansion by means of urban renewal, functional diversity and more compact urban forms with the aim of restricting the growth in personal transport and limiting the costs of urbanization. With this vision as a basis, principles of spatial organization and structuring based on the road network and the successive growth rings of the conurbation were developed.

Several proposals relating to transport were included in the Masterplan in order to help implement this pro-active scenario, in particular the structuring of urban growth from urban transport networks. The plan thus proposed a multimodal system which integrated the current plan for a metro in the centre, urban rail services (along the Bombay model) using existing railway lines, and busways on the major radial roads. To facilitate intermodality, the Masterplan proposed the creation of public transport interchange stations and secondary centres. It also included a system of rings in order to relieve the traffic in the central business district and a road network to serve and structure the outskirts.



Master Plan of Bangalore, SCE Group, Nantes - France

The system was completed by urban regulations and innovative zoning based on the principles that were developed.

Two years after delivery of the Masterplan (2005) and the public consultation and approval phases, the verdict on the project is ultimately somewhat mixed. In spite of the attempt to promote a sustainable development approach which integrates urban planning and transport, the desired results were not obtained. The proposals in the Masterplan and its chances of being implemented were thrown into question by the project owner's failure to back the study, pressure from the property development and political lobbies and confused links between the various levels of local action.

With hindsight, a less conventional appraisal of the

study shows how complex it is to deal with the problem of travel which involves collective and individual choices as well as financial, environmental, social and ideological dimensions. In Bangalore, as in other cities of the South which are acceding to higher levels of consumption, access to personal travel is a source of freedom and is viewed positively. In this context, the introduction of urban policies that aim to limit it encounters incomprehension, after all, even in Europe such policies are difficult to introduce.

In the constantly evolving context of urban India, French expertise has succeeded through this study in providing insight into the issues of urbanization and travel with regard to the environment, land and energy consumption and pollution, but also the risk of social

fragmentation. By showing that transport cannot be isolated from the space in which it takes place, it has placed the principle of sustainability at the centre of its approach, thereby reinstating Gandhian environmental thinking. ■

1 Groupe SCE Nantes

Reform of the transport sector in Gauteng Province in South Africa

Yves Mathieu

yves.mathieu@missionspubliques.com

The scale of the transport problem in South Africa is such that the level of complexity frequently exceeds what we experience in Europe. One of the key factors for success is the ability of reforms to change mentalities.

Gauteng province is one of South Africa's nine provinces. It has a population of almost nine million, in an area of almost 15,000 km². In European terms, it is almost a country. The province contains thirteen metropolises, including Soweto, Pretoria and Johannesburg.

Reform of the transport sector aims to transform the sixty thousand shared taxis, which represent the traditional firm par excellence, into as many operators working within an integrated public transport system, to develop the capacity of the public transport system, to reduce automobile congestion and integrate the different modes.

My experience working alongside the team that is managing this reform leads me to share a number of observations:

The first is that the scale of the transport problem in South Africa is such that the level of complexity frequently exceeds what we experience in Europe, apart from in our major metropolises. The creativity needed greatly exceeds what we require to solve our own problems.

The second is that these metropolises have inherited

patterns of urbanization from the period of authoritarian system that impose long travel distances and feature low mixed use of the urban fabric. Gauteng Province is therefore compelled to develop supply because it is impossible to increase its density in the short term.

The third is that the infrastructures of the transport systems are in excellent condition and those in charge of transport policy are exceptionally well qualified.

The principal problems relate to capacity and quality. Demand is exploding and supply is not following it. The so-called informal sector is responsible for a major proportion of supply, with an outmoded organization based on individual operators. Taxi firms were one of the few types of enterprise that coloured persons were allowed to own during apartheid. Also, methods have not changed much since 1994, with the individual operators preferring to work on weekdays or Saturday mornings, often leaving passengers without services at other times.

Major reforms have been undertaken in order to integrate shared taxis within formal transport

supply. These involve making it compulsory to have licences, government purchase of vehicles at the end of their service life, and including shared taxis in scheduled services.

This programme aims to mobilize the expertise of the independent operators and increase supply. Major construction projects are also in progress, for example Gautrain, which is a PPP train line in which the RATP is a partner. Another example is the recent decision to build a monorail to serve Soweto. In addition, projects are under way to create BRT routes, with the assistance of technical teams from Curitiba and Bogota.

Overcoming resistance

In my opinion, the most difficult aspect of these reforms is mental perceptions, for which I will emphasize three levels of considerations: political, entrepreneurial and individual.

At political level

The success of the reforms in Bogota and Seoul, and in Europe in Madrid and Stockholm, have shown us that the most successful reforms are those which are conducted with a political mandate and a strong and symbolic vision of the area concerned. The Bogota

Trans-Milenio should allow everybody, including children and the poor, to reappropriate the city in accordance with the vision of the mayor of the time.

In Seoul, the aim was to produce a user-friendly city that the residents could once again make their own. In less than two years the entire supply of bus services was redefined and simplified. Ridership increased by 25%. These successes show us that a strong vision leads to rapid results.

For politicians to be able to support this type of vision, they need to be trained, informed about the possibilities and aware of what is achievable in one term of office.

At entrepreneurial level

One of the stumbling blocks is a degree of inertia on the part of companies which means that the managers do not always realize that their market may have to develop if they accept certain reforms. The comparison between Gauteng and La Réunion is instructive in this regard. In La Réunion, reforms of the same type as in Gauteng Province have been carried through with remarkable success. The shared taxis have been integrated within formal structures, and, above all, the SMEs have been involved, through very novel original Economic Interest Grouping systems, in decision-making mechanisms for capitalistic training with semi-public companies.

In Gauteng, it is indispensable to help the managers of companies accept opportunities and new forms of groupings. Why not encourage more participation on the part of European or Asian groups in some local firms in order to encourage the reform of managerial practices?

At individual level

The main thing that has prevented reform of the shared taxis is fear on the part of the independent operators. They are afraid of losing their rights, privileges and even their businesses. Legislation and workshops are not enough, as here we are dealing with several thousand individuals. Why not use the mass media as a tool of persuasion? For example, a South African sitcom has been used to inform the population about AIDS prevention. When we are addressing 20,000 taxi owners surely it would be a good idea to use this type of medium which is much more accessible and much more transparent as regards issues and potential benefits? You need to think in new ways if you want to change mentalities.

A return to simplicity and effectiveness

Last, it is worth thinking about the technical complexity of the measures to be introduced to ensure the success of a transport policy. The success of reforms is frequently the result of their simplicity. To give two examples: in Seoul, the reform involved the colour of the buses, their numbering and the creation of a few suitable traffic lanes. In Curitiba, the efficient operation of the bus system is the result of a few guide marks painted on the ground and the window of each bus that enable bus dock perfectly with the platform.



Shared taxis, Gauteng, South Africa

Yves Mathieu

What can be learnt from South Africa's reforms of firms?

1. Return to simplicity and the need for quick results.
2. Humility: in view of the complexity of the problems in the cities and provinces, our role is not to give lessons. At most we can participate in the joint construction of complex novel systems.
3. The inescapable need to communicate in a simple way about a complex issue, using the mass media and even fiction.
4. Gauteng Province's problems are our problems: once the reforms of the informal and formal sectors have been completed, the teams will turn to the Football World Cup, congestion in rural and urban areas, the integration of transport systems and coping with climate change. ■

Global Metropolitan Perspectives (PMG)

Wednesday 9 April 2008, at the Ministry of Research

The Ministry of Further Education and Research, Carré des Sciences, Amphithéâtre Stourdzé, 1, rue Descartes, Paris 5

Particularly in those regions that are providing new economic dynamics, urban transport, motor vehicle use, traffic and the mobility of city dwellers give problems which have been given little attention. For several years, the Global Metropolitan Perspective (PMG) project has been comparing Paris with Sao Paulo, Shanghai with Seoul and Teheran with Buenos Aires. PMG has also directed its searchlight onto Tokyo, Bombay and American cities by setting up collaborative projects and networking or through the specific creation of secondary data. Systematic scanning has brought together, in MOSTRA, the principal data on urban travel and transport systems in the 27 conurbations in the world whose populations exceed 10 million (representing a total population of 420 million in 2005, according to the Geopolis definition). This conference thus sets out to compare the situations observed in the megapolises covered by PMG and submit the issues of travel of sustainability asked there to scientific debate.

Etienne Henry (INRETS), moderator

Scientific advisory committee:

Alain Bonnafous, ISH U. Lyon II

Bernard Descombs, ENS – PC VMD

Michel Rochefort, Université Paris I

Ignacy Sachs, EHESS

Pierre Signoles, Citeres U. Tours – ANR

Registration: pmg@inrets.fr

News on cooperation

"Organizing, planning and financing urban mobility" Skhirat Morocco, 22 and 23 January 2008

This regional conference on urban mobility in the Mediterranean has been organized by CODATU, the World Bank, the UNEP/Blue Plan, the AFD and the Mena and Medcités urban networks. It is targeted at decision-makers, professionals, senior civil servants working for central and local government, elected officials and urban transport managers. In addition to the Moroccan delegates, 60 or 70 participants from Maghreb countries (Algeria, Tunisia) and the Middle East (Egypt, Lebanon, Syria, Jordan, Iran and Yemen) are expected to attend. Four sub-topics will be covered:

- Institutional organization, planning, citizen participation,
- Economic issues, finance (public, private, PPP), fares,
- Transport modes for high quality services (bus, tram, metro)
- Traffic management and parking policy.

A technical visit of the Bouregreg valley planning project has also been organized for the day before the conference.

Information : www.codatu.org

ISTED

Financé par :

Ministère
de l'Écologie, du Développement et
de l'Aménagement durables

Ministère
des Affaires étrangères
et européennes

Directeur de publication :
Yves Cousquer,
Président de l'ISTED

Rédacteur en chef :
Pierre Laye,
AdP Villes en développement-
Association de professionnels de
développement urbain et coopération

Comité de rédaction :
Gilles Antier
Michel Arnaud
Xavier Crépin
Bruno Fulda
Olivier Mourareau
Françoise Reynaud
Louis-Jacques Vaillant

Rédactrice : Isabel Diaz

Secrétaire de rédaction et PAO :
Christiane Rebel-Graechen

Impression : Imprimerie Lefevre
(91) Saint Michel sur Orge

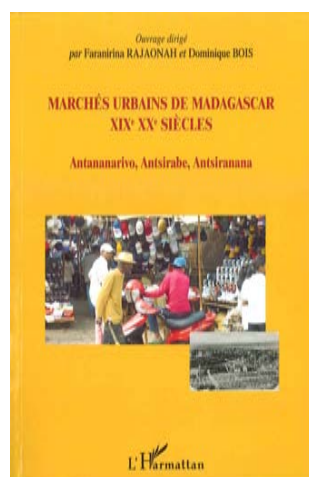
ISSN 1148 - 2710

Abonnement : 4 n° par an 20 Euros

ISTED
Centre de documentation et d'information
«Villes en développement»
Arche de la Défense
Paroi Nord
92055 La Défense Cédex
France
Tél. (33) 1 40 81 78 01
Fax. (33) 1 40 81 78 07
christiane.rebel@i-carre.net
www.isted.com

This bulletin is on line
on the ISTED website

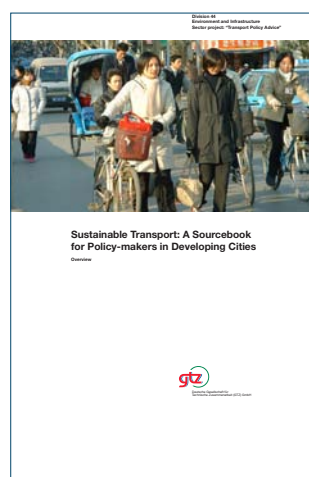
Publications



Marchés urbains de Madagascar - 19^{ème} et 20^{ème} siècles Antananarivo, Antsirabe, Antsirananana

Under the supervision of Faranirina Rajaonah and Dominique Bois
L'Harmattan, 2007, 242 pages,
22,50 euros

This book brings together studies conducted in 2002-2004 in the framework of the Urban Development Research Programme (PRUD). Markets are central to urban renewal problems in Madagascar as elsewhere in Africa. The papers deal with the different types of long-term infrastructure measures, and the tensions between the public authorities and users such changes produce.



Sustainable Transport: Sourcebook for Policy-makers in Developing Cities

GTZ Eschborn, 2002
The Sourcebook on Sustainable Urban Transport addresses the key areas of a sustainable transport policy framework for developing cities. The Sourcebook consists of more than 25 modules. It is intended for policy-makers in developing cities, and their advisors. This target audience is reflected in the content, which provides policy tools appropriate for application in a range of developing cities.

*This document can be downloaded
on the Internet.*



Methodological guide. Decentralized cooperation in urban transports.

CODATA, Ed. CNFPT, Lyon 2007.
This methodological guide is based on research presented at the CODATU XII held in Lyon in 2006. It constitutes a genuine cooperation tool for urban travel and contains several case studies on cooperation between Greater Lyon and Erevan; the Greater Paris Region and Hanoi; the Canton of Geneva and Quito; Greater Lyon, Lomé and CODATU.

*Available on line:
[www.codatu.org/english/
publications/summary.htm](http://www.codatu.org/english/publications/summary.htm)*