MOBILITY FLOWS IN THE MARSEILLE METROPOLITAN AREA: ISSUES AT STAKE AND ORIENTATIONS FOR THE FUTURE

Component 1: Common systems and tools for the territorial services
   Activity 4: Pilot Project 1: Integrated plan in the influence area

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1- INTRODUCTION: the Marseille Metropolitan Area and main challenges

1-1- A territory strongly intertwined

Marseille is located in a territory characterized by the heterogeneity of its urban environment, as it is composed of some major urban centres – Marseille, Aix-en-Provence, Aubagne – a great variety of small cities, and a mix between preserved landscapes and spread of housing.

Now, this territory is typified by the very important interlinkages which exist between the different urban centres: industrial and entrepreneurial activities are spread out in the area, notably in centres exclusively dedicated to these activities, like “Aix Les Milles” near Aix-en-Provence or Fos Port near Marseille; commercial activities may also be concentrated in specific places, like Plan de Campagne, which is the greatest commercial centre in France; leisure and cultural places are located in the major urban centres, etc.

The delimited area of investigation for In.FLOW.ence has been selected due to the importance of these interlinkages which strongly impact the daily lives of the 1,7 million people living there. This territory approximately covers Bouches-du-Rhône province, minus the area around Arles (on the Western side of the province), meaning six “intermunicipalities” – including 90 municipalities. These six “intermunicipalities”, ie administrative areas of cooperation between several municipalities, which compose a zone called Marseille Metropolitan Area, are the following:

- Communauté urbaine “Marseille Provence Métropole” (MPM), composed of 18 municipalities and 992 000 inhabitants
- Communauté d’agglomération du “Pays d’Aix”, composed of 34 municipalities and 340 000 inhabitants
- Communauté d'agglomération “Agglopole Provence” (Salon-Étang de Berre-Durance), composed of 17 municipalities and 133 000 inhabitants
- Communauté d’agglomération du “Pays d’Aubagne et de l’Étoile”, composed of 12 municipalities and 93 000 inhabitants
- Communauté d’agglomération du “Pays de Martigues” (previously “Ouest Étang de Berre”), composed of 3 municipalities and 70 000 inhabitants
- Syndicat d’agglomération nouvelle “Ouest Provence”, composed of 6 municipalities and 95 000 inhabitants
The Marseille Metropolitan Area can be defined as a multi-polar metropolis, composed of different intermunicipalities which have developed their own activities. Thus, economic sites have migrated outside the cities and constitute the five growth poles of the zone, among them the industrial port area in Fos, the petrochemical industry in Berre and the Atomic Energy Commission and ITER in Cadarache. This situation of a fragmented metropolitan space, where economic centralities are spread out on the territory, has prevented a city from claiming legitimacy to take the management of the area. That is why cities and intermunicipalities are sticking to their prerogatives.

Nevertheless, these numerous links between the different urban centres of the territory prove the need for the population to move easily and then the necessity to have an appropriate and coordinated transport offer in the territory.
1-2- Planning documents for mobility and transport

At national level

Mobility and transport facilities depend on several decision-making levels. At national level, the 3 main important legislation texts are:

- The LOTI law (“loi d’Orientation des Transports Intérieurs”), adopted in 1982, laid the foundations for the organisation of transport public services in France. The LOTI foresees the realisation of Urban Mobility Plans (“Plans de Déplacements Urbains” – PDU) in order to define the general principles in the organisation of transport, traffic and parking.

- The LAURE law (“Loi sur l’Air et l’Utilisation Rationnelle de l’Energie”), 1996, aims to improve air quality by decreasing pollution due to transport, through the reduction of car traffic and the increase in collective transport and soft vehicles. This law makes compulsory PDU in cities or urban areas with more than 100 000 inhabitants.

- The SRU law (“loi relative à la Solidarité et au Renouvellement Urbains”), 2000, reinforces PDU’s role and organizes coherence between urbanism, transport and housing. It also establishes Territorial Coherence Schemes (Schéma de Cohérence Territoriale – SCOT).

The laws “Grenelle de l’Environnement” (2009 and 2010) fix an objective of 20% decrease of greenhouse gas emissions in transport by 2020 and create conditions to facilitate the development of collective transport facilities and the reduction of car traffic.

At local level

The Territorial Coherence Scheme (Schéma de Cohérence Territoriale – SCOT) is a planning document which fixes, at the scale of several municipalities or groups of municipalities, the bases for territorial organisation and urban area evolution, in order to preserve balance between urban, industrial, touristic, agricultural and natural areas. It is a framework of reference, which specifies which different policies are to be led at the scale of a territory “of life”.

In transport field, the SCOT has to answer to an objective of “control on travels and car traffic needs”, taking into account transport needs expectations. The SCOT is notably enforceable against the Local Urbanism Plan (“Plan Local d’Urbanisme” – PLU) and the Urban Mobility Plans (PDU).

The SCOT in Marseille Provence Métropole
The SCOT of MPM has been approved in June 2012, after a seven-year work. It covers the 18 municipalities composing MPM. It includes
- a presentation report (state of the art and diagnostic),
- a Planning and Sustainable Development Project (“Projet d’Aménagement et de Développement Durable” – PADD) and
The Urban Mobility Plan (“Plan de Déplacements Urbains” – PDU) is elaborated by the public authority of urban transport. It aims to ensure a sustainable equilibrium between needs of mobility, easiness of access, protection of environment and protection of health. It has to define precise objectives in terms of improvement in travels safety, decrease in car traffic, development of collective transport and alternative transportation modes, planning and exploitation of the main road network, organisation of parking and goods delivery, advice to mobility and incentive to enterprise and public authorities mobility plans, installation of an integrated pricing and ticketing. The Urban Mobility Plan has to be compatible with the SCOT, which means that it cannot forbid the implementation of orientations determined at a larger territorial scale.

The Urban Mobility Plan of MPM was approved in 2006 and is under revision; the new project should be approved in July 2013.

*The main planning documents impacting mobility and transport in Bouches-du-Rhône Province*

- Territorial Directive for Planning
- Charte of National Park of Calanques
- Territorial Coherence Scheme (SCOT)
- Housing Local Plan (PLH)
- Urban Mobility Plan (PDU)
- Other policies from MPM (climate plan, economic development strategy, coastal area, waters...)
- Local Urbanism Plans (PLU)
Companies can also play a role through a Company travel plan (Plans de déplacements d’entreprise” – PDE), which give them the possibility to optimize travels generated by their employees and activities. Since 2006, PDE have been mandatory for companies of more than 250 employees. Plans between several enterprises (PDIE) are also possible for areas which concentrate a certain amount of companies.

The general strategy aims to promote sustainable transport and manage the demand of transport by individual cars, through a global and integrated analysis of every flow passing by the company. PDE and PDIE include travels of workers, purchasers and providers, in order to be the most inclusive as possible. If well done, the plan should provide more productivity and be seen as an investment for the future.

1-3- Local institutions responsible for transport

Transport is a competence shared between several public authorities. In general terms, the Region manages the regional traffic of train, the Province and intermunicipalities manage road and school transport outside urban areas, while municipalities deal with urban and school transport within the cities.

In Bouches-du-Rhône province, public transport organisation is segmented into 8 Public Urban Transport Authorities – corresponding to the intermunicipalities of the province – in addition to 2 non urban Public Transport Authorities: the Provence-Alpes-Côte d’Azur Region and the Bouches-du-Rhône Province.

They all work autonomously with separated logics, without making in coherence urban with interurban fields.
In 2009, a public transport authority (“syndicat mixte des transports”) was created in the province of Bouches-du-Rhône. This authority gathers the Province of Bouches-du-Rhône together with seven Public Transport Authorities from the Province\(^1\). Its main objective is to simplify travels for users of public transport in the province, notably through the creation of a single ticket of transport that would allow users to move on the whole territory. Nevertheless, this organisation has not for the moment real powers.

Funding is ensured for a large part by companies employing more than nine employees, which pay the transport tax, representing almost half of funds invested in urban public transport.

1-4- The question of mobility, a burning issue challenged by the lack of coordination of public authorities in the Marseille area

The repartition of activities on a territory whose specificity lies in the coexistence of urban and peri-urban areas strongly interrelated leads to an important mobility of its inhabitants, as many people work or study in different cities from those where they actually live. Therefore, capacity for inhabitants of the area to move easily from a place to another on a daily basis constitutes a key challenge for this territory.

Now, despite linkages and dependencies of the territory around Marseille, inhabitants suffer from difficulties in moving, due to high traffic level and lack of public transportation. This results from a real lack of governance coordination and collective decision, that, added to other factors – scarce financial resources, specificities of the urban landscape in Marseille - impedes to take action which would significantly improve inhabitants’ quality of life.

The recently borne “syndicat mixte des transports” was a first step in the right direction, as it aimed to better coordinate the different transport authorities. But its powers are for the moment reduced to studying what it should be. Therefore, the creation of this public transport authority is an important step forwards but shows that the situation is still blocked.

Through this study and in this particular context, the Institut de la Méditerranée aim is to analyse and propose solutions on how to improve one of the strategic flows for citizens’ lives conditions and territory attraction which are affected by this deficit in territorial governance - people mobility – notably within the new opportunity that constitute the creation of a metropolis in Marseille area.
2- Multiplication of people flows versus transport: an inadequate transport service in the Marseille Metropolitan Area

2-1- Analysis of mobility flows

Analysis of people travels – in particular locations and travel purposes – shows the actual linkages between the different urban areas, where places of residence, work and leisure are sprawled across the whole territory.

2-1-1. Number of travellers and profiles

1.7 million inhabitants live in the territory under analysis, which counts about 930 000 travels every day (in 2009). This amount was 720 000 in 1997, when the last survey on households’ mobility was made, which means a 29% increase in 12 years.

Travels per inhabitant according to the different territories, evolution between 1997 and 2009

Source: AGAM, Enquête Ménages Déplacements 2009
Marseille territory, the biggest city of our case study, generates the major part of travels. Exchanges at metropolitan scale are increasing, in particular towards Berre and Aubagne. People travel on average 23 kilometres and spend 64 minutes in transport every day. 62% of travels cover less than 3 kilometres. At the scale of Bouches-du-Rhône province, 65% of people spend less than 30 minutes in transport but 15% spend more than 45 minutes between home and work.

*Travels in Bouches-du-Rhône Province*

*Source: AGAM, Enquête Ménages Déplacements 2009*
Several reasons may explain the continuous increase in the number of travels. First, in general, travels increase is due to the growth of population and increase of equipment owned by families – as a large part of families own several cars. Urban sprawl is also one of the factors which explain the high number of travels between urban centres (such as Marseille, Aix or Aubagne) and peripheral cities (this also induces a high use of car, as explained below). A lot of families indeed move outside Marseille to reach a better standard of life. This also increases the flows coming from other provinces such as Hautes-Alpes, Alpes-de-Haute-Provence or Gard.

2-1-2. Causes of travels

Distribution of activities across the territory leads people to move between different urban centres. Travels purposes range from work/studies to shopping, leisure or accompaniment of another person, which proportion can vary according to the age.

*Causes of travels according to age of people living in Marseille*
Nevertheless, as emphasized in the graph below, travel from home to work or university remains a structuring relationship.

*Attractiveness of working and academic poles outside Marseille*

![Map of Marseille's employment areas](image)

*Source: AGAM, Enquête Ménages Déplacements 2009*

MPM has an autonomous functioning in comparison with other intermunicipalities, as 77% of the working class lives and works in the urban community territory. On the contrary, “Pays d’Aubagne et de l’Etoile” shows a high level of exchanges, as more than half of jobs are occupied by inhabitants from other local intermunicipalities and almost 70% of inhabitants of the agglomeration works outside. The metropolitan area indeed is a multipolar metropolis, composed of seven employment areas. This characteristic explains the high number of travels between these employment areas and creates congestion because they are realized during rush hour.
2-1-3. Means of transport: a significant culture of personal car in the territory

Individual cars represent a large part of transport means in our territory. Although this tends to slightly decrease these last years, there is still a real culture of car prevalent in Marseille and its surroundings, at the expense of public transport or soft vehicles. This is true for connections between cities, but also for travels within the same city.

Evolution between 1997 and 2009 of modal shares

The means of transport used also depends on the kind of area. In Marseille, where most of its inhabitants live and work within the city, the use of car is less important than in other peripheral cities, and 37% of people go to work by foot. In peri-urban and small cities, where public transport connexions with working areas are bad, part of car becomes more important, as shown in the following table.
At the scale of the province of Bouches-du-Rhône, 73% of people use their own car to go to work, while only 11% use public transport. The rest goes by foot (7%), by motorcycle (3%) or using auto sharing (2%).

Walking represents only 81% of travels of less than 1 kilometre. Marseille territory is known for its bad reachability for pedestrians and cyclists, who, on the top of that, suffer poor conditions of comfort and safety. Due to the priority given to individual cars, indeed, other means of transport are not improved nor encouraged: even though the official discourse shows a will to promote soft vehicles, concrete measures in spatial planning and equipment devoted to them (such as bicycle lanes) are not taken, whereas there have been many opportunities, notably within Marseille with the current reorganisation of many streets of the centre.

The graphic below emphasizes this phenomenon, where 33% of travels between 1 and 3 kilometres are realized in motorized vehicles.
Parking policy and laxness do not restrict inhabitants to use their car (as it is demonstrated that people are more encouraged to drive if it is easy for them to park). The importance of cars is also explained by the lack in public transport offer, although its part has increased from 9.4 to 10.5 % between 1997 and 2009. Connections between cities are too few, and fast public transport are also lacking within cities. Thus, in Marseille, there are only two metro lines for a city of almost 1 million inhabitants, and 33 kilometres of reserved lanes for public transport, which can be compared with the close city of Montpellier, where there are 56 kilometres of tramway for 300 000 inhabitants.

Also, people have not a good opinion of public transport. 60% of their users Indeed feel that the journey is particularly long when this feeling is shared only by 37% of users of individual cars. For no-users of public transport, reasons mentioned are related to bad services of bus (47%), a complicated system (35%), a longer journey (23%), a lack of comfort compared to individual cars (19%) and an expensive cost for 6%². In spite of this, in big cities such as Marseille or Aix-en-Provence, 72% of citizens are satisfied with the current public transport system and network. In general, this percentage falls to 32% of satisfaction for the public transport system between work and living place.

Although the use of cars tends to slightly decrease, the effective number of car continues to increase because of the growth of population (165 000 additional cars between 1997 and 2009). The use of motorbikes and scooters is also strongly increasing in the territory. The predominant use of car relegates the other means of transport to secondary places and make them lose attractiveness: wild parking of individual cars penalises traffic of buses, pedestrian roads and use of bicycles by creating lack of comfort and safety.

2-2- Transport infrastructure networks

Geography plays an important role in transport flows and infrastructures. Marseille indeed is bounded to the west by the Mediterranean Sea and to the east and south by several mountains (mountain of Estaque and mountain of Etoile in the north, Garlaban in the east, mountain of Saint-Cyr and Mount Puget in the south east and mountain of Marseilleveyre in the south). This geography explains a part of the structuration of transport flows in the territory. Marseille is connected with other significant cities by motorways which are most of the time congested. This framework of roads has contributed to the creation of segmented areas between social housing, urban centres and areas of employment. This division creates inequality, in particular for disadvantaged persons who suffer from difficulties to have access to equipment (such as hospital, school, etc.) and shops.

² TNS Sofres study
2-2-1. Highway and road

The territory is crossed by a network of roads, which traffic intensification during the last years is obvious in the map below. Represented broad roads are motorways, smaller roads are in orange. The red colour highlights roads which have supported an increase in cars flows between 2004 and 2009, while the green one indicates roads where the traffic has decreased. Nevertheless, as stated by the figures, flows there remain very important, particularly when getting closer to Marseille. For instance, between Aubagne and Marseille, 124 700 cars are registered every day on the highest volume section.

According to experts, MPM roads will become saturated by 2020 if nothing is done.

*Evolution 2004-2009 of vehicles number*

Source: AGAM
2-2-2. Railway at regional and local level

As a general rule, railway is not used much by travellers – as well as goods – in the region. As highlighted in the map below, the whole region and the province of Bouches-du-Rhône do not have structuring railway network that can answer to flows increase: most railway lines are concentrated in the costal area and the hinterland is strongly isolated, excepted between significant cities.

This lack of infrastructure does not help travellers, who are not encouraged to use train, in particular for travels which are not between important cities.

*Regional train in Provence-Alpes-Côte d’Azur region*

*Source: SNCF*
Focus on Marseille Metropolitan Area

Source: SNCF

The territory also suffers from a lack of connection between the different modes of transport and between places. For instance, from Marseille, the airport is served mainly by a shuttle bus service, which depends on motorway traffic, particularly during rush hours. A train permits to get to Vitrolles, the nearest city, but passengers have to take an additional bus shuttle, and this service is little known by most people.
2-2-3. Intermodal and buses connections between cities

The territory is covered by bus lines of CarTreize, the bus company of Bouches-du-Rhône Province. Thus, 19 regular lines serve MPM territory, out of which 11 by motorway.

Bus network in the territory

Source: CarTreize

Thanks to this network, 93% of MPM inhabitants live at less than 300 meters of an urban public transport line. Nevertheless, these figures displayed by MPM do not take into account the level of service. Also, inhabitants of other urban communities around MPM, which are more rural, are more impacted by a lack in public transport offer.
However, the real problem in buses connections relies on the overlapping of the various public transport authorities, which leads to a lack of coordination in public transport development. Thus, pricing differs between sectors, including within MPM; information is not heterogeneous and not always easy to understand; and exchanges poles are saturated.

Another barrier to public transport development is the little clout given to intermodality, which could push people to drop their car where public transport is available. But multimodal platforms are little promoted: MPM territory is lagging far behind other French big cities in the installation of park and ride facilities:

**Comparison of park and ride facilities in French big cities**

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Offer</th>
<th>Parking lot/ 1000 inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montpellier</td>
<td>415 000</td>
<td>3 740</td>
<td>9,0</td>
</tr>
<tr>
<td>Lyon</td>
<td>1 268 888</td>
<td>6 068</td>
<td>4,8</td>
</tr>
<tr>
<td>Strasbourg</td>
<td>474 524</td>
<td>3 840</td>
<td>8,1</td>
</tr>
<tr>
<td>Nantes</td>
<td>595 902</td>
<td>4 935</td>
<td>8,3</td>
</tr>
<tr>
<td>Marseille</td>
<td>1 040 751</td>
<td>3 712</td>
<td>3,6</td>
</tr>
<tr>
<td>Marseille project</td>
<td>1 040 751</td>
<td>6 212</td>
<td>6,0</td>
</tr>
</tbody>
</table>

*Source: MPM with AGAM*

Thus, in MPM, out of 19 railway stations, only the one of La Ciotat includes more than 100 parking lots while all the other ones have less than 100 lots and some of them do not include any parking area. In addition, due to the lack of space, these park and ride facilities are mainly for commuters, and are not accessible to visitors and at night.
3- An alarming impact diagnosis, resulting from a flawed management of transport

Transport offer quality does not only affect people’s lives conditions by increasing the time they spend in travels. It has also a strong impact on a broad scope of issues, ranging from health and environmental damage to territorial attractiveness.

3-1- The environmental impact

In a recent study³, the city of Marseille has been identified as one of the most polluted cities in Europe, and the worst in French cities, with 18,5 micrograms of particles per cubic metre of air, directly linked to car traffic, whereas the value recommended by World Health Organization is 10 micrograms. This means that Marseille inhabitants could gain from 4 to 8 months of life expectancy and 3000 deaths could be avoided if the average annual level of fine particles was reduced to the recommended threshold.

In the chart below, you can see how much transport produces pollution in the urban community of Marseille (MPM), with 17 tonnes of CO emitted in only one day of travels. This pollution has two main effects, as it worsens climatic change and affects health conditions, especially for sensitive persons as young children, allergic people, etc.

Obviously, all the modes of transport are not equivalent in pollutants emission, as shown in the table below: for one traveller and one kilometre, individual car is the most energy consuming and rejects more GHG and particles than others, while motorcycles reject three times more CO than cars.

_Emissions per traveller for 1 kilometre in city (in 2009)_

<table>
<thead>
<tr>
<th>Mode</th>
<th>Conso.</th>
<th>GES</th>
<th>NOx</th>
<th>PM</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gep</td>
<td>g</td>
<td>mg</td>
<td>mg</td>
<td>mg</td>
</tr>
<tr>
<td>Individual car</td>
<td>53 gep</td>
<td>167 g</td>
<td>470 mg</td>
<td>101 mg</td>
<td>1250 mg</td>
</tr>
<tr>
<td>Motorbike</td>
<td>31 gep</td>
<td>97 g</td>
<td>100 mg</td>
<td>82 mg</td>
<td>3870 mg</td>
</tr>
<tr>
<td>Bus</td>
<td>32 gep</td>
<td>98 g</td>
<td>1060 mg</td>
<td>90 mg</td>
<td>290 mg</td>
</tr>
<tr>
<td>Train</td>
<td>9.8 gep</td>
<td>0 g</td>
<td>0 mg</td>
<td>0 mg</td>
<td>0 mg</td>
</tr>
<tr>
<td>TCU</td>
<td>10.1 gep</td>
<td>0 g</td>
<td>0 mg</td>
<td>0 mg</td>
<td>0 mg</td>
</tr>
</tbody>
</table>

Source: EMD 2009/ AOT(s)/ COPERT IV/ AGAM

Thus, individual cars in MPM represent less than half of travels but the major part of emissions. Emissions increase as one moves away from centres, emphasizing the negative impact of peri-urbanisation: in the map below, the green colour shows emissions of less than 1,9 kg of green house gaz emissions, while it gets more red and dark as this amounts increases.
Daily individual GHG emissions from MPM inhabitants

Nevertheless, this does not mean that centres’ inhabitants are less impacted by pollution than others, since there is no direct relation between their emissions and air quality.

Modelling of Nox pollutant emitted by traffic

Daily emissions of NOx per inhabitant

Source: EMD 2009/ AOT(s)/ COPERT IV/ AGAM
In the map above, concentration of NOx (dioxide of nitrogen) appears in red. This pollutant is particularly present on main roads and city centres, which means that people not using frequently a car but living in city centres are the most affected by this pollution. Contrast with the map on the right side, representing daily emissions of NOx per inhabitant of Marseille centre, is obvious: whereas inhabitants of Marseille city centre pollute the least, they are the most polluted. NOx pollutant should be a major concern for local authorities, and transport strategies should take this data into account.

3-2- The economic impact

A non-efficient transport system has a strong economic impact on the territory, as it generates important costs for enterprises and affects territorial attractiveness.

Thus, by thwarting accessibility of collaborators, clients and providers – as well as goods circulation – travels difficulties hamper the development of enterprises and make them lose opportunities. Also, enterprises competitiveness is penalized because time spent in transport and related constraints make it more difficult for them to attract interesting profiles coming from far away. Economic benefits would also be better distributed on the whole territory if people and goods could circulate more easily.

Furthermore, transport generates costs for enterprises through the reimbursement of transport fee between work and home, that they have to pay back to their employees. This reimbursement is mandatory for every employee using public transport, for whom enterprises have to pay back half of subscription fees. Enterprises also cover costs linked to employees travels made for work reasons and occupational accidents. Accidents at work related to the use of car represent 20% of fatal accidents linked to work. Some websites\(^4\) allow enterprises to calculate accident risks and limit costs for them. These websites take into account the location of the enterprise and the structure of transport.

Enterprises have been paying a transport tax to transport authorities since 2009. They provide the main source of funding for transport: in Bouches-du-Rhône province, they spend more than 120 million Euros, that represent about 50% of charges of the nine transport authorities of the province. Nevertheless, these conditions can create a vicious circle affecting enterprises competitiveness. In Marseille indeed, which suffers from a high unemployment rate and a lack of enterprises located within the city, this tax on transport paid by enterprises is relatively low – as it depends on payroll. Thus, added to the two other funding sources – tickets price and general tax – investments available for transport in Marseille differ every year from 150 million Euros with a city like Lyon. This impedes


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transport development in the city, which on its turn gives it a negative image in terms of attractiveness and restricts economic development.

For all these reasons thwarting competitiveness and economic attractiveness of the territory, the Collective “Mon entreprise, Ma Ville” – “My enterprise, My city” – which gathers local federations of companies in the province, with the support of the Chamber of Commerce of Marseille Provence, strongly advocates for the creation of a metropolis, which would permit to create a single transport authority for the province and solve the problems related to the bad management of transport.

3-3- The social impact

Transport system has also a strong social impact, first through the purchasing power decrease it brings for its inhabitants. Thus, an employee living at 20 km of his company spends 208 Euros every month to go to work; 52% of employees use more than 10% of their budget for transport, and this tends to worsen with gas price increase.

It also impacts inhabitants’ professional situation. There are seven working areas in our territory, and two of them really attract businesses and workers: the territory of Pays d’Aix and the territory of MPM. MPM alone represents 42% of jobs in the Marseille Metropolitan territory. These two areas concentrate jobs for a large part of the province.

Now, difficult transport conditions affect employees, a third of whom declare being penalized in his professional career because of transport or housing related problems. 84% of people consider that transport improvement would facilitate access to employment.

These figures go up to 87% for MPM territory. Due to urban sprawl and lack of public transport in peri-urban cities and rural areas, people living outside important towns are particularly penalized. This affects especially citizens who do not have access to individual car such as young people (students or youngsters looking for a job), elderlies, disabled, etc.

The map below shows that use of individual car and integration in labour market are strictly related.

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Usage typology of public transport and car of MPM inhabitants

Therefore, without an efficient transport system, marginalisation of some territories is a real risk, since transport allowing inhabitants mobility are necessary not only to get a job, but also to have access to public services in general, such as school or hospital.

At last, the lack in collective transport is unfair in term of exposure to air pollution: as seen in 3.1\(^6\), inhabitants who pollute the least (in city centres) are the most polluted, leading to absurd situations and inequalities between territories and citizens.

Mobility flows and the important use of individual cars create negative externalities on the territory, not only in terms of economy or air quality as seen above, but also in terms of noise nuisance, energy consumption, space occupation by roads or artificialisation of the soil.

\(^6\) See the maps p. 25
4- On-going planning and legislative changes and potential impact for the near future

Politicians and decision-makers, at both national and local level, are very aware of the difficulties related to transport that have been described in this document. Now, since decades, local politicians have been unable to agree on common solutions which could help Marseille and its territory make up for their delay in transport management and equipment.

In order to solve these issues, several mobility-related important changes are under way in the Marseille Metropolitan Area. The two most important, which potentially could deeply change the administrative face and equipment in transport of the territory, are the Urban Mobility Plan (PDU for Plan de Déplacements urbains) of MPM and the future law of decentralisation which includes a section on the actual creation of a metropolis in the territory. Nevertheless, these legislative and planning evolutions sometimes raise strong oppositions. Through the analysis of these texts below, we will try to anticipate their real impact on the territory in the near future, and see if they can really solve the problems related to mobility.

4-1- The Urban Mobility Plan of Marseille Provence Métropole Urban Community: hope for the future?

The on-going Urban Mobility Plan of MPM was approved in 2006 and is currently under revision: the new project is in its phase of public inquiry (from 2nd April till 17th May 2013), which precedes its formal approval in July 2013. This document applies to MPM territory, which is only a part of the Marseille Metropolitan Area. Nevertheless, with its 992 000 inhabitants and 18 municipalities, it represents a major part of the territory under scrutiny, and the Plan will necessarily also impact surrounding areas.

This Urban Mobility Plan, which is an important document of 220 pages, presents all the measures related to mobility and transport which should be taken in MPM territory for the ten coming years, between 2013 and 2023. Its overall objective is to “improve our quality of life notably by regulating traffic in city centres, as well as by proposing alternative means of transport to the car”. More precisely, it aims to achieve the following objectives by 2023:

- decrease of travels in car or motorized two-wheelers by 8% (ie 152 000) compared to 2009;
- increase of travels in alternative means (collective transport or soft vehicles) by 28% compared to 2009;
- reduction of pollutants and greenhouse gases: -40% for NOx ; -15 % for PM10 and -30 % for PM2,5 ; -20 % GHG.

The Plan clearly shows its will to develop bicycle and collective transport travels while decreasing car usage. In this sense, it represents a good signal for the future. Nevertheless,
one may also have some doubts on its actual application and the real improvements in mobility it will lead to.

4-1-1. Metropolitan scale and Urban Mobility Plan limits

From the introduction, the Plan recognizes the real existence of a metropolitan area around Marseille (defined according to urban data by INSEE\(^7\)) and the reality of a metropolis that its inhabitants live daily, although it does not exist in administrative terms yet. The text also anticipates the creation of the metropolis. Thus, although this plan concerns MPM, it takes into account the necessity to coordinate transport at metropolitan scale and advocates for the structuration of a metropolitan collective transport system.

Nevertheless, the Plan is limited by itself: although it shows that it is aware of the necessary coordination with transport authorities outside MPM and the administrative changes which are on the verge to occur with the creation of the metropolis, it can only propose and recommend. Thus, it proposes actions to “stimulate thinking at metropolitan area scale” and improve transport offer at metropolitan scale: it recommends that the common public transport authority created in 2009 (“syndicat mixte des transports”, Cf. p. 7) leads thinking to improve some travels corridors which are relevant for the metropolitan scale, and that an integrated pricing system between the different networks is put in place. It is also worthwhile to recognize the necessity to better coordinate transport offer managed by different transport authorities in order to create a real dense territorial network of collective transport. But all this amounts basically to recommendations on which the Urban Mobility Plan of MPM has no power. Therefore, nothing permits to ensure that these recommendations – which necessity has been recognized for years – will be put into application.

The Plan, actually, focuses more on current administrative boundaries inside MPM – can it be really criticized for this? – and therefore, inter-urban exchanges, which cover a scale beyond MPM territory, are only partially addressed. The risk is that this Plan becomes outdated as soon as the metropolis has been created.

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\(^7\) French national institute of statistics
4-1-2. Urban sprawl and the problem of coordination with other planning documents

Urban sprawl and demographic pressure are a real problem for the Marseille Metropolitan Area. Indeed, peri-urban areas, which have been continuing to increase since these last years, although less intensively than during the 1980-2000’s, strengthens dependency to cars. It is necessary, then, to put in place a virtuous mechanism to increase urban density, through urban renewal, collective transport and quality of public space. We know how to manage urban areas, but the real challenge for the future is peri-urban areas.

Now, the Urban Mobility Plan formally recognizes the problem of urban sprawl and refers to the Local Urbanism Plan which has been adopted in June 2012. Also, the Plan reminds that the Territorial Coherence Scheme of MPM – approved at the same date – sets out the necessity to ensure exchanges between urban poles of MPM and main surrounding urban poles, by developing rail services in priority.

The Plan cannot do much more about urban sprawl mitigation than providing solutions in terms of transport – which is an answer, but does not tackle the origin of the problem. Nevertheless, it could have recommended to the Local Urbanism Plan to increase density around transport infrastructure transport and set clear prescriptive targets. The proposition of the Plan to create a governance on urbanism/transport, notably through the analysis of the coherence between infrastructure projects progress and planning projects in MPM territory, is a good, albeit light, initiative, to coordinate urbanism, planning and transport projects, which cannot be dissociated.

4-1-3. Alternative modes of transport: a real effort in the text, to be confirmed in practice

The Urban Mobility Plan puts a strong emphasis on walking and bicycle development and all the measures which give them back space to them, such as fight against illegal parking and liberation of public space to pedestrians and cyclists. Also, a cliché on the difficulty to drive a bike in Marseille because of hills is demolished. The second brake to bike usage – safety – is addressed through a whole section dedicated to it. The plan proposes to create at least 10 kilometres of structuring axes every year on the whole MPM territory, which corresponds to 3 million Euros investment per year.

Nevertheless, although figures on bike increase are precise – travels by bike have to be multiplied by 5,4, without knowing how they have been calculated – there is no guarantee that measures to reach them will be really applied. Thus, the text – “Important effort has been dedicated recently to the requalification of the centre city of Marseille” – is in contradiction with what is currently realized by MPM, in the Vieux-Port for example, where the project of “semi- pedestrianization” has not foreseen bicycle lanes. Also, equipment for

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bicycles are not precise enough, in particular cycle routes should be identified and prioritized.

A bad signal is given by quoting an analysis concluding that unsafety’s cyclists decreases as their number in traffic increases: the more cyclists, the more drivers would pay attention to them and the less there would be accidents. This kind of reasoning has been used to justify the absence of bicycle facility in Dunkerque Boulevard in the new Euromed area, whereas the avenue is broad enough. The reasoning is made upside-down.

At last, many references are made to the Master Plan for soft vehicles which is supposed to give more details on measures for bikes and others, as if it existed, but it is not available anywhere.

The Urban Mobility Plan also insists on the necessity and measures to increase collective transport, through the development of multimodality – with the construction of park and ride sites – intensification of bus network, notably inter-urban lines and in areas where collective transport services are lacking. Development of regional train concern continued effort of renovation or extension of some lines, evolution of pricing, improvement of information to users, etc. All this is going in the right direction but lacks precision on how to apply these measures and time-schedule.

Changes in behaviours are key to permit the real increase of alternative vehicles in modal shares. That is why a whole section is dedicated to awareness raising, which could occur thanks to comparisons of budget necessary for the same travel between different transport means, or displays of pollution and concentration of some pollutants in some local areas. This awareness raising is important and necessary, because the success of goals stated by the Plan depends partly on behavioural changes, and not only on alternative transport. Now, this change of individuals’ habits can only be complementary to the development of alternative transport offer. The modal shift of 8% of car decrease – objective of the Plan – will be possible, moreover, only if offer in collective transport is greatly enhanced.

4-1-4. Credibility and guarantees: will good intentions be followed by action?

The Urban Mobility Plan recognizes that objectives stated in the previous Plan – dating from 2006 – have not been reached, which is the reason why MPM has decided its revision. This evaluation and the following decision seem to show, then, the will to start with a new basis in order to really improve mobility system.

Nevertheless, one can wonder about the credibility of all the measures announced, whereas the Plan from 2006 already included a part of them and has not allowed their application. Thus, soft vehicles were already promoted in that Plan, with the same kind of measures:
creation of bike paths and lanes on main axes and crossroads, promotion of a climate favourable to the use of bike in city, areas where the maximum speed is 30 k.p.h., Master Plan for bikes, etc. Now, between 2006 and 2012, very few realisations have been made for cyclists, which explains partly their very low modal share. Pedestrians have also been forgotten. On the contrary, car use has been favoured through projects implementation such as parking areas or tunnels construction. So, why a new Urban Mobility Plan would be better applied than the previous one? All the more so as the new Plan does not present a complete evaluation of the 2006 Plan results.

In addition, the Urban Mobility Plan announces many infrastructure or equipment projects. Now, some of them require preliminary studies, and their opportunity or feasibility have not been studied yet. This raises doubts on the effective implementation of these projects. At least, a time schedule should have been set to guarantee the realisation of these studies. This is the case for the development of Arenc, Blancarde and Cantini stations as complementary to Saint Charles station and gateway for Marseille. This is also valid for transport with exclusive lanes to the airport, which would previously require coordination between the different transport authorities.

This observation also raises worries about realism of the announced budget. Although 4 billion Euros of investment are announced for 2013-2023, the Plan, for some projects, only assesses the cost for preliminary studies necessary to their realisation, and not their realisation itself, which distorts the overall estimated budget.

In conclusion, the Urban Mobility Plan announces good intentions, but it is difficult to know if they will be really followed. Does MPM provides with the means to match up its goals? Actually, only politicians possess the answer to guarantee the overall implementation of the Plan. Now, until then, there has always been a difference between rhetoric and practice. One can have a look at the recent renovations on the symbolic places of La Canébière, rue de la République and the Vieux-Port, which, in contradiction with the article L 228-2 of the Environment Code obliging to foresee facilities for bikes when building or renovating a street, have not installed any lane dedicated to bikes⁸. When Eugène Caselli, President of MPM, has been questioned on this for the Vieux-Port, he has only answered that cyclists could use bus lanes, which is not on the same line as what is promoted officially by its administration. Although the Urban Mobility Plan insists on awareness raising of inhabitants, politicians, who are the ones who can ultimately take decision on transport, should be priority targets of these measures, in a city where the culture of car dominates all segments of society.

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⁸ In 2012, the « Collectif Vélo en Ville » won two appeals in court against MPM for non-compliance with this article.
The creation of Aix-Marseille-Provence metropolis: a recognized need, but an imperfect realisation

In September 2012, following affrays particularly violent with kalashnikov in peripheral areas of Marseille, the French government got together to find a solution on Marseille case, which regularly was on the front pages of national newspapers for murders occurring in areas tackled by poverty.

Following the decision of the government, and included in the decentralisation law which should be approved by MEPs before late 2013, a metropolis “Aix-Marseille-Provence” should be created on the 1st of January 2015. This metropolis, appealed since years by many local stakeholders, is seen as the solution to the administrative fragmentation of the territory, considered as responsible for the difficulties suffered by the inhabitants in terms of economic development, transport and territorial inequalities.

This text goes further than the previous reform on local governance adopted by the previous government (in December 2010), as it creates a specific status for Aix-Marseille-Provence metropolis (as well as for the Great Paris and the Great Lyon), along with ordinary metropolis. The new metropolis will replace the six intermunicipalities9 of the territory. The council of the metropolis will be headed by a president, and composed of metropolis councillors. The metropolis will be divided into “territories”, each of these having its own council and elected representatives.

After the whole demonstration presented in this study, the creation of a metropolis on the territory is more than welcome if it really permits to lead policies at metropolitan scale. Now, the metropolis as presented in the law project and the context in which it would be created raise some doubts about this capacity.

4.2.1. A real metropolis or the perpetuation of intermunicipalities?

The metropolis will be divided in territories, which are presented as the guarantee to take local specificities into account. Now, although according to the law the boundaries of these territories are set by decree, the Minister in charge of decentralisation, Marylise Lebranchu, suggested that these territories would cover the same limits as the current intermunicipalities. The risk, then, is to replicate the same fragmented management of the territory, pushed by local mayors opposed to the creation of this metropolis.

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9 Communauté urbaine Marseille Provence Métropole, communauté d'agglomération du Pays d'Aix-en-Provence, communauté d'agglomération Salon Etang de Berre Durance, communauté d'agglomération du Pays d'Aubagne et de l'Etoile, syndicat d'agglomération nouvelle Ouest Provence, communauté d'agglomération du Pays de Martigues.
The territories councils, which will manage these territories inside the metropolis, will be in charge of competences instead of the metropolis and/or cities. Then, unlike classical metropolis, territories councils won’t be only consultative. They will receive from the metropolis an investment and operating budget to implement these local and non strategic actions. For M. Lebranchu, as they won’t be in charge of the taxation, and as they will manage competences delegated by the metropolis, there is no risk that these territories councils monopolize powers.

Nevertheless, the strong opposition of most mayors and presidents of intermunicipalities to the project – basically, only Eugène Caselli, president of MPM, is in favour of this metropolis – casts doubt on this, as the law leaves too much space to permit them remaining in the system in place.

However, while the metropolis can delegate competences to territories councils, it is compulsory that a list of competences remains under its responsibility. Now, this is the case for transport, that the metropolis will manage. This provides reasons to be optimistic on a further integration of transport management on the territory.

4-2-2. Which legitimacy for the metropolis?

Whereas the multi-layered institutional structure (the famous “millefeuille”) of the French administration has been criticized for years, the metropolis carries the risk of increasing its complexity by adding a new level of decision-making, which would be the metropolis. This risk is reinforced by the possibility to maintain former intermunicipalities in the form of territories councils, as seen above, instead of really cancelling them. Therefore, the metropolis is likely to appear only as an additional level in the complex institutional system and lose its interest for citizens.

Furthermore, the metropolis members won’t be elected through direct universal suffrage, which would have helped it to achieve legitimacy among inhabitants of the territory. Mayors’ role will remain predominant, notably through the institution of a “mayors’ conference”, giving them the opportunity to lobby for local interests instead of metropolitan interest within the metropolis.
4-2-3. Financing and transport: Aix-Marseille-Provence metropolis disadvantaged compared to the Great Paris

Whereas ministers seem to have realized that local politicians would not solve Marseille area issues if not imposed by above – the State – notably in terms of transport, conclusions are slightly different when looking at financing. Marseille territory undoubtedly needs another governance scheme to improve its transports, and this may be brought by the new metropolis. But the other top priority to solve transport issues is the financing able to finance big infrastructure projects. Now, when comparing allocations given by the State to the Aix-Marseille-Provence metropolis and those given to the Great Paris, the contrast is obvious. The State invested 4 billion Euros in 2010, to which it is going to add another 2 billion, to finance the extension of a metro covering today 213 km and add 200 km (the total budget should be 27 billion Euros). In comparison, Marseille, one of the largest French cities, has only 23 km of metro and 11 km of tramway: now, to get national subsidies, Marseille will only have the capacity, as all French other cities, to answer to the 3rd call for proposal launched by the State to finance reserved public transport lanes.

The argument of inhabitants’ number – 12 million in the Great Paris – and the number of travellers in collective transport – equivalent in one single regional train line to the whole metro network in Marseille – is not valid when considering that the number of travellers in public transport would be much higher if Marseille area had a real public transport network. Moreover, the historical unbalance of investment between Paris and all the other French big cities would justify compensatory investment.

Local politicians have showed their frustration in front of this difference in treatment and inequality between regions. This will not help government to convince the opponents and inhabitants of the opportunity of the metropolis. And this will not help, neither the Urban Mobility Plan to respect its commitments, nor the Aix-Marseille-Provence metropolis to fulfil its obligations in transport development matters.
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