

Measure title: **Public space redesign in Toulouse**

City: **Toulouse**

Project: **MOBILIS**

Measure number: **6.2**

A Introduction

In preparation for the opening of the 2nd underground line, planned for 2007, Toulouse carried out an integrated package of accompanying measures and mobility changes in the city centre

This measure particularly concerns the city centre and acts on a commitment to:

- Create and extend the areas subject to access control as well as pedestrian precincts.
- Reduce traffic in the most central sectors with improved management of the cost and availability of parking spaces,
- Increase the admissibility of access restriction policies in congestion areas.

In addition to road works and setting up new access restriction systems, the Mobilis 6.2 measure provides for an assessment of their impact on transport patterns and more generally on the use that is made of Toulouse city centre. In this regard, various types of survey aiming to accurately observe habit, traffic, pedestrian and cyclist trends were carried out.

This measure is being implemented within a specific context, with the opening of the underground line B in July 2007. Development of this second line altered the public space around stations, with support features being integrated into their surroundings (for example, pavement, square, surfacing, bicycle racks, modified parking area or work of art).

A1 Objectives

In relation with the opening of the 2nd underground line in Toulouse, the objective of the measure relies on the urban renewal of the city centre in order to:

- facilitate the mobility, the use of public transport (PT);
- improve pedestrian areas and access to the underground stations (by restructuring the entrances of the 20 underground stations of the new line B);
- redesign public space with pedestrians and cyclists in mind by installing new bicycle parks around all new underground stations, for example ;
- create special areas for deliveries.

but also :

- create and enlarge access-controlled and "clean zone" areas;
- reduce car traffic in inner urban areas by managing parking space availability and costs;
- improve the acceptance of access restriction policies for sensitive areas
- reduce the physical ascendancy devoted to cars;
- optimise parking organisation, combining this with a reduction in the number of available parking spaces.

A2 Description

Within the period of the MOBILIS project (between 2005 and early 2008), on the corridor of the 2nd underground line in Toulouse, various sub-measures were implemented in the heart of Toulouse city centre to divert through traffic by resigning the landscape of the public space to favour more environmentally-friendly means of transport. The lanes for pedestrian and

two-wheeled vehicles have been secured along this corridor. Accessibility and continuity are ensured in other places than the underground stations only. There is no parking whatsoever on the section of boulevards situated around the Jean Jaurès station (core of the PT network – cross of the underground 2 lines). Specific lanes have been built to ease deliveries and short stops.

B Measure implementation

B1 Innovative aspects

At the local level, this measure is part of a more general reorganisation plan of the city centre, in connection with the commissioning of line B, which encourages the use of public transport and non-motorised means.

The innovative aspects of the measure are:

- **New policy instrument** – The aim of this measure is to change the behaviour of people going to city centre and force them to give up their private vehicle.
- **New physical infrastructure solutions** – To force people to change their behaviour, the city centre design is reviewed : less parking spaces and car lanes, more space for bicycles and pedestrians.

B2 Situation before CIVITAS

The programme for the 2001-2007 term of the city council elected in 2001 planned to extend the pedestrian areas in the city centre. During the 2001-2005 period, the works on underground line B affected the boulevards and prevented any other work being carried out in the areas.

A pedestrianisation committee, comprising local councillors, shopkeepers and a representative of the Chamber of Commerce and Industry (CCCIT) and a technical committee were created.

The 2001-2007 programme sought to limit motorised transport, facilitate use of environmentally-friendly transport means, improve accessibility and public transport management.

The development principles adopted were to reduce to a single traffic stream where possible, widen pavements, get rid of parking spaces, develop areas for deliveries, recommend sections without kerbs.

Support measures carried out at the same time included restoration of façades, improvement of public lighting, and enhancing public space.

In 2005, before the implementation of MOBILIS actions, Pedestrianisation only concerned the Wilson Square area (Square located near Jean Jaures underground lines A and B main station) and the surrounding streets (Lafayette, Montardy, Lapeyrouse, Roosevelt Alleys). The other areas of the very centre were mostly devoted to cars.

Bus routes went down Rue d'Alsace Lorraine. This is no longer the case since line B opened in 2007; bus lines have been redirected on to the boulevards.

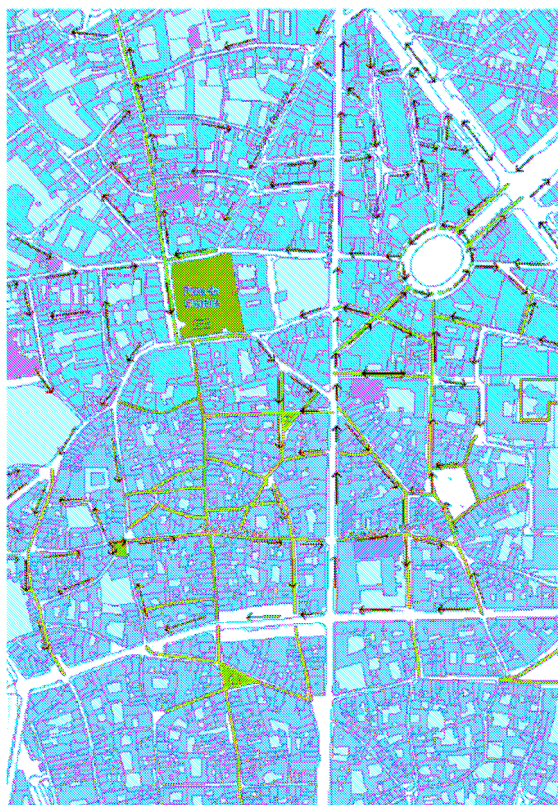


Figure 1: Traffic layout around Place du Capitole and pedestrian areas in 2005.

B3 Actual implementation of the measure

This measure covers a series of actions, which can be combined into four phases according to their planning and type:

- Modification of the traffic layout;
- Urban planning for bicycles;
- Pedestrian area development
- Delivery area implementation

Modifications of the urban plan in favour of sustainable transportation

In late 2005, the neutralisation of the street to the south of the “Place du Capitole” square by restricting the traffic access, and neutralisation of one street to the west (Arcades). The neutralised area to the west is reserved for deliveries in the mornings and for pedestrians the rest of the time. Fixed street furnishings run along the side of it and removable posts were set up at the access points.



Figure 2 : Capitole square traffic directions

A study started in 2006 to launch an architectural competition to redesign the central historical district of Toulouse with, in particular, the aim of encouraging soft modes. The planned operations would only be carried out in the year 2010.

Mid 2006, the traffic plan has been extended around the “Place du Capitole” :

- Rémusat sector, traffic direction change in the Rue de Rémusat

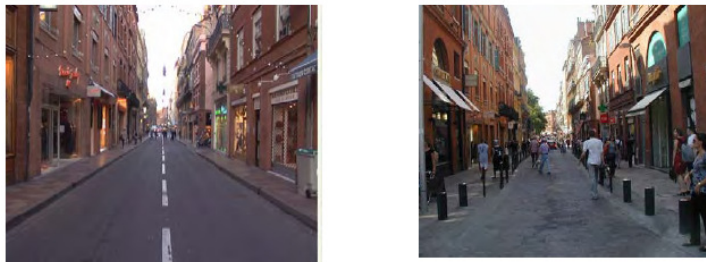


Figure 3: “Rue Lafayette” before and after

- Taur sector, consisting in controlled access to the “Rue du Taur”
- Ga-mbetta sector (being studied), St Ursule, Peyrolières, consisting in traffic direction change in the “rue Sainte-Ursule” and controlled access to the “rue Cujas” or “rue Temponières”.

After the underground line B has been opened, in the autumn of 2007 pedestrian-friendly streets of the city centre were opened for cyclists in both directions, but one-way for cars, In 2007, there were 211 km of cycle lanes in Toulouse, amounting to a 40% increase since 2001. Shared spaces (bus lanes, service roads, pavements, mixed lanes) account for 60% of these developments. 188 km of recommended routes complete the network, in zones 30 and zones 10, pedestrian precincts or pedestrian-friendly stretches where it is safer for cyclists.

At the same period, a private supplier has erected 135 bicycle stations in the city centre (1,500 bicycles, 2,200 terminals) for automated bicycle rental and signposted two-direction cycle lanes were laid out right in the centre making it possible for cyclists to use one-way streets in both directions. 39 streets and squares have been developed in this regard.

At the end of 2007, the provisional redevelopment of “Rue Alsace Lorraine” intervened : removal of bus lanes, widening of the pavement on the east side, layout of a cycle lane in the opposite direction and delivery areas, reduction of the general traffic lane and above all interruption of general traffic at “Square de Gaulle”, thereby removing through traffic from this road.

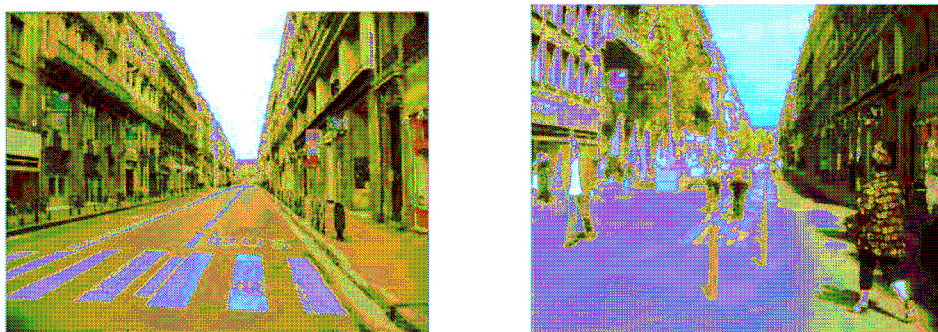


Figure 4: Rue d'Alsace Lorraine before and after

Delivery area implementation

In 2006, the Toulouse Council House, Chamber of Commerce and Industry (CCIT) and carrier trade unions worked together to draw up a common charter whose purpose was to lay down rules and good practices associated with delivery in the city.

At the end of 2006, the joint discussions led to delivery area creation in the heart of Toulouse city centre and the production of the Charter on Good Delivery Practices in the City Centre, which was signed in early 2007. (Measure 10.1)

B4 Deviations from the original plan

The deviations from the original plan comprised **Additional Activities implemented**

Pedestrianisation projects of the city centre depended to a considerable extent on the commissioning of the underground line B in June 2007.

The whole of the semi-pedestrian area extension programme has been implemented and the main accesses to the city centre (Rue d'Alsace-Lorraine) was added to the initial programme. A private architect firm was called on to work out how these developments would best be implemented.

Reasons for the deviation:

The population (residents, visitors of the city centre, shop owners) well accepted the reconstruction of Roosevelt street and Wilson square as it noticed that it decreases traffic congestion and its negative environmental effects (noise, pollution...). The commercial stakeholders have particularly welcomed it as it improves the attractiveness of the city centre. A survey established in 2002 showed that already then 89% of the population was in favour of the pedestrianisation of the city centre.

As all bus lines passing through this avenue were replaced by underground services, the measure group proposes to extend the public space redesign to Alsace Lorraine Street The inclusion of the reconstruction of the avenue Alsace Lorraine, the main access to the city centre of Toulouse, considerably enlarged the measure impacts in terms of improvement of the modal split (5000 private vehicles less daily).

B5 Inter-relationships with other measures

The measure is related to other measures as follows:

No.	Measure title	Relation
6.1.T	Definition and implementation of a new parking management policy in Toulouse.	The re-organisation of the car parks management in the city centre has been done in relation with the re-design of the public space linked to the 2 nd underground line construction.
6.4.T	High-quality bus corridors in Toulouse and development of PT segregated and secured lanes in the city centre.	The development of PT segregated lanes in the city centre offered alternatives to private cars for commuters, in addition to traffic restrictions and private-car parking in the city centre. This is also a means of restricting private-car capacities.
10.1.T	Clean urban logistics and goods distribution platform in Toulouse	The new organisation of freight delivering in the city centre has reduced the number and size of lorries.
11.2.T	Promotion of bicycle use and integration with PT services in Toulouse.	The re-design of the public space linked to the 2 nd underground line construction, took in consideration the cycle mode promotion and the cycle parks development around underground stations.

C Evaluation – methodology and results

C1 Measurement methodology

The general principle of the evaluation is based on comparison “before-after” of traffic measurements for different modes through surveys.

C1.1 Impacts and Indicators

Impact	Indicator	Used
Reduce the physical hold over cars	Public space areas reassigned to soft modes (m ²) in city of Toulouse Traffic plans created before and after 2005. Evolution of traffic, average speed, travel time on boulevard ring	Yes Only speed
Facilitate mobility and use of public transport;	Evolution of cyclist number,	Yes
Improve pedestrian walkways and access to underground stations;	Evolution of pedestrian number	Yes
Redesigning public space with pedestrians and cyclists in mind by installing new bicycle parks around all new underground stations	Evolution of pedestrian area Evolution of cycling lane length Evolution of cycling system offer	Yes Yes Yes
Optimising the way parking spaces are organised and reducing the number of spaces available	Number of parking places available	No Used in measure 6.1
Create special areas for deliveries Cost and benefits	Evolution of the number of areas and service roads specially for deliveries,	Yes

Detailed description of the indicator methodologies:

The evaluation of the redesign of the “Place du Capitole” and of the sectors in the vicinity, is based on a targeted analysis of the following surveys:

	2001	2002	2003	2004	2005	2006	2007	2008
Pedestrian counting	x			x		x		x ?
Bicycles counting	x					x		x ?
Car survey around the city centre						x		x ?

The surveys, led to assess traffic, pedestrian and cyclist numbers, concern the very centre of the city and perimeters which vary depending on the contexts of each means of transport.

Pedestrians counting

Since 1992, just before the first underground line was opened, the number of pedestrians in Toulouse city centre was monitored through regular counts of the pedestrians in the streets.

The survey, conducted in 2008, is the seventh based on the same method: the last ones took place in 1992, 1994, 1998, 2001, 2004 and 2006.

Since 2007, a dozen sites have been monitored five times a year by the Toulouse City Centre Pedestrian Monitoring Observatory. In March 2008, the survey covered more than 70 sites through the city centre which have been monitored since line A opened in 1992.

Until 2006, the analysis was conducted over three main sectors covering the main squares of the city centre: Esquirol, Capitole-Daurade, Wilson-Jaurès. In 2006 and 2008, a new division created new sectors: Jeanne d'Arc, Metz-Monument and Carmes.

Carried out at regular intervals, this work reveals the busiest areas, and those which are becoming more or less popular with pedestrians. It can also be used to assess the effects of landscape developments carried out in public spaces.

In 2008, the survey was carried out Thursday the 27th and Saturday the 29th March.

Three counting are carried from 7.30 a-m to 9 a-m (not in Saturday), from 11.30 to 12.30 a-m and from 4.30 p-m to 6.30 p-m (before 2008, the counts started at 4 p-m on Saturday).

Bicycles counting



The perimeter of the cyclist surveys is slightly wider than for the pedestrian surveys. The City of Toulouse initiated bicycle counting surveys in 1998 on 4 counting stations, rising to 25 stations in 2001. These counts analysis assessed cyclist numbers in the city centre, showed which areas of the city cyclists used, showed how bicycle use has evolved in the city centre, assessed the opportunity for new developments with bicycles in mind. For the purposes of consistency, the 2008 survey method was identical to the one in 2001 and 2006. The surveys were led on two different days each year a Thursday and

a Saturday (out of days off or school holidays). In 2006, the survey was carried out on the 11th and 13th of May and in 2008 it was carried out on the 29th of March and the 4th of April. The time periods are the same as the one presented for the pedestrians counting.

Car survey around the city centre

The evaluation of the "Place du Capitole" redesign, carried out in September 2005, was made by measuring the impact of traffic flows at rush hours in the morning and evening in the Place du Capitole and in the converging streets, or the ones leading out (Lois, Romiguières, Gambetta, Taur, Rémusat, Lafayette, Poids de l'Huile, Pomme, Peyras, and Cujas). It is based on the comparison of traffic counts made in March 2001 (Baseline situation), then in October (situation right after the modification) and November 2005 (stabilised situation after the modification).

Lastly, the perimeter of the ODPV¹ 2006 survey is the most limited since it covers the very centre, from Place Esquirol, north of Rue d'Alsace lorraine and the Jaurès-Boulevard crossroads to the Jacobins district.

It has defined a second perimeter for the ODPV survey in 2008 with a view to identifying through traffic in Rue de Metz and to reproducing the routes that vehicles using this road take. Only light vehicles were counted in 2006 as through traffic was the main interest. But

¹ | Origin-destination of private vehicles. Survey by number plate reading

because the latter has since been partially eliminated, we would also now like to find out the structure of traffic and heavy goods vehicle routes through the centre. For the sake of keeping the results from 2006 and 2008 comparable, it has been requested that a distinction be made between the private car and heavy goods vehicle counts in 2008. The origin-destination survey is carried out by recording, over four time periods², from 53 survey stations, the number plates of the vehicles travelling on a cordon in the heart of the city centre and directional counting in the area or at the crossroads as shown on the map.

² 7.30a-m/9.30a-m, 10.30a-m/12p-m, 2.30p-m/4p-m and 5p-m/7p-m.



Figure 6: Survey points in city centre

The surveys were carried out on Thursday the 16th February 2006 and Thursday the 20th March 2008.

Counting were carried out in term-time and on public holidays, one Saturday and one week day (Tuesday or Thursday), the same as for the pedestrian and traffic surveys. Tuesday and Thursday are considered to represent week days when employees, students, pupils and so

on travel in the city centre, while Saturday is considered to represent a busy day, particularly in commercial activity terms.

Although delivery areas are part of the Mobilis 6.2. measure, they will not be assessed because the initial meetings with the various stakeholders did not paint a clear enough picture of the implementation of this action.

C1.2 Establishing a baseline

Before 2005, Toulouse city centre was characterised by:

- Fewer pedestrian areas (only 6 km of semi-pedestrian streets in the city centre),
- A single underground line (line A),
- A city centre wide open to car traffic, including through traffic,
- Few cycle routes (1 km of cycle paths and 2.9 km of cycle lanes in the city centre)
- Few bus lanes (1.1 km of bus lanes in the city centre and 2 km in the whole of Toulouse).

The available data to define the base line are:

- For through traffic, the results of the origin-destination conducted on 26 April 2001 (before the second bus lane opened on Rue d'Alsace-Lorraine)
- For pedestrian number and bicycle conditions, the results of the former surveys.

C1.3 Building the business-as-usual scenario

We can assume the opening of line B as this was decided before the support measures of measure 6.2.

The ad-hoc situation would correspond to the basic situation with underground line B. We admit that this scenario can only be theoretical, as the opening of a second underground line in an urban area the size of Toulouse always leads to a redistribution of public space in favour of more environmentally-friendly transport means.

Regarding the consequences, we can make the following assumptions:

- Through traffic and volume of private car traffic maintained in the city centre would continue to use the road network right in the city centre and particularly around Place du Capitole, in the south-north direction of Rue Alsace-Lorraine, on Allées Roosevelt and Place Wilson.
- The traffic using the boulevards laid out in 2 times 2 traffic lanes would continue to be heavy (around 900 vehicles an hour at evening and morning rush-hour at the crossroads with Boulevard de Strasbourg/boulevard Carnot around 700 vehicles an hour in off-peak periods in 2001).
- Smaller increase in pedestrian numbers than today_The high numbers of private cars in the city centre mean that there is less space for environmentally-friendly means of transport and therefore less accessibility to the underground and bus network. Car traffic would remain constant compared with volumes recorded in 2001, i.e. heavy, with a poor living environment.
- Fewer people opt for the underground over their car Even if at present, with no household survey-type studies, we cannot assess it, we can assume that the redistribution of public space in favour of alternative means of transport to cars would have meant fewer people opted for the underground and then the city centre streets over their car.

C2 Measure results

C2.1 Economy

Not appropriate as it concerns mainly investment costs. The total cost of this measure was roughly 1 million of euros.

C2.2 Energy

This impact has not been assessed.

C2.3 Public space

The main evolutions in the traffic scheme before and after Mobilis



Figure 7: Traffic scheme

Changes to pedestrian and semi-pedestrian areas before and after Mobilis

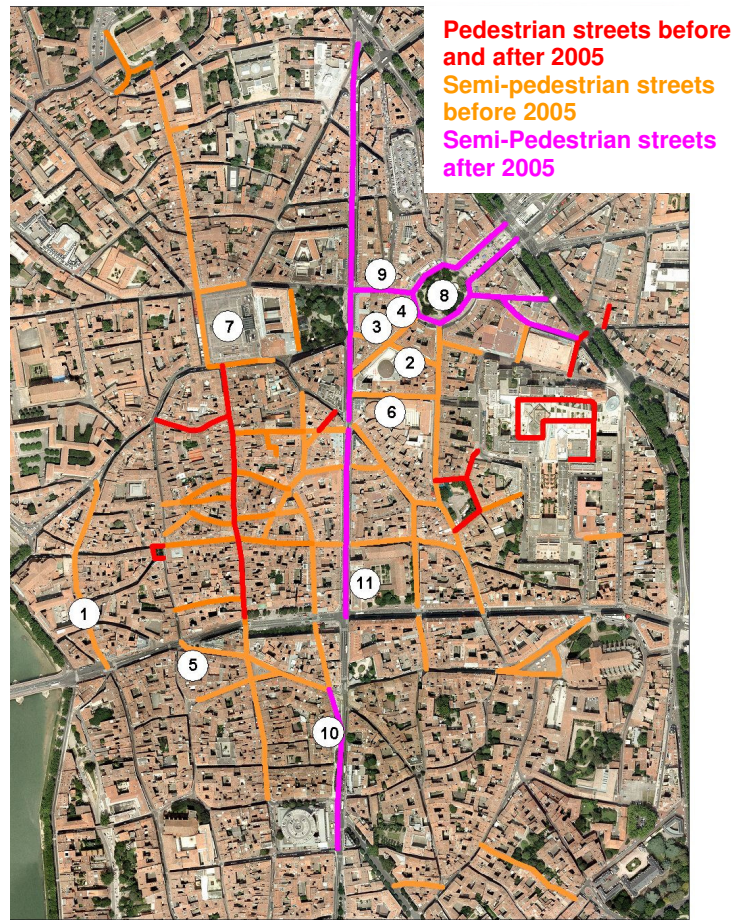


Figure 8 : Pedestrian and Semi Pedestrian Streets

Pedestrian-friendly areas (km) in Toulouse city centre



Figure 9 : Pedestrian friendly areas in city centre

The map above shows that the heart of Toulouse city centre has been entirely subject to “zone 30” development.

In 2007, the term “voie à priorité piétonne” (pedestrian-friendly street) was no longer used in Toulouse. The whole of the city centre did, however, become a zone 30 and some streets, the busiest shopping areas, became zone 10. Subsequently, developments giving priority to pedestrians in 2007 include pedestrian areas over 2.9 km; zones 30, over 187 km; zones 10, over 5.3 km.

Urban planning for bicycles in Toulouse city centre at the end of 2007

At the end of 2007, 32 km of cycle lanes criss-crossed the city centre. Most of them existed before MOBILIS, but since 2005 a redistribution of public space in favour of environmentally-friendly means has been observed, particularly in Rue Alsace-Lorraine where cyclists can now travel in each direction. These developments include both off-road routes such as cycle paths and mixed pedestrian-cyclist pavements, on-road routes such as cycle lanes, bus lanes and service roads.

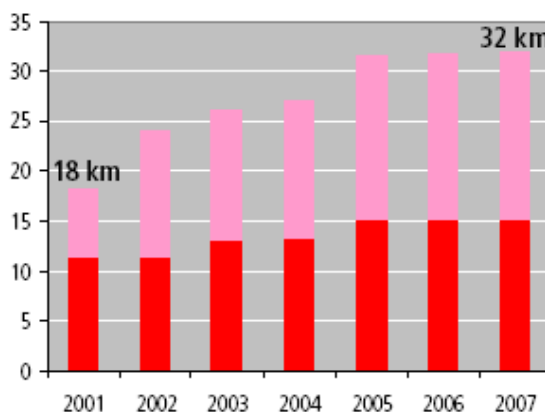


Figure 10: Rise in cycle routes in the city centre

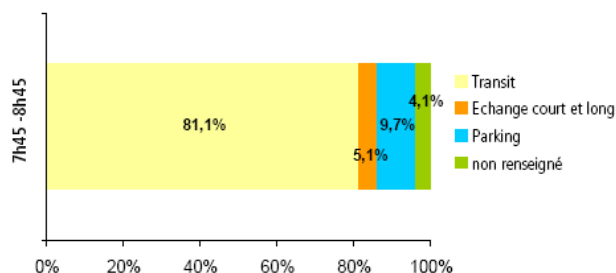
- Cycle lanes and on-road routes
- Cycle paths and off-road routes

The service Vélô Toulouse was officially opened on 16 November 2007. As at 31 January 2008, 135 stations and 1,500 bicycles were available for self-service by the public within the greater city centre,. New stations were added. Since the inauguration, use of these bicycles has become more popular with rental numbers exceeding 11,000 a day on some sunny days in June 2008.

C2.4 Transport

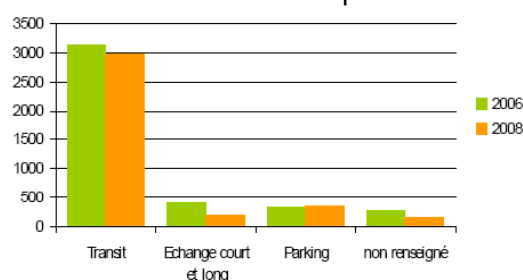
1. • Car trends in the city centre since 2006

• Morning rush-hour: from 7.45a-m to 8.45a-m



In 2008, total traffic in the morning rush-hour was 3,680 private cars, 3,530 which could be identified as through traffic, exchange traffic and traffic linked with car parks. Out of these 3,530 vehicles 81% was through traffic, around 5% was exchange traffic and around 10% was traffic linked with car parks within the study perimeter.

• 2006-2008 comparison for through traffic between 7.45a-m and 8.45a-m

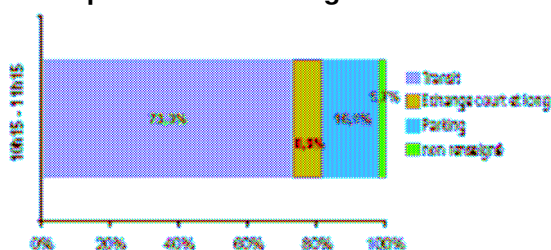


Compared with 2006, through traffic has reduced by 5%. Traffic linked to car parks has increased by almost 9%, short and long exchange traffic has reduced considerably from 410 vehicles in 2006 to 190 in 2008. Figure 11 : Car traffic trends between 7.45 a-m and 8.45 a-m.

Between 2006 and 2008, car traffic at morning rush-hour in the heart of Toulouse city centre reduced by 12.6%.

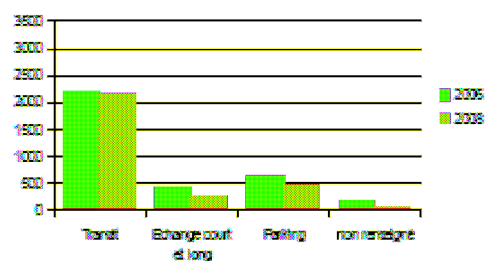
NB: Areas where public space has been reorganised to cater for more environmentally friendly means of transport have seen a reduction in through traffic. Public spaces that have not been reorganised with the same objectives have seen through traffic increase.

At off-peak in the morning: from 10.15a-m to 11.15a-m



Compared with the morning rush-hour (7.45a-m to 8.45a-m), through traffic represented a smaller share of total traffic: **73% compared with 81%**. These vehicles fell from 2,990 to 2,150. However, traffic linked to car parks increased (472 between 10.15a-m and 11.15a-m) compared with 359 between 7.45a-m and 8.45a-m to make up 16.1% of vehicle flow.

Car traffic trends between 10.15a-m and 11.15a-m



Car traffic in the city centre reduced more considerably for the 10.15a-m to 11.15a-m time slot than for the morning rush-hour. **Through traffic fell by 2.5%**, short and long exchange traffic fell by 64%, flows linked to car parks fell by 32%

During the morning off-peak period, **private car traffic in the heart of Toulouse city centre fell**

by 17%.

However, although through traffic reduced between 7.45a-m and 8.45a-m in areas that had been reorganised to cater for more environmentally friendly means of transport, for the 10.15a-m to 11.15a-m time slot, through traffic increased in access and shopping areas.

2. Pedestrian numbers in the city centre

The main results during the week over a full day: At district level between 2001 and 2008 and between 2006 and 2008, it is observed that most of the districts saw pedestrian numbers fall during the week, as shown in the table below.

Table 1: Average pedestrian number per hour during the week, per district

	2001	2004	2006	2008	Average percentage of annual hourly pedestrian number trends 2001-2008
Capitole-Daurade	1392	1428	1400	1063	- 4.4%
Carmes	1084	1089	499	581	- 12.4%
Esquirol	1533	1437	1552	957	- 8.6%
Jeanne d'Arc	1207	1110	1478	1388	+1.9%
Metz-Monument aux combattants ^s	609	611	594	680	0%
Wilson	1084	1056	961	997	- 1.2%

Moreover, the reduction in pedestrian numbers in the city centre between 2001 and 2008 was certainly partially due to the opening of underground line B. Some of the people who used to walk to work or to a bus stop now take the underground. It is observed that the only counting stations to increase on week days are those located close to the line B underground stations. The main results on a Saturday over a full day: at district level between 2001 and 2008 and between 2006 and 2008, the general trend points to an increase, as shown in the table below.

Table 2: Average pedestrian numbers per hour on a Saturday, per district

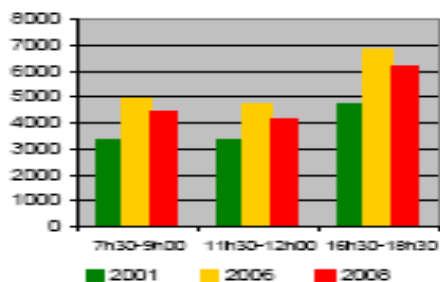
	2001	2004	2006	2008	Average percentage of annual hourly pedestrian number trends 2001-2008
Capitole-Daurade	2017	2621	2168	2890	+ 4.3%
Carmes	1343	1546	573	977	- 5.4%
Esquirol	1961	2352	2180	2400	+ 2.6%
Jeanne d'Arc	1546	1753	1768	2507	+ 5.5%
Metz-Monument aux morts	1041	1022	821	1097	+ 0.7%
Wilson	1202	1449	997	2593	+ 7.7%

3. Number of cyclists in the city centre

During the week, cyclist numbers and routes vary

Trends in overall average bicycle use per period during the week (in number of bicycles per hour)

Source: city of Toulouse, ADEMA



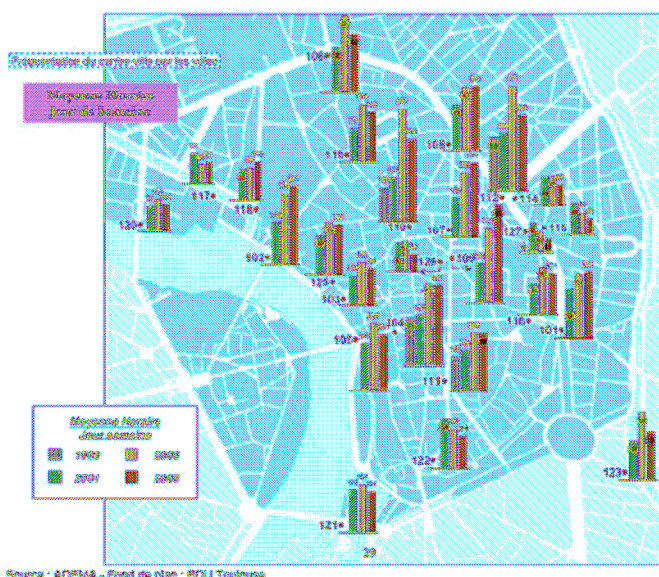
Overall, for all 25 counting stations, week-day cyclist numbers in 2008 are less than in 2006: 2,600 fewer bicycles were counted over the four-and-a-half hour survey. This reduction is observed for each survey period (morning, midday and evening), and is around 10% for each period. That said, cyclist numbers in 2008 are still higher than in 2001 and the general trend over the 2001-2008 period is upward. The weather was warmer in 2008 however, which naturally pushed numbers

up.

The reason for the fall between 2006 and 2008 probably stems from several factors. It is perhaps partly due to greater use of public transport and the new underground line in particular and to the weather conditions, the gloomy weather of the survey day discouraging people from cycling, but also in 2006, the counts were taken much later on in the year than in 2008 (May 2006/March and April 2008), when people have perhaps got more into the habit of cycling.

Note that in 2008, the use of the Vélô Toulouse service was relatively high that day. The influence of this service is difficult to pinpoint. The differentiation between Vélô Toulouse bicycles and own bicycles could be considered during future counts.

Cyclist numbers in the city centre (hourly average during the week)



The reduction observed between 2006 and 2008 does not concern all of the counting stations, some of which actually see their bicycle numbers increase, in particular, those located on Rue Alsace-Lorraine. However, a sharp drop in numbers is observed at Place du Capitole, as well as on the Boulevards

The cyclists seem to have taken to the new developments on Rue Alsace Lorraine, which now has a cycle lane in both directions, to the detriment of “parallel” circuits which perhaps enabled this busy traffic street, unpleasant for cyclists, to be avoided.

On Saturday there has been a sharp increase in cyclist numbers

Trends in overall average bicycle use per period on Saturday

(in number of bicycles per hour)

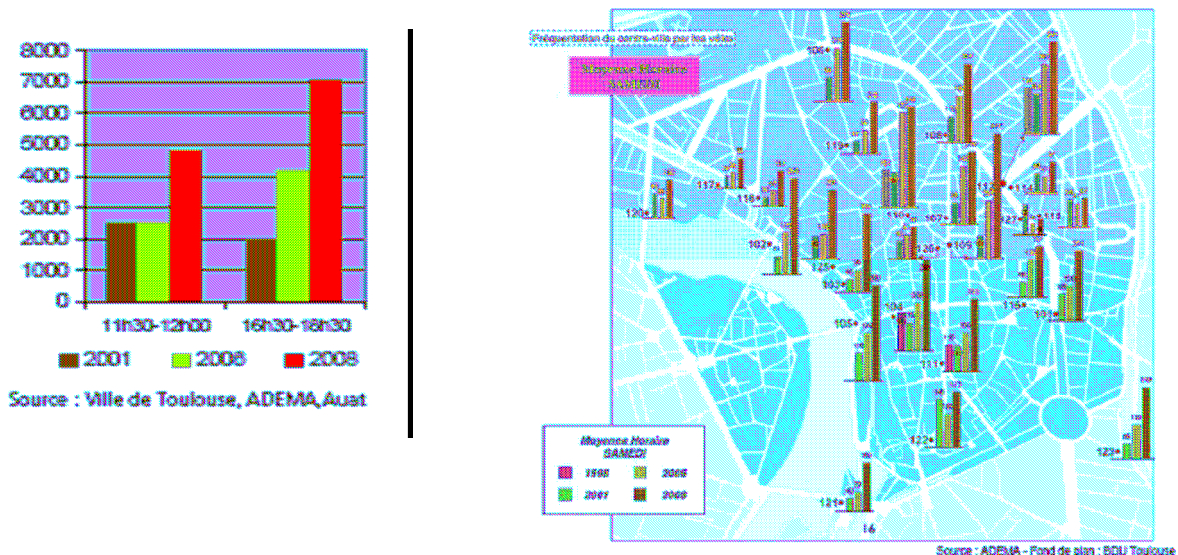


Figure 12: Cyclist numbers in the city centre (hourly average on a Saturday)

Overall, for all 25 counting stations, cyclist numbers on Saturdays in 2008 have increased considerably compared with 2006 and 2001. Compared with 2006, 8,000 more bicycles were counted over the three-hour survey. This significant increase has been observed for each survey period: the number of bicycles per hour over the 25 stations doubles in the morning and increases by 70% in the afternoon. This is explained at least in part by the difference in weather conditions between the two years: in 2001 and 2006, the weather was not ideal for cycling, with rainfall (and even some snowfall in 2001), whereas in 2008, the weather was fine and sunny.

For the first time, numbers were higher on Saturday than during the week

This is mainly explained by the difference in weather conditions between the two 2008 survey days.

Vélô Toulouse bicycles may also play a part in this new trend: they were particularly popular on the Saturday of the survey.

C2.5 Society

No social impact has been measured.

C3 Achievement of quantifiable targets

No.	Target	Rating
1	Facilitate mobility and use of public transport;	**
2	Reduce car traffic, particularly through traffic in the city centre;	**
3	Improve pedestrian walkways and access to underground stations;	**
4	Redesign public space with pedestrians and cyclists in mind by installing new bicycle parks around all new underground stations, for example	***
5	Create special areas for deliveries.	**
0 = Not Achieved * = Substantially achieved ** = Achieved in full *** = Exceeded		

C4 Up-scaling of results

The measure already covers the whole city centre, so no up scaling is planned.

C5 Appraisal of evaluation approach

The chosen principles to measure the impacts was adapted to the measure, but the survey methodology changed between the different periods and the collected data have not always been easy to analyse.

Traffic in the city centre:

The origin-destination survey was conducted on 26 April 2001, which was before the second bus lane was opened on Rue d'Alsace-Lorraine. The cordon survey and directional counting were carried out by recording the number plates of the vehicles travelling in the defined perimeter.

In 2006, the cordon survey and directional counting were conducted by recording only the number plates of **light** vehicles entering or leaving the heart of the city centre perimeter on Thursday, 16 February 2006. The route times were measured by vehicles equipped with GPS that drove around the study perimeter during the data collection periods following six pre-defined routes. The afternoon data is unusable; disruptions were caused by a demonstration

Furthermore, the definition of a new method of analysing made any comparison with data from the 2001 origin-destination survey of private cars difficult.

In 2008, the survey uses practically the same perimeter and method as the ODPV survey conducted in 2006 to assess traffic patterns.

New challenges have been integrated though;

- Consideration of commercial traffic and heavy goods vehicles in the city centre Only light vehicles were counted in 2006 as through traffic was the main interest. But because the latter has since been partially eliminated, we would also now like to find out the structure of traffic and heavy goods vehicle routes through the centre. For the sake of keeping the results from 2006 and 2008 comparable, it has been requested that a distinction be made between the private car and heavy goods vehicle counts in 2008.

- Different recording period: Of the four recording periods, the 10a-m to 12p-m time slot has been changed. In 2006 this slot was 10.30a-m to 12p-m, but because of new laws on deliveries, the time slot in 2008 was from 10a-m to 11.30a-m.

Beyond the Mobilis project, the city is continuing discussions on how to develop its centre. It has defined a second perimeter for the ODPV survey in 2008 with a view to identifying through traffic in Rue de Metz and to reproducing the routes that vehicles using this road take. Only light vehicles were counted in 2006 as through traffic was the main interest. But because the latter has since been partially eliminated, we would also now like to find out the structure of traffic and heavy goods vehicle routes through the centre. For the sake of keeping the results from 2006 and 2008 comparable, it has been requested that a distinction be made between the private car and heavy goods vehicle counts in 2008.

For bicycles:

- The influence of Vélô Toulouse is difficult to pinpoint. The differentiation between Vélô Toulouse bicycles and own bicycles could be considered during future counts.

- The importance of weather conditions in bicycle use is once again highlighted by the 2008 counts. It could therefore justify extending surveys over several days to increase the chances of obtaining comparable survey contexts.

C6 Summary of evaluation results

The key results are as follows:

The second underground line, line B and the bicycle rental system, Vélô Toulouse, are now up and running.

- **Key result 1** – A reduction in car traffic, particularly through traffic. Between 2006 and 2008, **car traffic** reduced by 12.5% in morning rush-hour; 17% at off-peak during the morning.
Between 2006 and 2008, **through traffic** reduced by 5% in morning rush-hour, 2.5% at off-peak during the morning.
There has been a very distinct drop in car traffic along Rue Alsace-Lorraine. Although the results are satisfactory overall, it should be pointed out that to the north of Place du Capitole and along Rue Lafayette, traffic increased.
- **Key result 2** – A reduction in bicycle use during the week and sharp increase on Saturdays. During the week overall, bicycle use has fallen between 2006 and 2008 (but increased compared with 2001). Nevertheless, cyclist numbers have increased around Place du Capitole and Rue d'Alsace-Lorraine, assessed for reorganisation of public space in favour of more environmentally-friendly means of transport.
Increased bicycle use on a Saturday is very clear, and the results are much more positive. The stations which increase the most are those located on Rue Alsace-Lorraine and along the Garonne. The station located around Place du Capitole is one of those where the smallest increase has been observed.
However, changes seem to be emerging: developments in Rue Alsace Lorraine, modifications to traffic directions in some roads of the hyper centre and the installation of Vélô Toulouse stations are just some examples of actions which are changing the habits and routes of cyclists. The developments in Rue Alsace Lorraine have led to a sharp increase in cyclist numbers. Consequently, given the general trends for bicycle use, the Mobilis results for this measure are positive, even if the general downward trend does not meet the initial objectives.
- **Key result 3** The pedestrianisation of 2 major roads in Toulouse city centre: Rue Alsace-Lorraine, Place Wilson and Allée F. Roosevelt
- **Key result 4** A very steep increase in pedestrian numbers on Saturdays and reduction during the week. As with the bicycle counts, the general trend is a downward one. Some public spaces which have been pedestrianised have seen pedestrian numbers increase, but the other public spaces that have been redesigned only with pedestrians in mind have seen a fall in pedestrian numbers
Pedestrian numbers have increased overall on Saturdays, mainly in areas of the city centre that have been pedestrianised. The results of this measure are therefore very positive on Saturdays.
- **Key result 5** Layout of areas and service roads specially for deliveries
Although delivery areas are part of the Mobilis 6.2. measure, they have not be assessed,. However, steps have been taken (a delivery charter for the city centre with different time spaces) and a number of areas have been laid out.

D Lessons learned

D1 Barriers and drivers

D1.1 Barriers

The measure leader identified the following possible barriers to the success of the resign:

- Bars, restaurants and shops using more the public space for the pedestrians which reduces the comfort of its use.
- The attractiveness of the new area could also attract more visitors at night, which could cause more nocturnal noise.

Until now, these identified risks seem to be overcome due to the good acceptance of the measure, thanks to the good dialogue that took place with the general public, local citizens and shop owners.

D1.2 Drivers

- **Driver 1** – The main driver identified was the strong political support for the implementation of the measure.
- **Driver 2** – A second factor was the close coordination with the local citizens and shop owners. The technicians and politicians of the city presented the project to each individual shop owner. Local meeting for citizens took place to discuss the individual parts of the plan. General public meetings were organised to present the project to a wider public.
- **Driver 3** - The city implemented at the same time several accompanying measures improve the overall situation (cleaning of the buildings, improvement of the streetlights, general improvements of the public space). This helped to get a favourable opinion of the local citizens and shop owners.

D2 Participation of stakeholders

- **Stakeholder 1** – The Toulouse Council House, Chamber of Commerce and Industry (CCIT) and carrier trade unions worked together was to lay down the freight delivery rules
- **Stakeholder 2** – The public appreciates the new quietness of the city centre, even if some time they don't totally agree with the street furniture design.

D3 Recommendations

- **Recommendation 1** - The design of a city centre has to be combined with the renewal of the parking policy and the development of public transport. The needs of the inhabitants must be clearly identified.

- **Recommendation 2** – The resign of a city centre clearly attributes to the liveability of and quality of the city centre inhabitants, but such an action must be strongly supported by local politicians and good communication campaigns explaining, specifically to the shopkeepers, what will be the benefits of it.

D4 Future activities relating to the measure

Beyond the Mobilis project, the city is continuing discussions on how to get on its centre resign.