

POINT OF VIEW

URBAN MOBILITY, BRINGING BACK PEDESTRIAN TRAVEL

It seems so obvious that we tend to forget that walking is a mode of travel in its own right. Indeed, today's resurgence of interest in walking – which is being followed attentively by elected representatives and transport operators alike – may provide a basis for a reorganisation of the city as a whole and thus the whole of the mobility chain.



Walking, just another fashion?

/ “Walkable” cities and shared space

After a general decline in its modal share up until the early 1990s, followed by a levelling out¹, the figures testify to a discreet return to walking.

In France, in the major urban centres, whereas car travel began to fall back marginally over the period 1994 to 2008 (dropping some 5 points), surveys show a 3-point rise in journeys on foot². In the United States (particularly in Washington, Boston, Philadelphia), pedestrian travel rose by a one point in the statistics.

For the last thirty or so years, we have been hearing protests against the “obsession” with the car. Those protests have come from the United States, a land designed for the automobile³; they come from a movement to regain ownership of the urban environment. Citizens are calling for a city that is more liveable, more user-friendly and more tranquil, a place of calm cohabitation with the car and public transport. “Walkable communities” with “streetblogs” are organising a return to cities on a human scale. These programmes are based on the “New Urbanism” concept. The idea is to make use of the best parts of the older approach to urbanism in the interests of sustainable development and social mixity: short distances conducive to walking or cycling, housing density sufficient for viable commercial activities, plus social and spatial mixity for the residents and for activities.

¹ CERTU, La mobilité urbaine en France: les années 1990, Septembre 2002.

² INSEE, “Dans les grandes agglomérations, la mobilité quotidienne des habitants diminue, et elle augmente ailleurs”, Insee Première, n° 1252, July 2009.

³ Rieg J, “Un quotidien sans voiture dans les suburbs américains?”, Chronos, May 2009.

Some go even further, proposing the foundation of a “New Pedestrianism”⁴, a theory according to which urban space, termed the “pedestrian village”⁵, must be reinvented for ease of use on foot. By extension, people are beginning to talk in the United States about “walkable urbanism”, which sets out to promote urban development based on pedestrian travel with the pedestrian as the reference.

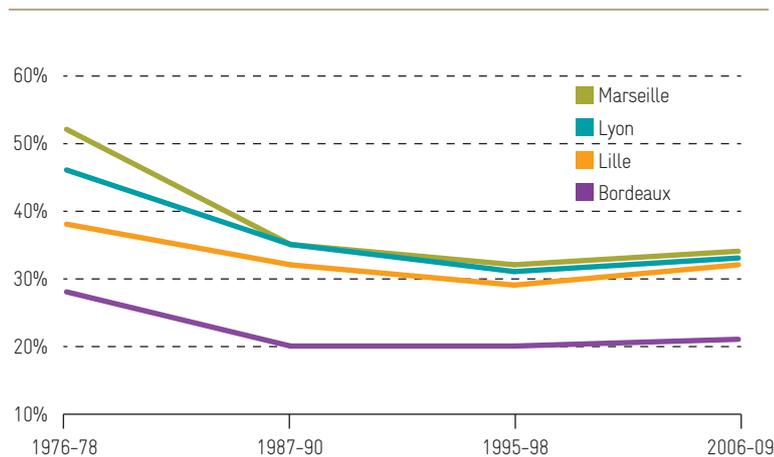
The very notion of “walkability” was invented for the measurement of a “pedestrian mobility score” for places and housing and the evaluation of programmes aimed at bringing back the habit of walking. In the United States, a “walkscore”⁶ is a measure of the availability of local shops and amenities (parks, schools, libraries, and so on), traffic speed, the configuration of the street network, including the pedestrian pavements. In London, the 5Cs rule is used to characterise a location’s “walkability”. Networks for pedestrians and amenities must be *Connected, Convivial, Conspicuous, Comfortable and Convenient*⁷.

⁴ M.E. Arth, 1999
⁵ www.pedestrianvillages.com
⁶ http://www.walkscore.com/
⁷ Transport for London, “Improving walkability – Good practice guidance on improving pedestrian conditions as part of development opportunities”, September 2005.
⁸ CERTU, 2009, p. 32
⁹ Lavadinho and Winkin, 2005.
¹⁰ CERTU, 2009, p. 54.
¹¹ Survey by the Mafpre institute; the results can be found at www.senioractu.com.
¹² Shared space is an idea proposed by an engineer, H. Monderman, in the 1970s. It led to a European programme in 2004: www.shared-space.org.

This change re-established walking as a fully-fledged and recognised mode of travel enabling pedestrians to participate in the organisation of their own space and the transport system⁸. This is “pedestrian empowerment”⁹. In France, a forum for such demands from the public is notably provided by neighbourhood meetings. In public consultation meetings in Paris, pedestrians call for wider pavements, along with comfort, accessibility and quality in public spaces¹⁰. Expectations are also very high where safety is concerned. In Spain, a quarter of all pedestrians consider themselves to be at risk in the street; this is even truer of seniors, who maintain that the public highway is no longer suited to their needs¹¹. The demands they express are straightforward and would cost little: more benches on the street, pavements that are safer, lower and less encumbered with obstacles, along with public transport that is easier to understand and more accessible.

This new urbanism leads on to a concept of “shared space”¹² which proposes intelligent, intuitive self-regulation of space and roadway notably by means of relevant urban design. The breaking up of space, the use of the roadway for local cultural life and the abolition of rectilinear visual perspectives are all components of the “shared space” principle, as implemented in Bath (UK) or Drachten (Netherlands), for example.

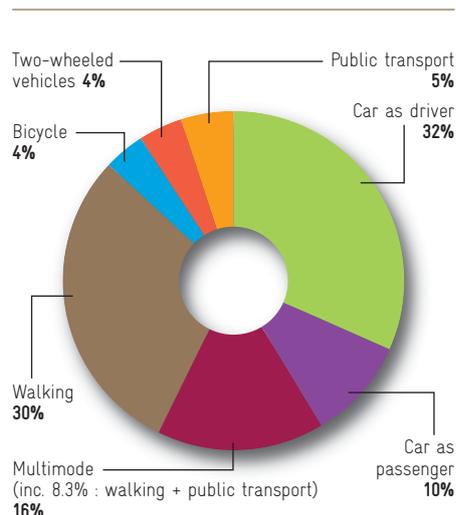
FIGURE 1. The evolution of pedestrian travel in some large urban centres in France.



After declining sharply with the shift to the car, the modal share of pedestrian travel is now trending marginally upwards in the major French urban centres.

The statistics on walking need to be handled with some caution since the method used undoubtedly downplays the importance of this form of travel. The very few French surveys or studies on the topic (Transport Surveys, Household Travel Surveys) include it only if it is the sole mode used, which rules out journeys on foot to reach a vehicle or public transport, and locks pedestrian travel into a local neighbourhood context.

FIGURE 2. A breakdown of journeys by transport mode in Geneva in 2000.



In the majority of cities, walking accounts for at least a third of all journeys. Geneva has set an example on this by drawing up a pedestrian plan as part of its overall urban travel plan.

> A SHORT HISTORY OF PEDESTRIAN TRAVEL

Until the end of the 17th century, walking was the obvious way to travel. Life was carried on within a restricted space (approximately 7km) and walking was well suited to a sedentary lifestyle and an agrarian economy. Horses and horse-drawn carriages were the preserve of the rich¹.

From the middle of the 18th century onwards, production was less and less local and locked into a nearby customer base. Commerce was intensifying. Horse-drawn carriages were being perfected, increasing the distances travelled. Trade was spreading and enabling development and administration to be conducted on a regional basis. In cities, hackney cabs and like vehicles vied for road space. However, the cost, congestion, danger and air pollution (due to the horse droppings) placed limitations on their use. These constraints ensured that cities remained pedestrian.

In the second half of the 19th century, industrialisation accelerated changes in lifestyles

and in cities, with the poorest population groups being relegated to outlying districts. This required the organisation of some means of picking up the workforce for the factories: cities constructed the first train lines, followed by trams. Government, driven by public health policy pressure, undertook major public works to ensure the accessibility of city boulevards. The velocipede, invented in the 1860s, became rapidly popular, enjoying a golden age in the closing years of the 19th century. Despite these alternatives, pedestrian travel continued to dominate.

In 1875, the motor car appeared on the scene. Horse-drawn vehicles disappeared (by 1913 in Paris) and by 1935 the tram had also lost its leading place, yielding to the motor bus and car. Government investment in bus networks commenced. Until the 1940s, towns and cities were the preserve of public transport.

The car constituted a genuine social revolution². In the wake of World War II, car ownership

reached massive proportions³. As a symbol of progress and modernity it was favoured by all: lobbies, associations and especially government, which supported the industry financially and built major dedicated infrastructures. The city was in thrall to the car, and the town planning dedicated to it became a source of obstacles for the pedestrian. In 1966, when 50% of households owned a car, walking accounted for only half of all journeys in cities. This proportion declined continually over time: from 1967 to 1994 annual distances travelled on foot were cut by half from 569 to just 226 kilometres.

Today, the long daily tailbacks at city entry points, signs of the growing scarcity of oil and damage to the environment are sowing seeds of doubt and cry out for new regulatory controls. Given all this, might pedestrian travel come to be seen as a good thing once again?

¹ Roche, 2003

² Mergnac M.-O., Lanaspère C., Bertrand B. Dejean M., 2005

³ Steven D. Levitt, Stephen J. Dubner, 2007

Health, safety, environment: local initiatives

In parallel with city-dwellers' actions and demands, the authorities have begun to make use of the issue of pedestrian travel to promote sustainable development, protection of public health and safety and the sharing of space.

London, Paris, New York, Tokyo and Copenhagen have all launched programmes based around pedestrian travel. Some have made actions promoting it part of their urban travel master plans, in some cases drawing up a pedestrian plan or walking plan for all users or for just some, such as seniors. The aim of such plans is to reintroduce the habit of walking. The city of Geneva has shown the way. Many others, in Switzerland and in Europe, have followed.

For nearly 30 years, Chambéry (France) has also been conducting programmes aimed at calming traffic and

restoring proper balance to the use of public space: making school gate areas safe, putting traffic calming infrastructures in place, enhancing mode mixity (speed reduction, "mode meeting points", 30kph neighbourhoods, suitable street furniture)¹³. In France, Targeting, a consultancy, has drawn up a travel master plan for seniors that highlights the importance, among other things, of alternative modes of travel (foot and cycle). The aim is to make their journeys easier, break down their isolation and foster their sense of wellbeing. This was needed because for this population group getting about in the city is both a desire and a necessity if they are to maintain a satisfactory physical and psychological quality of life (cf. Point of View, Mobility and Population Ageing, Transdev Lab, March 2010).

The "Walking Plan for London" drawn up in 2004¹⁴, has three objectives. One: to get the 10% of travellers who

¹³ MEEDDAT, 2008.

¹⁴ Transport for London, 2004.

are making journeys that could be done on foot out of the Underground – over 50% of tube journeys would be quicker on foot – and replace them with 10% of new customers who would otherwise have travelled by car. Two: to increase by 10% the share of pedestrian travel for journeys up to 3km (2 miles) and the annual number of journeys on foot per individual. Three: to enhance London's "walkability" and make it a model to be emulated by 2015. In Paris, the RATP is thinking along the same lines. The Walking Plan for London also has public health objectives connected with the fight against obesity among schoolchildren. Walking, an active mode of travel, is in fact increasingly being used as a means of promoting public health. In France, a campaign by the Ministry of Health and the French Institute for Prevention and Education for Health (INPES) recommends 30 minutes of fast walking every day¹⁵.

As for Belgium¹⁶, in 2003 it launched a "Street Code", an idea adopted in France in 2008¹⁷. This differs from the Highway Code for vehicles in that it defines a general prudential principle applicable to every road user from the strongest to the weakest (trucks/cars, cars/two-wheeled vehicles, and so on). The car ceases to be the central focus of city traffic.

/ A new form of urban pedestrianism

Understood in its modal sense, walking is a means of transport. And as the final link in the mobility chain, pedestrian travel gives the city meaning. That is why it is of interest to mobility operators. Meeting its requirements will make it possible to improve the quality of public transport and flesh out the solutions to be proposed. This work can lead to flagship innovations for the new mobility of the early 21st century.

Creating a pedestrian identity and culture

Encouraging people to walk entails development of a social identity¹⁸ for the pedestrian and adding value to journeys on foot. However, this is more easily said than done. First of all, no real identity exists as of now for the pedestrian, unlike the users of cycles, motorbikes and cars. Added to this is the fact that walking had for many years a "downmarket" image before a process of semantic slippage gradually began to associate it with hiking

> GENEVA, A PRECURSOR

Geneva's Pedestrian Plan¹ starts out from a straightforward observation of fact: almost half of all urban journeys can be done on foot or by bicycle faster than they can be done by car. Increasing them further will help improve air quality by reducing the harm done by car traffic, ensure the attractiveness, liveliness, safety and user-friendliness of the city and promote good health among its residents. The first generation of the Pedestrian Plan came into force in 1995. With no regulatory support, it aimed to restore pedestrians to their rightful place in the city and encourage walking as part of a mobilisation of the city to promote its environment, the development of alternatives to the car, and noise reduction. It was followed in 2000 by the Pedestrian Walkway Master Plan. This meant that the Pedestrian Plan now had a legal basis in cantonal law and that the pedestrian was acknowledged as a fully-fledged user of the urban environment. Given structure by a 10-15 year programme of action, it has five components: encouraging leisure walking; highlighting the attractiveness of places and squares in local neighbourhoods; facilitating pedestrian journeys; eliminating obstacles; calming traffic in residential neighbourhoods. Every year from 1995 to 2005 the city also officially opened an urban pathway creating or improving an existing route. This approach injected major impetus into the creation of traffic calming zones – thirteen 30kph zones were created, corresponding to approximately half Geneva's total area – and the development of combined areas where pedestrians have priority over vehicles and speed is limited to 20kph.

¹ The law implementing the federal act on pedestrian pathways and hiking and rambling routes (L160) of 4 December 1998.

and rambling. And lastly, public programmes to promote soft transport modes give pride of place to the bicycle but mention walking little, if at all. Given this, the pedestrian needs a separate identity, the distinction whose full importance in the dynamics of social relations has been pointed up by Bourdieu. The mechanisms to be brought into play are complex, involving belief systems, social norms and the ability to change behaviour. They require consideration to be given to emotional perception, symbolic and social representations of walking, and to the values to which it points. Choice? Freedom? A return to nature? Slowness? Even a feeling of luxury due to the new feeling of control over one's time¹⁹. What actions can be undertaken in this context?

¹⁵ www.mangerbouger.fr

¹⁶ Royal official order, 4 April 2003.

¹⁷ Decree 2008-754 of 30 July 2008 amending the Highway Code, MEEDDAT.

¹⁸ According to Tajfel and Turner (1979), social identity is that part of the individual's sense of self that stems from his or her consciousness of belonging to a social group and the value and emotional meaning that they attaché to that belonging.

Communication strategies, information and awareness-raising campaigns can have an effect on the ownership of the values underlying pedestrian travel. Since 2003, the city of Zurich has been conducting an annual campaign on “walking culture” whose aim is to strengthen each individual’s sense of identity. Such programmes can take advantage of events already familiar to the general public (“A day without my car”) or others that are more ephemeral (White Nights, Paris Plage). Another contribution to this culture: the creation of logo representing pedestrian travel in Geneva or participation in a competition in Nuremberg (Germany).

Use can also be made of physical facilities, every possible accessory (shoes, clothing, mobile telephones, mp3 players, bags, trolley cases, etc.) and infrastructures (pedestrian pavements, pedestrian crossings, pedestrian bridges, map information windows, urban signage). These have, according to Lavadinho and Winkin, an important symbolic function for the status, identity and acknowledgement of the pedestrian. They permit walkers to enhance their independence of action and emerge as fully-fledged actors in the urban environment, with legitimacy equal to that of users of other modes. This is new and breaks with the earlier, functionalist, approach, which involved protecting pedestrians behind “architectural prostheses” that kept the different flows separate and everybody in their place. It casts a critical eye to the power relationships within the city.

The creation of such an identity and culture requires walking to be promoted and symbolised by a dynamic movement. This is the aim of “Walk 21”, an annual international conference (“Walking in the 21st Century”) which came out of a conference held in 1997 in the United Kingdom. Walk 21 sets out to reaffirm the importance of walking for policy on travel, provides a platform for discussion and exchanges of experience, promotes awareness of actions that have been undertaken and highlights the most interesting practices. An International Charter was drawn up in 2006 with a view to building communities in which residents can choose to walk in order, ultimately, to put a pedestrian culture in place.

Making walking easier: the role of urban morphology²⁰

In order to bring back pedestrian travel and make walking easier, several types of urban development are possible, all of which essentially amount to providing better ways of sharing public space and calming flows.

Infrastructures that slow and reduce the flow of cars restore balance to the sharing of public space. In San Sebastian (Spain), the area containing paying parking spaces is reserved for residents. The total pedestrian green light system (allowing junctions to be crossed in every direction) and faster pedestrian green light cycles (reducing waiting times) make crossing streets more comfortable and walking easier. In Toronto, this system is accompanied by a countdown display that starts only once a standard crossing time has elapsed. The countdown indicates the number of seconds remaining to pedestrians to cross the road²¹. Similarly, adding value to certain city spaces by means of temporary or permanent pedestrianisation can extend the total space dedicated to walking. In Seoul (South Korea), a six-lane motorway has been eliminated to recreate a space for leisure walking. In Dax (France), from April to June 2010 the municipality tested the pedestrianisation of its three street markets every Saturday: managing traffic, high-lighting parking available near the city centre and providing free shuttles every 10 minutes.

In order to make walking easier, pedestrian routes need to be as continuous and as direct as possible, which is the case in San Sebastian Donostia (Spain), where main pedestrian thoroughways provide continuous links between the various city districts. The obstacles to pedestrian traffic must be removed by installing infrastructures providing solutions for natural obstacles, escalators or lifts for major changes in ground level, a network of mechanised pedestrian routes to take pedestrians from park&ride facilities into the heart of the city – all contribute to this goal. With Belgium’s *trottoir traversant*, in which the pavement continues uninterrupted through an intersection, or uninterrupted pavements (San Sebastian Donostia) pedestrians are not forced to leave the pavement to cross the roadway and move out of their own space; it is the car that does the crossing. Such initiatives require regular upkeep as well as monitoring the quality provided (Camden, USA).

Making routes safe and creating pedestrian pathways that are pleasant to use are other tools for progress. Cleanliness and safety encourage walking – “People walk where they feel secure and they’ll choose not to walk

¹⁹ Lavadinho and Winkin, 2005.

²⁰ Grandpierre and Follète, 2003.

²¹ « Walk 21 à Toronto. Les piétons au premier plan », www.rue-avenir.ch, 2008

where they don't feel secure; it's the most basic human instinct.²² – in the same way as better lighting, road and pavement refurbishment, the creation of a natural, pleasant environment with green spaces and user-friendly facilities (Larissa, Greece), allowing pedestrians to find shelter, as in Villeneuve d'Ascq (France) or to take a break on their journey. This is a major expectation of pedestrians. Pedestrian pathways also need to be effective²³ in that they must take account of the potential of the places in which pedestrians find themselves. The fragmentation and complexity of urban structures and a rich wealth of activities are all conducive to the habit of walking²⁴.

Knowledge of mobility could be put to good use by transport operators to contribute to developing such pedestrian routes, working alongside urban developers, and to design urban signage capable of simplifying pedestrian journeys and directing walkers to intermodal hubs.

New technologies for the intermodal pedestrian

Information and guidance systems that include pedestrian journeys can make walking easier. The Travel Planner Assistant (PTA) in Amsterdam (Netherlands) calculates the distance and time that will be necessary for a given journey, plus the mode combinations available and interconnections with public transport. It integrates this information into the user's diary. According to the arrival time specified, it will tell users if they need to hurry or if they are on time.

In Japan²⁵, where the population is ageing faster than anywhere else, technology is used to assist the pedestrian. In 2005, several thousand electronic tags were installed in the city of Kobe to guide pedestrians equipped with RFID terminals. Other pilot projects have sprung up in Japan's biggest towns and cities. In London, "Legible London" sets out to improve information for pedestrians by means of special signage and maps to a range of scales. Private enterprise, elected representatives, banks and non-profit associations are promoting this programme. The user is guided when switching between transport modes²⁶. "Walkshed"²⁷ in the United States lets users find a suitable means of travel in the "urban jungle" and identify pedestrianised areas near places of interest to them.

In order to make walking easier, services ancillary to mobility have been invented: umbrella and pushchair rental, left-luggage offices enabling pedestrians to leave heavy or voluminous packages and continue their journey in greater comfort – even a centralised delivery service to lighten the burden on pedestrians (Nuremberg, Germany).

Assistance services help children learn the walking habit from the youngest ages. One example is the pedestrian buses that take children to school (cf. box opposite). Transport operators are already playing a role in developing, structuring and providing a contractual framework for such schemes by drawing up travel master plans for private companies. This could surely be extended to other population groups such as seniors currently awaiting solutions to assist them.

A combination of such elements aimed at restoring pedestrian travel to a rightful place in the imagination and in urban space, and at making walking easier, would lead to the creation of "walkable cities" like Philadelphia in the United States (cf. box below).

> PHILADELPHIA, A WALKABLE CITY?¹

Philadelphia is said to be heaven for pedestrians.

The connectivity and limited length (120 metres approximately) of its city blocks give pedestrians a substantial degree of freedom in their choice of route. Over and above this, it requires pedestrians to walk in order to reach a junction.

The narrow streets allow traffic speed to be reduced.

Car parks between streets and places through which pedestrians can walk provide greater safety.

Waiting time for pedestrians at traffic lights is limited. Pedestrian pavement width is substantial, and that width takes account of stairways, cafés, signage, bus stops, newspaper vending machines, parking meters, cycle stands, trees, etc.

And to conclude – a Pedestrian Plan has been drawn up.

¹ Budick S., 2008.

²² S. Budide, 2008.

²³ Genre-Grandpierre C. and Foltête J.-C.

²⁴ Grandpierre and Foltête, 2003, pp 16-17

²⁵ <http://www.gerontechnologie.net/reseau-de-tags-rfid-systeme-de-navigation-pour-les-pietons-seniors/31477>

²⁶ Francoeville (de) C., 2009.

²⁷ <http://walkshed.org>

> PEDESTRIAN BUSES: TEACHING THE WALKING HABIT TO THE VERY YOUNG

In Denmark in 1976, in Odense, the school journey safety programme arose as a response to an increase in numbers of serious accidents on journeys between home and school. In 1997, the United States initiated a "Let's Walk to School" day, followed by Canada. Since then, more and more towns and cities have provided pedestrian bus services under a range of names such as *pédibus*, *carapattes*, *millepattes*, or *gross'trotter*, as part of their travel master plans or Agenda 21 programmes. The basic idea is that children lead each other by the hand, guided by an adult along a predetermined route at a predetermined time.



The "school crocodile" ¹

The objectives of this programme are safety, respect for the environment and social cohesion. Health is also a powerful argument: parents are shown that in addition to the need for daily physical activity², a child that has walked for 15 minutes to get to school is considerably more attentive and receptive³. The arguments used differ from city to city. In Switzerland, the accent is on safety in conjunction with a non-profit association supported by insurers⁴. In Italy, the primary argument is the independence of the child; in Spain, it is the fight against obesity.

This approach's major benefits have resulted in its rapid spread. In France, in the Languedoc Roussillon region⁵, early in 2008, 31 *carapattes*, or pedestrian buses, were in operation, involving 797 families, 1,028 children and a distance of 409.5 kilometres walked each week. In Greater Lyon alone by the end of 2007 there were 152 such walking buses every day.

¹ gillesmaurel@gmail.com

² The WHO recommends 32 minutes of physical activity every day for children, which equates to two kilometres walked to and from school.

³ CERTU, 2009, p. 40.

⁴ www.pedibus.ch

⁵ www.carapattes.org

Pedestrian travel, an opportunity to rethink the mobility chain?

The users of public transport are also pedestrians. Urban transport networks need to make efforts to observe, understand and facilitate pedestrian travel with a view to making life easier for their customers.

But over and above such legitimate self-interest, we need to see that there is in such heralding of "Pedestrian Empowerment" a greater, multi-faceted opportunity: the power given to pedestrians to control their own mobility makes them actors in the sustainable development of the city, free to invent their own routes and to design their own multimodal journeys. This assumes that mobility operators offer pedestrians forms of transport that make physical access easier using urban infrastructures adapted to pedestrian pathways and to inter-connections. In addition, there must be easily understood and relevant information, and signage open to all modes and simplified distribution relevant to the characteristics of pedestrian travel, its speed, its accessories and its freedom.

And that freedom for the pedestrian is a source of demands for quality of service, at the forefront of which is reliability, an imperative condition to be met for winning customer preference. It also provides an opportunity to broaden our offering to include new ancillary services. ■

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ANALYSIS AND SYNTHESIS



• Marc Le Tourneur

Former transport network director for Montpellier city and district (France), currently Adviser to Veolia Transdev's Department of Innovation and Development, member of PREDIT [urban mobility commission]
marc.letourneur@veoliatransdev.com



• Sandrine De-Boras

Marketing expert, Veolia Transdev
 Ph. D. Student at the Laboratoire d'Économie des Transports
 [Transportation Economics Laboratory]
sandrine.deboras@veoliatransdev.com



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The Mobility LAB observes and analyses trends relating to mobility in a large number of countries. As a locus for encounters and exchanges between research work and field experiences, it takes into account expectations of the public and local government authorities in order to build solutions to propose to them.

Contact: Marie-Catherine Beaudoux (+33) 1 41 09 24 90 / mobilitylab@veoliatransdev.com
 Mobility LAB, Innovation & Sustainable Development Dept.
 9, rue Maurice Mallet – 92445 Issy-Les-Moulineaux Cedex • www.veoliatransdevlab.com



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