Certu

Mobility and transport

Focus on

27

30 years of sustainable urban mobility plans (PDU) in France

Sustainable urban mobility plans (plans de déplacements urbains - PDU) have been in existence for thirty years. They were created by the French domestic transport orientation law (loi d'orientation des transports intérieurs - LOTI) in 1982, but have only really developed since the law on air quality of 1996, which made them compulsory in urban areas of over 100,000 inhabitants.

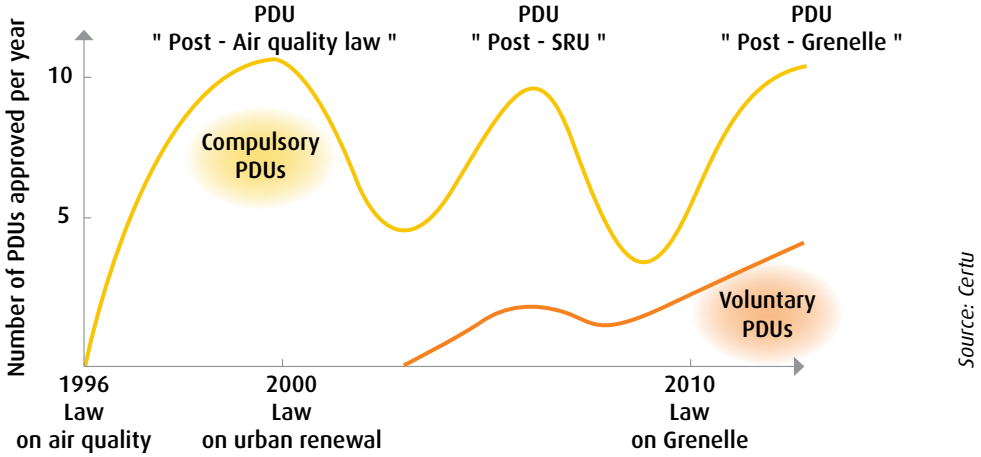
They started out as global transport planning tools in urban areas for the development of public transport and active modes (walking and cycling) in the 1980s and 1990s, and have gradually taken on more importance around more recent issues or ones that received insufficient treatment in the early decades: environment and climate change, accessibility for people with reduced mobility, transport and urban planning, parking management and the transportation of goods.

Thirty years after their creation, PDUs have demonstrated their effectiveness to help influence inhabitants' mobility: decrease in car use in major urban centres, increased use of public transport and development of active modes. Their success has encouraged many mediumsized towns to engage in voluntary approaches and the PDU is now one of the "sustainable urban mobility plan" models promoted by Europe in its Action Plan on Urban Mobility.

However, problems of implementation remain, particularly due to the complexity of integrating the PDU into the hierarchy of planning documents, the multiplicity of stakeholders involved in governance and the need for cooperation between transport authorities beyond the scope of application of the PDU.

So the PDU today faces many challenges which it must take up if it is to strengthen its contribution to the integration of urban and transport policies.

Three waves of PDUs since the air quality law



Source: Certu

After forty or so PDU's in the 1980s, they became compulsory in 1996 for urban areas of more than 100,000 inhabitants. The first wave of compulsory PDUs was approved in the early 2000s. Most of these first PDUs were revised or are being revised in the early 2010s. Since 2005, PDUs have gradually conquered medium-sized towns, a movement that has picked up speed in recent years. Today, nearly 80 PDUs are being implemented, and about as many simplified procedures in towns of less than 100,000 inhabitants.

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The PDU: many changes over 30 years

The PDU is a comprehensive transport planning tool that determines the principles governing the organization of passenger and freight transport, traffic and parking within the scope of urban transport. The development process is led by the French urban transport authority (autorité organisatrice des transports urbains - AOTU) and involves many institutional stakeholders, both from civil society and economic ones. Its content has changed several times and its objectives have gradually turned towards the promotion of sustainable mobility in relation to urban policy.

The first PDUs: a new way of working

PDU's were created by the French **domestic transport orientation law** (loi d'orientation des transports intérieurs - LOTI) as a tool to define the principles of organization of urban transport, with the objective of promoting rational use of the car and proper integration of pedestrians, cyclists and public transport.
They aim to provide balanced use of different modes of transport, in response to the oil crisis which highlighted the risks of a transport system largely dependent on fossil fuels.
In the 1980s, the first PDUs in Nantes and Grenoble aimed to support the development of tram networks. The return of this mode of transport in these cities in 1984 and 1987 marked its revival after being abandoned in order to "adapt towns to the car" (except in Lille, Marseille and Saint-Etienne).
In the 1990s and 2000s, investment in public transport continued, and many cities were equipped with one or more public transport lines using dedicated lanes (Transports collectifs en site propre - TCSP). The tram service has increased tenfold between 1990 and today.
The first PDUs were mainly an opportunity to discuss transport planning from a medium- and long- term standpoint, via a new partnership approach, involving municipalities and different transport authorities, State services, etc.

From the 2000s, the PDU programmed its actions more and reinforced its prescriptive role

The first "post-air-quality-law" PDUs often proposed a number of measures covering all modes of transport, without sufficiently specifying how financing was to be programmed and actions prioritized. The first, rather lacklustre results showed the importance of giving the PDU more assertive goal programming. The SRU law on solidarity and urban renewal of 2000 helped to fill this gap by requiring the PDU to specify the timing of decisions and actions, whereas the air quality law required only an examination of the terms of its funding and how it would cover its operating costs.

The voluntary PDU in Brive-la-Gaillarde, approved in 2010, included in its summary of actions a table which, in addition to the description of each measure, detailed:

- The pilot and associated partners.
- Phasing in three stages (short term - 2010 to 2013, medium term - 2015 and long term - 2017-2020).
- The investment cost and annual operating cost.
- Related actions.

The SRU law also required urban areas to produce a travel account, a decision-making tool to conduct a local transport policy, showing both direct costs and expenses and the external costs of transport.

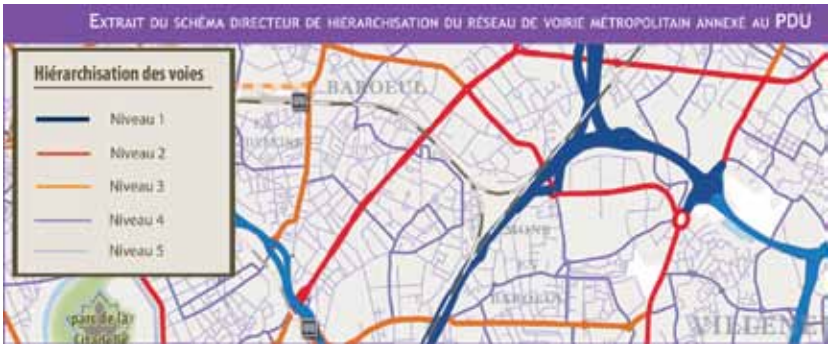
The SRU law also gave the PDU legal status binding on municipalities and authorities responsible for the road network. These levers aim at achieving consistency between municipal policies and concern:

- Private parking: the PDU may - in areas well served by regular transport - impose upper-limit **car** parking standards on the local urban development plan (Plan local d'urbanisme – PLU) in buildings used other than as dwellings. It can also impose lower-limit standards for providing parking areas for **cycles**.
- Public parking: the PDU defines areas and rates related to the regulation of on-street parking and in parking lots. Actions taken under the mayor's police powers for parking are made compatible with these measures.
- Public roads: the PDU determines the principles of road network hierarchy and may suggest a speed restriction scheme, in coordination with road network managers.

Lille: DIVAT and road hierarchy

DIVATs (disks for enhancing major public transports lines) are disks of 500 meters radius around public transport stops (metro, tram and train) which can be theoretically accessed in 5 to 10 minutes' walking time. The DIVATs are prioritized into 3 levels according to quality of public transport service. While standards of minimum construction density are binding on all DIVATs, car parking standards are binding only on level 1 DIVATs.

The Lille PDU also offers a ranking of the entire road network, from level 1 (highly structured and limited to 90 or 110 km/h) to level 5 (local service, 30 km/h speed limit, developments of traffic-calming areas).



Source: Lille Métropole PDU 2011

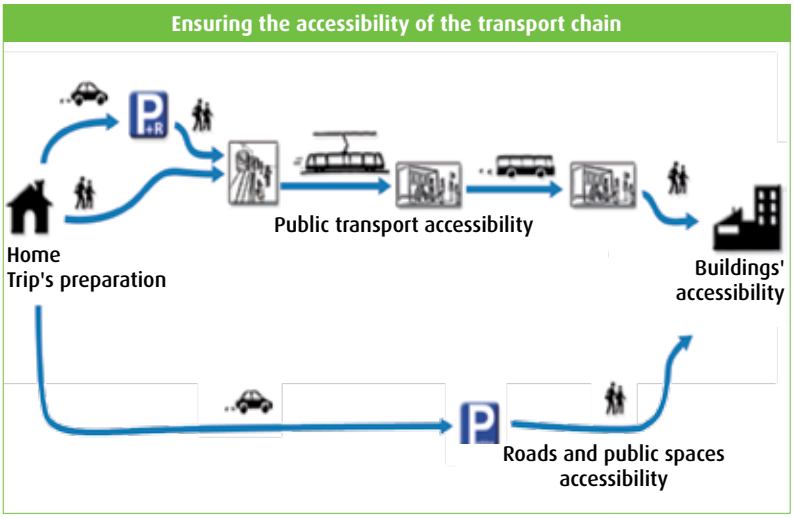
The right to transport for all

In 1982 the LOTI put forward a key principle: every user has the right to travel and the freedom to choose how, in the economic and social conditions most favourable to the community. This principle was to be adapted over 20 years later in the so-called 2005 "Handicap" law, which makes the implementation of transport chain accessibility (buildings - roads / public areas - transport) for persons with reduced mobility into a major issue. While it does not set a deadline for roads and public spaces, it does require transport authorities to provide full access to networks by 2015.

The law has made the PDU into the central planning document for defining and scheduling measures to achieve this ambitious goal. With its accessibility appendix, it is the coordinating tool for ensuring accessibility of the transport chain and handling the interfaces between transport and roads. As such, it includes accessibility plans for roads and public spaces (PAVE).

Montpellier: a transport and road accessibility appendix

The accessibility appendix to the 2012 Montpellier PDU follows the spirit of the "Handicap" law. It recalls the role of the topic central to the PDU, in particular by promoting walking, and the role of the tram, the first accessible mode, in the PDU.
It then outlines the three master plans for accessibility (urban, département and regional) adopted in 2009/2010.



It also falls in line with accessibility of the transport chain, noting the delay accumulated in adopting PAVEs [a third have been engaged, but none adopted] and providing a methodology for drawing them up and supporting municipalities in this process.

Finally, it sets out a number of recommendations for the development of roads and public spaces (pedestrian paths, obstacles, treatment of floors, slopes and banks, managing illegal parking, creating pedestrian crossings, bus stops and parking spaces for people with reduced mobility).

Source: Montpellier PDU 2012

Active modes recently taken into account: walking and cycling

Walking long occupied a marginal place in the PDU, whereas in all major cities it is the second transport mode after the car (in general between one quarter and one third of trips).
It is now making a very noticeable appearance in mobility policies, in conjunction with a more balanced sharing of public space, the problem of road accessibility for people with reduced mobility and the promotion of so-called active modes with a view to improving public health.

Cycling has found its way into more PDUs since the air quality law in 1996. Although its share of travel rarely exceeds 2%, this mode is identified as high-potential, as many European towns have implemented very proactive policies that have been successful in this field, especially in Northern Europe.
Measures involving these modes are designed to support a more general urban planning policy to promote local travel, a prerequisite for pedestrian and cycling mobility as standalone modes of transport or ones used as feeders to public transport networks.

Strasbourg: the PDU promotes walking and cycling

The second **Strasbourg** PDU, the project draft for which was defined in February 2012, has developed numerous actions in favour of walking and cycling via its first three topics for action:

- TOPIC 1 - walking central to the new PDU: implement the 2011-2020 Strasbourg pedestrian plan and assist other towns in developing theirs
- TOPIC 2 - towards a 2.0 cycling policy: continue and enhance the Vélhop cycle hire service, make people aware of the value of cycling, continue to mesh the cycle network path in the 2020 cycling master plan and set up an express network connecting the centre to its outskirts, provide a suitable number of cycle racks, support the combined use of cycles and the TER (regional express train) and improve cycle parking in offices and homes
- TOPIC 3 - active modes for public health: communicate about travel times for walking and cycling, make the public aware of the health benefits of the regular use of active modes

Measures to support behaviour change

As legislation has changed, the PDU has acquired more latitude for setting up measures to support behaviour changes, often grouped under the term "mobility management".
The PDU encourages businesses and public authorities to set up mobility plans for their employees and facilitates the use of public transport by integrated ticketing and pricing measures. Since the Grenelle II law, the PDU has encouraged car sharing and the use of electric vehicles by providing car parking facilities for these two forms of mobility.
Finally, the SRU law has made it compulsory to create a multimodal information service and set up mobility consulting, in addition to the obligations with regard to the PDU.
Initially relatively marginal, these measures are developing in PDUs and other recent simplified procedures, like the example of the Loire Forez (Montbrison) 2007 comprehensive transport master plan. This proposes the creation of parking spaces dedicated to carsharing, accompanied by appropriate communication and awareness campaigns for the inhabitants.

Many PDUs also offer the creation of mobility agencies or centres, like those of Chambéry and Grenoble, to provide comprehensive information on mobility that is understandable by, and accessible to all.

StationMobile, mobility information agency in Grenoble
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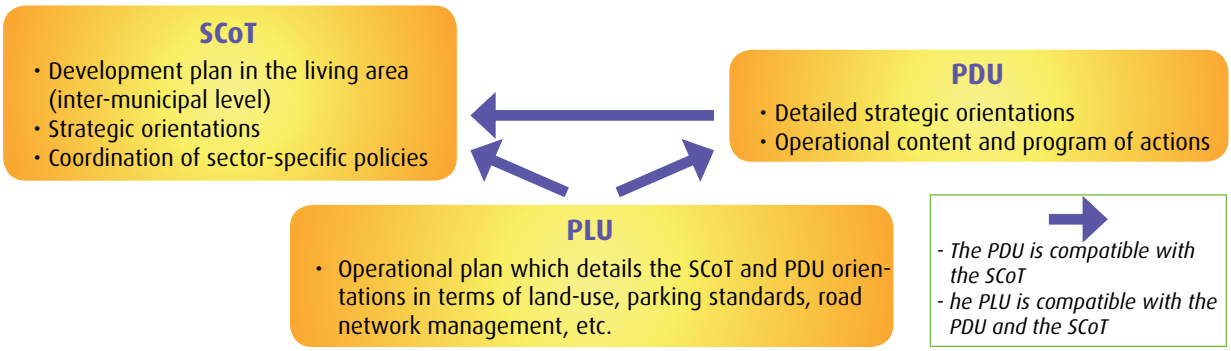
Better coordination between transport and urban planning

The 2000 SRU law aimed to strengthen social and urban cohesion. It introduced regional integrated development plans (Schéma de cohérence territorial - SCoT) and local urban development plans (Plan local d'urbanisme - PLU) and placed the PDU within this hierarchy of planning documents.

The PDU in the hierarchy of urban planning



Since the SRU law, mobility policies are better integrated into urban planning, and the 2010 Grenelle II law 2010 now gives "reduce the need to travel" as one of the objectives of urban plans (SCoT and PLU).

Several recent PDUs have been drawn up to better link transport and urban planning, like the 2011 Nantes PDU whose first topic is to build a town in which trips are short, or that of Montpellier in 2012 which clearly shows its consistency with the SCoT.

Montpellier: the project supported by the SCoT foreshadows new forms of mobility

"As a continuation of the Scot, the project supported by the PDU is intended to promote the transformation of mobility attitudes and practices, and to deploy an alternative transport offer to the car [...]. The SCoT and the PDU together express an overall vision of towns and urban life based on the renewal of liveable communities, within which forms of urban development and mobility practices are coordinated".

The link that the PDU has with urban planning and the town also comes into effect more locally in issues of space design. The SRU law makes improved safety for all trips one of the eight goals of the PDU.

By giving the PDU a more important role in road sharing, to the advantage of active modes, and in the management of public parking, this law promotes an improved living environment.

Towards more balanced policies for goods

Goods transport, long regarded as a source of pollution in towns because it consumes space, pollutes the air, is noisy and leads to accidents, is now the subject of a more balanced approach. The delivery of goods to or from towns is necessary for economic activity and the vitality of urban centres.
A balance must be struck between a very restrictive policy which may have effects that run counter to public policy objectives and too loose a policy that will not meet with the PDU objective of reducing the environmental impact of transport. Too defensive a strategy will make activities tend to move further away and increase their dependence on road freight transport.

The PDU may contribute to a better organization of goods transport in towns through measures helping to harmonize municipal regulations, the definition of heavy transit routes, the development of delivery areas in public spaces and the requirement to make some private space available for the largest traffic flow generators (via the PLU).
Several major cities such as Lyon, Paris, Marseille, Strasbourg, Bordeaux, Lille and Toulouse have already implemented some of these actions. However, most of these measures are still not written into the PDU even though this is one of the objectives assigned to it. Its mission is therefore to become the framework for thinking about and coordinating them.

Response to an environmental emergency

The air quality law made PDUs compulsory in 1996 and made them into an instrument in the fight against air pollution in cities. Since then, the environmental issues of the PDU have gradually extended to all environmental topics.

All PDUs approved after mid-2006 contain an environmental assessment report that aims to minimize the impact of the plan on the environment in the broadest sense and including in particular the following topics: climate, energy, air, noise, water, biodiversity.

In the late 2000s, the Grenelle round table on the environment brought the fight against climate change to the centre stage, creating the regional climate, air and energy scheme (Schéma régional climat, air et énergie - SRCAE), a document which is compatible with the PDU. The PDU must also measure the greenhouse gas (GHG) emissions avoided by implementing the plan and carry out a review after five years.

CO_2 emissions from transport: two key figures

1/3 of CO_2 is emitted in France by transport (goods + people)

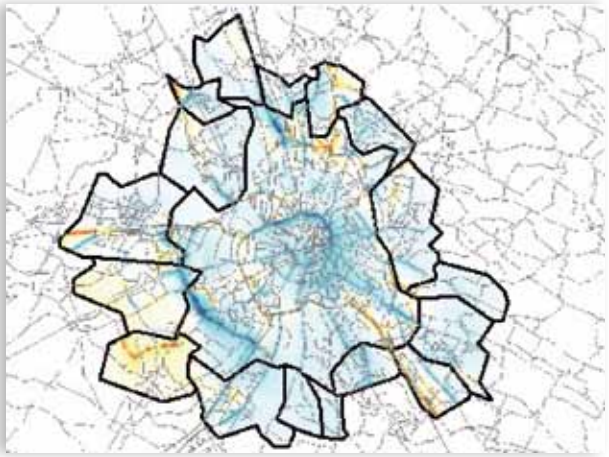
2/3 of CO_2 related to people transport is emitted by local mobility

Source: www.eltis.org

Many PDUs reflect the impact of the GHG emission scheme, the concentration of local pollutants or noise around infrastructures, using simplified tools such as the mobility emission energy diagnosis (Diagnostic Energie Emissions des Mobilités - DEEM) or more complex ones incorporating a complete transport - emissions - concentrations modelling chain.

Toulouse: a modelling chain to assess the effects of the PDU on the environment

The environmental assessment of the Toulouse PDU is based on an integrated model to simulate the concentration of pollutants in the atmosphere in the reference year of the PDU: 2020. This map also shows the falls in nitrogen dioxide concentration in the PDU scenario compared to the 2020 "over time" scenario.
This fine-tuned breakdown of the impacts of transport on local pollution makes it possible to locate areas where air quality is improving (in blue) and those where it is deteriorating (in orange). Overall, the PDU predicts that the land area affected by the threshold overruns will be halved by 2020 as compared to 2008.



Source: Toulouse PDU 2012

The DEEM: mobility emission energy diagnosis

The DEEM is a tool for calculating GHG emissions, local pollutants and energy consumed by transport proposed by the ADEME and the Ministry of ecology and sustainable development. Useful both for diagnosing and anticipating, it is used to measure and explain emissions in relation to different explanatory factors, be they geographical, socio-demographic or technological. The 2011 Lille PDU uses this tool for environmental assessment, but also to measure the impact of the two PDU scenarios on GHG emissions.

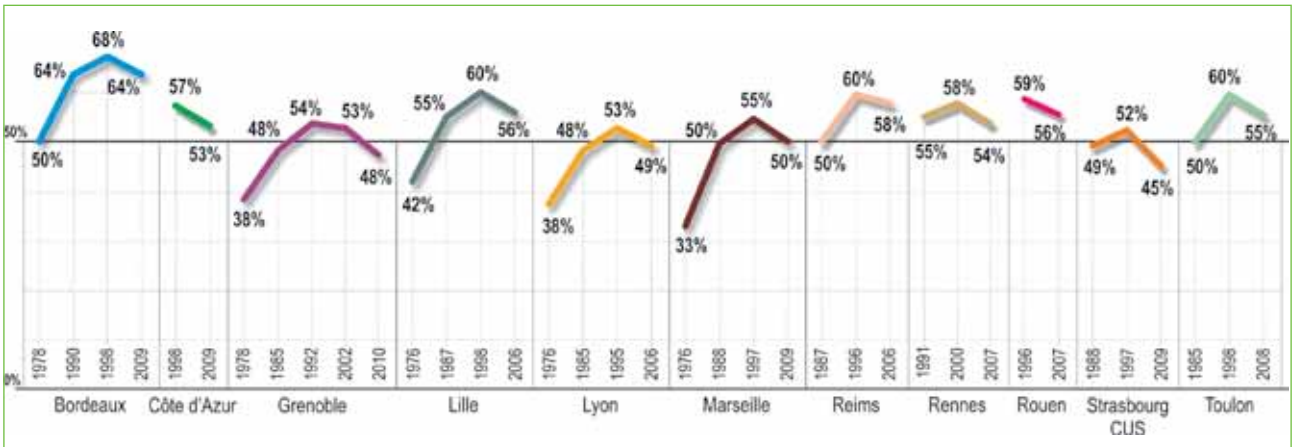
To learn more about this tool, visit the Certu website: www.certu.fr

Have PDUs finally gained legitimacy by a shift in mobility practices?

30 years after the creation of PDUs and the promotion of sustainable urban mobility policies in the years 1990 and 2000, results are visible, mainly in large urban areas:

- decline in car use;
- increased use of public transport;
- cycling making a comeback in towns.

Change in the modal share of the car in some French urban areas



Source: EMD standard Certu

The PDU, successfully adopted by cities, is now increasingly popular in medium-sized towns, so much so that, of the 150 planning steps for urban mobility in France, three out of five were initiated on a voluntary basis, in towns with less than 100,000 inhabitants.

In addition, since 2007 Europe has been promoting sustainable urban mobility plans in its Green Paper on urban mobility, the PDU being one of the models alongside the English "local transport plan" (LTP).

However, it is difficult to attribute recent developments in terms of travel to the PDU alone: the economic environment and rising fuel prices play an important role in the choice of mobility.

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And while changes are broadly moving in the direction indicated by policies, several results need to be consolidated. For example, all regions do not follow the same trends. While car use is declining in large cities, it continues to increase in the outskirts as a result of continued urban sprawl in the second and even third ring around urban centres, as well as in medium-sized towns. Links between transport and urban planning remain to be consolidated, and PDUs must look further than the centres of urban areas to offer alternative mobility solutions adapted to all types of regions.

In addition, the improvement of transport accessibility for people with reduced mobility observed for several years will probably not be sufficient to achieve the goal of full accessibility everywhere and for all forms of disability and reduced mobility by 2015.

Finally, PDUs have not sufficiently reduced emissions from urban traffic, to the point that France is under threat of financial penalties before the European Court of Justice for exceeding regulatory pollution thresholds in several French cities. According to the World Health Organization (WHO), air pollution causes 42,000 premature deaths per year in France.

These results reveal some difficulties in the implementation of PDUs, leaving room for future progress.

8 proposals to help drive progress

The PDU process is gradual and the implementation of all the levers for action takes time. First predominantly focused on urban centres and as part of a logical development of the alternative offer to private cars, PDUs are now impacting the entire scope of their actions, and road-sharing policies are challenging the space that cars occupy in towns, both when parked and when driving.

Taking clearer action to define the space occupied by the car

Most PDUs propose actions to promote public transport, walking and cycling, but are still very cautious about questioning the role of the car in towns, in dense urban areas and in the outskirts. Several recent examples show that the modal shift requires the respective advantages of different modes to be re-examined.
In addition, PDUs often approach the issue of car parking by increasing the supply of available parking or stabilizing it and moving on-street parking to car parks, but rarely by an overall decrease. They also address the location and development of park and ride schemes, but a comprehensive approach across the whole urban area is lacking.
Looking to the future, where it is frequently desired to see the use of private cars reduced, concrete measures are struggling to make themselves clearly visible, parking being a sensitive issue that touches the lives of residents and shopkeepers who defend the idea of "no parking, no business."

Nantes: the busway and multimodal information in real time

In Nantes, a recent survey of "busway" users shows that 50% of users having a choice of modes (with a car at home) use the busway because it is difficult to "drive around or park ones vehicle". The local authority has set up signs displaying real travel times by bus, bicycle and car.

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Innovating in the suburbs and peripheral areas

Long mainly devoted to the densest areas of urban transport perimeters, PDU actions often face difficulties implementing measures in the peripheral areas of cities: the density is less favourable to public transport, the areas are less built-up and are sectorized, encouraging the use of private cars and long-distance trips, etc. However, there are solutions, both in terms of urban planning, public transport, and green mobility. Each mode has its own area in which it provides a relevant solution.
For public transport, a network hierarchy makes it possible to use rail services, and identify key urban lines running in dedicated spaces, to which transport lines can be connected, either as a regular service or on demand. Intermodality with walking and cycling has also a role to play in expanding the public transport-user base, provided that the urban development is safe both on the road and with regard to parking near the stops.
The “shared use” of car is also relevant: facilitating carpooling by creating dedicated car parks and effective internet platforms for linking motorists, proposing carsharing services and making it easier for these new modes to park as compared to solo car use.
Finally, green mobility already represents a high proportion of travel in town centres in rural areas, because local services are often available within walking or cycling distance. It can be further aided by working on the development of traffic-calming areas and cycle parking, but also on awareness and education, especially as far as cycling is concerned.

Creating consistency: integration or coordination?

Within the urban transport area, the development and implementation of the PDU are the responsibility of the French urban transport authority (AOTU). However, the fragmentation of expertise in transportation, urban planning and the environment means that dialogue with different institutional stakeholders is essential.
One of the PDU's fields of action is particularly concerned by this problem is parking, with the many stakeholders and competencies shown below.

Stakeholders and competencies involved in car parking

Institutional stakeholders

- State: four departments involved: sustainable development (PDU, roads, urban planning), interior (local authorities, the mayor's police powers for parking), justice (payment of parking fines) and finance (collection of fines)
- Towns: on-street parking, police powers of the mayor, Local Development Plans (Plans Locaux d'Urbanisme - PLU)
- Inter-municipalities: car parks
- AOTU: park & ride, penalty notices for parking obstructive to public transport, PDU
- French départements: carpooling areas on the departmental road network
- Regions: park & ride for train stations

Transport professionals

Operators of car park and road parking, freight professionals, taxi representatives

User representatives

Local residents' associations, shopkeepers, representatives of the medical profession, people with reduced mobility, transport users

Two complementary solutions can overcome this difficulty:

- Develop cooperation by mobilizing stakeholders for the development and implementation of the plan using technical and political measures. In Lille, the community approach to parking aims to implement consistent community parking policies (with a charter) and to improve knowledge in the field (inter-municipal parking observatory). In Saint-Etienne, the local authority has united a number of local and national economic and research stakeholders to implement action with regard to the delivery of goods in the city.
- Bring competencies together giving the AOTU the opportunity to exercise competencies in carpooling and carsharing, delivery of goods in town and parking. This proposal for a new sustainable mobility organizing authority (autorité organisatrice de la mobilité durable - AOMD), which would replace the current AOTU is being discussed within the framework of the decentralization Act III.

Thinking mobility outside the PTU

The growth in living areas and the increasing distance between home and workplace have not been systematically followed by an extension of administrative boundaries.
More and more people now live outside the PTU and therefore do not benefit from PDU action, which has effect only within its area of competence.
Mobility planning in these areas can be organized within the framework of thinking on the SCoTs (area coherency schemes) whose boundaries correspond more to living areas. Municipalities outside the PTU may make more fine-tuned use of SCoT principles in municipal transport plans, or as part of the PLU (local urban development plan) that may contain many actions related to mobilityIn addition, transport thinking at departmental and regional level is also an opportunity to grasp mobility issues in sparsely populated areas in the outskirts of urban areas. As such, the "regional intermodality scheme" that could be introduced by decentralization Act III should deal carefully with transport planning in areas not covered by the PDU.
There is a real need for discussion and cooperation between transport authorities to jointly develop mobility solutions that transcend administrative boundaries.

Strengthening public participation

Outside the institutional sphere, the PDU is a document whose preparation is legitimately open to dialogue with civil society, as transport issues affect the daily lives of citizens and economic stakeholders.

The law provides for a consultation in two stages:

- representatives of the professions and public transport users, associations of persons with disabilities or with recognized reduced mobility and environmental protection associations are consulted, at their request, on the draft PDU;
- after collecting the opinions of the relevant public entities (state, municipal, general and regional councils), the draft PDU is then put through a public inquiry, with the aim of allowing everyone to express their views on the project.

It is however recommended to organize consultation before this, to prevent the public inquiry from leading to a negative opinion and thereby defuse any potential submission to the administrative court against the PDU, once approved by the AOTU. Over the past decade, twelve PDUs have been subjected to appeal, and eight have been canceled.

In addition, consultation contributes to the acceptance of public policies and is often the first PDU action of educational value, making people aware of mobility issues.

Grenoble: Citizen workshops to draw up the PDU jointly with local inhabitants

"Citizen workshops" are working seminars organized over a few days with a diverse panel of local inhabitants. They provide the opportunity to consult and engage civil society in drawing up the action plan.
Grenoble citizen consultation has highlighted the lack of knowledge of mobility services and the resultant need to raise awareness among residents. One answer provided by the AOTU is the implementation of the StationMobile, a mobility agency to give an overview of the different transport possibilities in Grenoble and its surrounding area, based on a website, a mobile application and an agency located in Grenoble.

Additional dialogue measures are often implemented by the AOTUs. These include conferences and debates open to all, public meetings relocated in inner city areas and other towns of the PTU.

Adapting the PDU over the area

The PDU covers the urban transport perimeter as a whole. This is usually a vast area, spread over several communities in which it is difficult to define and assign actions to areas with any degree of accuracy.

Several tools are used by AOTUs to make it easier to implement the PDU at more detailed levels. These variations have different names and can be classified into two broad categories, both used in the latest Montpellier PDU:

Montpellier: the PDU is more detailed in the PDS and PLD

Sector transport plans (PDS)

These are the regional component of the PDU. For each of the six sectors defined in the SCoT, they detail the PDU for aspects of transport infrastructure, public transport interchange hubs, the road network hierarchy and cycle routes between municipalities.

Local travel plans (PLD)

These are drawn up at municipal level and specify the guidelines of the PDU, including the actions for which it has municipal authority (parking regulation, traffic, deliveries). They aim to take greater account of transport in the PLUs and urban projects and have support from the AOTU.

Other tools defined in the PDU help municipalities to appropriate the plan and implement development principles. These include charters (pedestrians / cycles, parking).

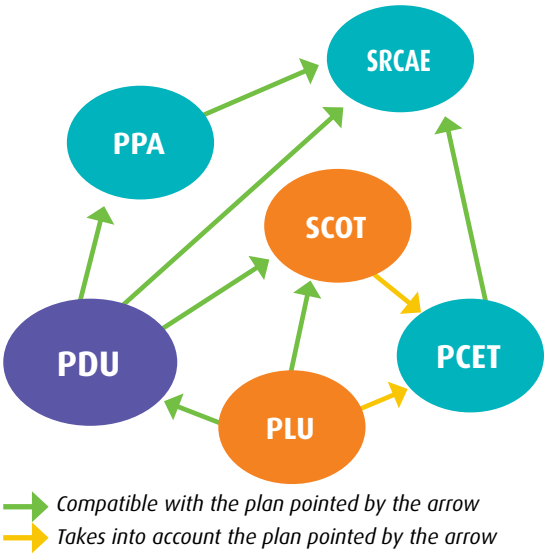
Finally, contracting between the AOTUs and other mobility and urban planning stakeholders facilitates implementation of the PDU: the transport / urban planning charter in public transport line contracts in Grenoble, is a good example.

Integrating the PDU in urban planning

The PDU is part of a hierarchy of urban planning and environmental documents linked by ties of legal compatibility. It uses the strategic guidelines set out in the SCoT and lists the actions coming under the PLU (including building density and private parking according to public transport service) at municipal level and in more operational terms.

In practice, the time taken to draw up documents may complicate these principles. So while the Montpellier PDU relies heavily on studies conducted as part of the SCoT, the Lille one is more a basis for discussions in progress on the SCoT.

The legal relationship between the PDU and other plans and programmes



In addition, PDU compatibility of acts relating to parking and traffic policing means that major PDU actions can be implemented consistently throughout the intermunicipal area.

The PDU must therefore strike a balance between flexibility and prescription. On this point, we note that two PDUs were canceled by the administrative court for failure to mark out the perimeters within which the public transport service can be used to lower PLU parking standards.

The result of the integration of local urban planning and transport policies is marked by the provision of the Grenelle II law requiring that the inter municipal PLU should act as a PDU for EPCIs with dual competence for organizing urban transport and drawing up PLUs. From the environmental standpoint, the PDU must contribute to two major goals, one global: the fight against climate change; and the other local: improving air quality.

Its compatibility with the objectives of the PPA (French atmosphere protection plan) set for each pollutant is often overlooked. And yet the European threat of financial sanctions against France for exceeding pollution limits in several cities should lead the authorities to implement more prescriptive measures to reduce pollution.

The PDU is therefore likely to be called upon, as transport accounts for a large percentage of particulate and nitrogen oxide emissions urban areas.

Long-term planning, but short-and medium-term action

The PDU is a planning document for medium- and long-term planning, but the SRU law also made it operational by including the provision that the AOTU should draw up a timetable for decisions and implementation.
Several recent PDUs put forward measures over 5 years, written into the local government mandate. These actions are part of a more strategic vision, looking 15 or even 20 years ahead, as witness the example of Nantes, thereby helping to prepare the next PDU.

The operational scope of the PDU also brings with it an obligation to monitor over time the implementation of planned actions and their impact on mobility. This monitoring, which prepares for the assessment of the PDU after five years as imposed by law, requires observatories to be set up.

Source: Nantes Métropole PDU 2011

10 challenges for the next 30 years

The PDU has changed dramatically over the past 30 years to meet increasingly complex and cross-relational challenges. What challenges will it face in the next 30 years to guarantee the "right to mobility for all", in a context marked by an aging population, public health issues, climate change and the depletion of energy resources?

1. **Seize** the opportunity for changes in competency laid down in decentralization Act III
2. **Include** the PDU in the inter-municipal PLU, while keeping the wealth of information of the PDU
3. **Meet** with the specific needs of medium-sized towns and sparsely populated areas
4. **Adapt** to the reduction in public resources
5. **Develop** measures for mobility management
6. **Make use** of new technologies and electromobility
7. **Take better account** of goods in towns
8. **Prepare** regions for scarce and expensive energy
9. **Deal** with the health issue
10. **Provide** 10 mobility solutions for all

After successfully fulfilling its educational role with regard to sustainable urban mobility, the PDU must meet the challenge of funding sustainable mobility solutions via an overall and integrative vision.

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Further information

- PDU: the French urban mobility plan – integrating transport policies – Certu 2012
- L'évaluation des PDU : des convergences d'approche pour une réalité complexe (Evaluation of PDUs: converging approaches to a complex reality) – Certu/GART 2012
- Coopération entre autorités organisatrices de transports : les communautés de transports allemandes, source d'inspiration pour les syndicats mixtes SRU français ? (Cooperation between transport authorities: German transport communities – an inspiration for French combined SRU syndicates?) – Certu 2012
- Des propositions innovantes pour l'optimisation des réseaux de tramway (Innovative proposals for optimizing tram networks) – Certu 2012
- Plan local d'urbanisme intercommunal tenant lieu de PLH et PDU – Éléments de cadrage juridique et technique (Inter-municipal local urban development plans in lieu of PLH and PDU – Information on the legal and technical framework) Certu/DGALN/AdCF 2012
- La mobilité urbaine en France – Enseignements des années 2000-2010 (Urban mobility in France – Lessons from the years 2000-2010) – Certu 2012
- Évaluation environnementale des PDU : analyse des premières pratiques et préconisations (Environmental evaluation of PDUs: analysis of the first practices and recommendations) – Certu 2011
- Plans de déplacements urbains : panorama 2009, résultat d'enquête et perspectives (Urban transport plans: the 2009 panorama, survey results and outlook) – GART 2010
- Articuler urbanisme et transport : chartes, contrat d'axe, etc (Coordinating urban planning and transport: charters and network contracts, etc.) – Certu 2010
- www.certu.fr

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