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Project acronym:	**CREATE**
Project title:	**Congestion Reduction in Europe - Advancing Transport Efficiency**
Project website	**www.create-mobility.eu**

D4.2 - Technical reports for Stage 3 cities

Work Package 4 "Qualitative analysis of Transport policy developments"

		Date of preparation:	**May 2018**
Start date of project:	**1st June 2015**	Duration:	**36 month**
		Version:	**1**
		Prepared by:	**C. Halpern**
		Checked by:	**C. Buckingham**
		Verified by:	
		Status:	**VF**
		Dissemination level:	**Public**

1 Introduction to deliverable D4.2 "technical reports for stage 3 cities"

How to reduce road congestion in large cities in Europe and the Euro-Med? How to encourage a switch from cars to more sustainable transport modes? Historically, rapid urban growth has led to a growth in car ownership and use, and consequential increases in urban road traffic levels. These increases, in turn, are associated with a range of negative impacts, including traffic congestion, traffic collisions, social exclusion and dangerous levels of air and noise pollution.

Recently, some European cities (Berlin, Copenhagen, London, Paris, Vienna) appear to have been successful in decoupling economic growth from traffic growth – and in the process, have been able to offer urban living environments that are cleaner and less congested, while maintaining increases in living standards. Why have these cities been able to achieve this turnaround, and what lessons can be drawn for other parts of Europe and the Euro-Med?

To answer this fundamental question, the CREATE project (Congestion Reduction in Europe, Advancing Transport Efficiency) brings together a team of international analysts in order to explore historical patterns of urban road traffic and car use, to identify success factors in encouraging modal shift and lessons learnt in Western European capital cities, and to work with Eastern Europe and Euro-med city partners (Adana, Amman, Bucharest, Skopje and Tallinn) to assist them in developing sustainable strategies.

Further information available on the CREATE Website: http://www.create-mobility.eu/

1.1 About Work Package 4 in the CREATE Project

How to account for the shift away from car-oriented policies towards sustainable urban transport policies?

As part of the CREATE project, the primary goal of Work Package 4 (WP4) is to analyse the historical 'Transport Policy Evolution Cycle' processes in Stage 3 cities, i.e. five Western European capitals (Berlin, Copenhagen, London, Paris and Vienna): Can we identify similar qualitative drivers of change across European cities? What are the main differences between cities and how to account for them? To what extent does the analysis of policy developments over time helps us make sense of recent policy choices and deadlocks? This is done by identifying the qualitative and contextual drivers that have enabled – or hindered – a shift from Stage 1 "urban congestion growth" to Stage 3 "encouraging sustainable mobility and liveable cities" policies. It also contributes to highlighting lessons to be learnt in order to speedup these processes in Stage 1 cities.

The work done as part of WP4 is coordinated by Dr. Charlotte Halpern, at Sciences Po, Centre d'études européennes et de politique comparée (CEE), CNRS, Paris.

1.2 About these documents, D4.2 technical reports for stage 3 cities

These documents, **D4.2 technical reports for stage 3 cities**, reflect the work produced as part of WP4 during Task 3, "Qualitative analysis of transport policy development cycle processes in the five Stage 3 cities during the Shift from Stage 1 to Stage 3". Paying attention to case-specific contextual factors, policy instruments and programmes and involved stakeholders, **this case-study approach unveils the processes and the main drivers for change**[1].

D4.2 reports contribute to understanding the shift away from car-oriented policies towards alternative transport policies in different city contexts. Each report seeks to develop a comprehensive qualitative analysis of the historical development of policies relating to traffic congestion and car use over the past four decades. It investigates the ways in which transport policies are designed and implemented in the five Stage 3 cities, how they have evolved over time, which policy mix has been favoured at different times, their intended/unexpected effects, and how coordination has been ensured.

Each report draws on the following datasets:

[1] For more information, see D4.2 reports and technical notes.

- The work done in Tasks 1 and 2, as introduced in the 1st WP4 Technical report. This first technical report developed the common analytic framework, methodology and data collection strategy that is applied in WP4, provided a first assessment of the spatial and chronological perimeter it targets, and a brief mapping out of multi-level institutional and transport governance settings in the five Stage 3 cities, including a chronology of the shift from Stage 1 to Stage 3. Data sources include policy documents, proposed and passed measures, yearly budgets, and expert interviews with key policy actors.
- The dataset that were constituted as part of the WP4 database, interviews, workshops and site visits. This provided invaluable support for analyzing dynamics of change in each city and understanding the discrepancy we found between policy objectives and effective change.

Drawing on the common outline developed during Task 4.1, a case study analysis was developed for each stage-3 city in order to identify major factors of change and provide a detailed analysis of transport policy developments. The list of case study writers is provided here. We are thankful to Charles Buckingham (TfL) for his support in editing these reports and for his comments and suggestions for change.

List of case study writers for D4.2 reports

Stage 3 city	Case study writers
Berlin	Charlotte Halpern and Ann-Kathrin Bersch
Copenhagen and its region	Charlotte Halpern and Alessandra Carollo
Greater London	Dr. Caralampo Focas (on behalf of TfL)
Paris and Île-de-France region	Charlotte Halpern and Alessandro Maggioni
Vienna	Charlotte Halpern and Nicole Badstuber (UCL)

More precisely, these case studies assess the relevance of the 3 stages approach, characterize dynamics of transport policy change (incremental versus disruptive), and highlight factors of policy change (e.g., institutional and political, organizational, social movements, politics etc.).

More precisely, each D4.2. report includes the following information:

- A short summary
- Context: socio-demographic changes, major evolutions in urban development
- Institutional and political arrangements
- The governance of transport
- The organization of transport, including the transport offer
- Main policies, measures, or projects
- A brief conclusion about the 3 stages approach
- References, including grey literature and major policy reports, main publications about urban governance and transport.

The work achieved as part of WP4 is complementary to other work produced as part of the CREATE project. Particularly noteworthy is the work done as part of WP3 and D3.2 reports, which introduce transport supply data and policies influencing travel demand in each city. When relevant, specific sections from D3.2 reports are referred to. This will be done systematically during Task 4, and as part of WP5.

These reports are not in themselves a definitive synthesis of transport policy evolutions and their causes, but rather it is a compendium of resources, with some basic interpretation, to feed into this further analysis. It is complementary to the work produced as part of WP3, which reviews transport supply data and policies influencing travel demand in the city.

These reports only reflect the authors' view. Where opinions are expressed about the causes of change or the significance of specific aspects, these are with the sole intention of guiding further analysis under the CREATE programme and to act as a starting point for that further analysis.

1.3 Summary findings for D4.2 reports

For each of these report, the Sciences Po team (C. Halpern and C. Orlandi) produced a technical note, which content will be available on the project website as part the CREATE project's technical notes series – TN 6 to 9. These six-pages notes are meant to reach out to a wider audience. They highlight key drivers and processes explanatory of the shift towards stage 3, current and future challenges, as well as a discussion of the relevance of the stage-1-to-3 approach. This will reach out to a wider audience. We are thankful to Charles Buckingham, Radu Gaspar and the EIP team for their support in editing the final version of the Technical notes.

CREATE has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°636573

Project acronym:	**CREATE**
Project title:	**Congestion Reduction in Europe - Advancing Transport Efficiency**
Project website	**www.create-mobility.eu**

D4.2 - Technical report for Stage 3 city: Paris and Ile-de-France

Work Package 4 "Qualitative analysis of Transport policy developments"

		Date of preparation:	**July 2017**
Start date of project:	**1st June 2015**	Duration:	**36 month**
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		Checked by:	**J. Courel et al.**
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1 The CREATE project

1.1 Brief reminder about the CREATE project

How to reduce road congestion in large cities in Europe and the Euro-Med? How to encourage a change from car use to more sustainable transport modes? Historically, rapid urban growth has led to a growth in car ownership and use, and consequential increases in urban road traffic levels. These increases, in turn, are associated with a range of negative impacts, including traffic congestion, traffic collisions, social exclusion and dangerous levels of air and noise pollution.

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To answer this fundamental question, the CREATE project (Congestion Reduction in Europe, Advancing Transport Efficiency) brings together a team of international analysts in order to explore historical patterns of urban road traffic and car use, to identify success factors in encouraging modal shift and lessons learnt in Western European capital cities, and to work with Eastern Europe and Euro-med city partners (Adana, Amman, Bucharest, Skopje and Tallinn) to assist them in developing sustainable strategies.

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1.2 About Work Package 4 in the CREATE Project

How to account for the shift away from car-oriented policies towards sustainable urban transport policies?

As part of the CREATE project, the primary goal of Work Package 4 (WP4) is to analyse the historical 'Transport Policy Evolution Cycle' processes in Stage 3 cities, i.e. five Western European capitals (Berlin, Copenhagen, London, Paris and Vienna): Can we identify similar qualitative drivers of change across European cities? What are the main differences between cities and how to account for them? To what extent does the analysis of policy developments over time helps us make sense of recent policy choices and deadlocks? This is done by identifying the qualitative and contextual drivers that have enabled – or hindered – a shift from Stage 1 "urban congestion growth" to Stage 3 "encouraging sustainable mobility and liveable cities" policies. It also contributes to highlighting lessons to be learnt in order to speedup these processes in Stage 1 cities.

The work done as part of WP4 is coordinated by Dr. Charlotte Halpern, at Sciences Po, Centre d'études européennes et de politique comparée (CEE), CNRS, Paris.

This document, **D4.2 Paris and Ile-de-France region report**, is part of the second series of technical reports produced as part of WP4 during Task 3, "Qualitative analysis of transport policy development cycle processes in the five Stage 3 cities during the Shift from Stage 1 to Stage 3". It seeks to develop a comprehensive qualitative analysis of the historical development of policies relating to traffic congestion and car use over the past four decades. It investigates the ways in which transport policies are designed and implemented in the five Stage 3 cities, how they have evolved over time, which policy mix has been favoured at different times, their intended/unexpected effects, and how coordination has been ensured.

By highlighting discrepancies between policy choices and policy results, D4.2 reports contribute to understanding the shift away from car-oriented policies towards alternative transport policies in different city contexts.

This is done across the 5 cities as follows:

- Explore urban sustainable policy dynamics by looking at three policy dimensions:
  1. policy objectives (i.e. Which are the main policy documents? How are the power and resources distributed among different levels of government? Major policy reforms? Proposed, passed and failed measures?),
  2. policy structures (i.e. what are the main resources: legal, financial, organizational? Evolution of budgets? Organization charts? Creation of new agencies?)

3. policy instruments (i.e. regulatory/legislative, economic/fiscal, agreement-/incentive-based, informative/ communication-based).

- Map out the evolution over time since the policy shift began by explaining the dynamics of issue salience, institutional and political changes, as well as changes in the governance of transport.
- Understand how controversies regarding urban sustainability policies were resolved by looking at policy results (failed/accepted measures).

The completion of Task 3 draws on the work done in Tasks 1 and 2, as introduced in the 1st WP4 Technical report. It developed the common analytic framework, methodology and data collection strategy that is applied in WP4, provided a first assessment of the spatial and chronological perimeter it targets, and a brief mapping out of multi-level institutional and transport governance settings in the five Stage 3 cities, including a chronology of the shift from Stage 1 to Stage 3. Data sources include policy documents, proposed and passed measures, yearly budgets, and expert interviews with key policy actors.

The work achieved as part of WP4 is complementary to other work produced as part of the CREATE project. Particularly noteworthy is the work done as part of WP3 and D3.2 reports, which introduces transport supply data and policies influencing travel demand in each city. When relevant, specific sections from D3.2 reports are referred to. This will be done systematically during Task 4, and as part of WP5.

1.3 About this document, D4.2 Paris and Ile-de-France region report.

This D4.2 Paris and Ile-de-France region report develops a case study of this specific Stage 3 city. A preliminary draft was produced by Alessandro Maggioni in September 2016. It was then completed by Dr. Charlotte Halpern (Sciences Po) (August 2017) in order to develop an analysis of transport policy developments in Paris and the Ile-de-France region. It provides key data and high-level interpretations for this case to feed into the wider cross-city analysis of transport policy evolutions being undertaken for Work Package 4 of the CREATE project. More precisely, each D4.2. report includes the following information:

- A short summary
- Context: socio-demographic changes, major evolutions in urban development
- Institutional and political arrangements
- The governance of transport
- The organization of transport, including the transport offer
- Main policies, measures, or projects
- A brief conclusion about the 3 stages approach
- References, including grey literature and major policy reports, main publications about urban governance and transport.

This D4.2 Paris and Ile-de-France region report is not of itself a definitive synthesis of transport policy evolutions and their causes in the Paris Ile-de-France region, but it is rather a compendium of resources, with some basic interpretation, to feed into this further analysis. It is complementary to the work produced by IAU Ile-de-France[1], as part of WP3, which reviews transport supply data and policies influencing travel demand in the city.

This report reflects only the authors' view. Where opinions are expressed about the causes of change or the significance of specific aspects, these are with the sole intention of guiding further analysis under the CREATE programme and to act as a starting point for that further qualitative analysis.

1.4 Short summary of D4.2 the Paris and Ile-de-France region report

The analysis done in CREATE highlights the critical role played by political and institutional conflicts in a context of exacerbated fragmentation and the extent to which a large variety of actors, namely different levels of government, technical agencies, political parties, elite groups and professional networks, compete in order to shape transport governance and the distribution of transport policy resources. This was achieved through continuous institutional reforms, major conflicts and competition strategies, and the development of highly visible policy initiatives and projects.

[1] Institut d'Aménagement et d'Urbanisme Ile-de-France

By contrast to other cities under study in WP4, where consensus-seeking strategies account for policy change over time, competition emerges as the main driver for change in the case of the Paris and Ile-de-France region: competition between levels of government, between political parties, between transport companies and between social and economic groups. Together, this accounts for the coexistence over a long period of time of two highly differentiated models of urban and spatial planning in the capital-city region: on the one hand a liveable, sustainable and compact model in which the automobile is integrated in a larger regional sustainable transport system, and on the other hand, a regional growth model which primarily relies on the automobile in order to ensure daily accessibility for commuters to the core metropolitan area.

Interestingly, such levels of competition have not led to inertia and the report documents the ways in which demographics and urbanization dynamics were instrumental in triggering various forms of collective action across the region. In terms of transport policy developments and transport behaviours, the evolution of transport policy objectives, resources and tools sheds light on both the “What’s” (substance) and the “How’s” (governance) of transport policy change. On the one hand, it shows how a sustainable approach to transport planning and policy-making progressively emerged at the margins of the transport policy sector, through the diffusion of alternative representations and policy solutions, and by drawing on small-scale innovations. But on the other hand, the evolution of transport policy objectives, resource and tools also highlight how state elites and networks are able to successfully resist bottom-up pressures and maintain, in a number of cases, a state-led approach to transport planning in the capital-city region that prioritizes its role as the national powerhouse.

Acknowledging the continued coexistence of both dynamics as well as their interplay over time contributes to better understanding remaining spatial disparities in terms of transport policy developments - a result that echoes the analysis done in WP3 regarding individual/collective choices pertaining to transportation in Paris and the Ile-de-France region. A shift away from the automotive city undoubtedly took place in the Paris Ile-de-France region, and the development of stage 3 policies is precisely documented. Yet this result remains ambiguous: this evolution is unevenly spread – both socially and spatially, recent conflicts over specific transport policy initiatives confirmed the permanence of high resistance capacities and the ability of a number of new entrants and old players to draw on new technologies in order to promote car-based forms of mobility.

The report is organized in two main sections. First, several drivers of transport policy change are examined successively: socio-demographic changes, institutional and political factors and the organization of transport in Paris and the Ile-de-France region. Second, the shift away from the automobile is analysed through the lenses of public policy change, by looking successively at the evolution of policy objectives, measures and tools over time. In the conclusion, the report discusses current challenges in transport governance and policies in the French capital-city region, and the extent to which it holds some valuable lessons for other cities in the CREATE project and beyond.

2 Introduction to the Paris and Ile-de-France region report.

This report examines transport policy processes in Paris and the Ile-de-France region – referred to in this report as the Paris Ile-de-France region – and the shift away from car-oriented policies towards alternative transport policies in the context of rapidly evolving economic, social and urban dynamics. When considering the evolution of transport demand over time, there has been a distinctive shift away from the 'automobile city' in the Paris Ile-de-France region – even though its scope and rhythm is unequally distributed in the region. Since the early 2000s, car traffic stabilized. For the first time since 1976, the average number of daily trips made by private cars dropped from 1.54 in 2001 to 1.46 in 2010 whereas demand has been on the rise for all other transport modes. In the city of Paris, the downward trend began in the 1990s, going from 0.77 daily trips by car on average in 1991, to 0.65 in 2001 and 0.41 in 2010. In the inner ring of the region, this shift seems to have occurred much recently. Today, the outer ring of the region is the only area in which increased growth in car use is taking place. At the same time, the use of public transport has sharply increased across the region (+ 21 per cent between 2001 and 2010) and the average number of daily trips by bicycle doubled between 2001 and 2010. In the meantime, there has been an increase of car traffic in the outer suburbs – between 30 and 40 kilometres from Paris.

This report's main objective is both descriptive and explanatory at the same time. First, it offers a detailed overview of major developments in transport over time. Second it provides some explanation for these changes in transport behaviours by exploring changes – and identifying drivers for change – in transport policies and governance over time. Which policy objectives, instruments and measures were introduced? How were they elaborated? By whom? Were they successfully implemented? What were the main drivers – or combination of drivers – that influenced such transport policy developments over time and account for such outputs in terms of transport behaviours?

Analysing transport policy developments over time, the report seeks to explore the relevance of the 'three stages' approach for understanding policy change and the shift away from car-oriented policies in the Paris Ile-de-France region. It also provides some explanation for policy change and the shift towards urban sustainable mobility by looking at different drivers for change and analysing how and why they explain transport policy developments over time.

More precisely, the report argues that transport policy developments over time in the Paris IDF Region are closely related with dynamics of political and institutional competition between levels of government. In this context, policy change is primarily shaped by two competing logics: 1) a highly centralized and state-driven policy domain, in which major policy resources are highly concentrated; 2) continued pressure for increased decentralization to the benefit of democratic or functional levels of governance.

Area selection

The choice made in WP4 to consider both Paris and the Ile-de-France region brings some difficulties when it comes to understanding and explaining policy processes. This has several implications for the analysis done as part of WP4 and explains why the area under study in this report differs slightly from the choices made in WP3 in order refer to formal levels of functional and institutional governance. It also led to consideration of dynamics at both the region and the city levels.

This choice also had some major implications regarding data availability. Due to high degrees of institutional and political fragmentation, and in the absence of an integrated transport authority at regional level, each level of government has produced its own data management capacity about those dimensions of transport policy and governance it was responsible for. This is particularly the case for car traffic. Recent controversies about transport decisions highlighted the role of data production and expertise (e.g., the choice of indicators, impact assessment methods etc.) as a major policy resource in political, institutional and organizational competition.

Data availability and sources

In addition to the preliminary work done on transport governance in Paris and the Ile-de-France region as part of the Transformative Urban Transport (TUT-POL) project[2], the report primarily draws on the material collected as part of the CREATE project. This includes contributions from IAU Ile-de-France to WP4,[3], a group interview session organized together with IAU Ile-de France, additional face-to-face interviews, and the input provided by IAU Ile-de France to WP3 and WP6, and to the CREATE project more generally[4]. Second, a large amount of data was gathered from secondary sources: statistical data and reports, grey literature (e.g., archives) and press archives. Most planning documents are available at the IAU Ile-de-France library. Third, press archives at the Sciences Po Library and the Bibliothèque François Mitterrand were particularly useful in order to access information and identify key actors, regulations, public reports and transport projects for the pre-1990 period. For the recent period, a systematic press review of major national newspapers (e.g., “Les Echo”, “Le Parisien”, “Le Figaro”, “Le Monde”) was done through the Factiva database. This press review also allowed identifying major controversies about transport and mobility in the Paris-Ile-de-France region.

Data collection was systematized as part of the completion of the WP4 database. This was achieved by the Sciences Po, CEE team (Alessandra Carollo, Charlotte Halpern, Simon Persico).

Report outline

The report is organized in two main sections. The first one discusses the role of drivers for change, and successively explores the role of demographic and socio-economic pressures, political and institutional changes, and finally, changes in transport governance. In the second section, the report provides a detailed analysis of transport policy developments over time, in order to provide some empirical evidence for change and to account for it. In the conclusion, the report discusses current challenges in transport governance and policies in the Paris Ile-de-France region.

[2] This case study has also benefited from the work done outside the CREATE project as part of the TUT-POL project, *Transformative urban transport*, led by Diane Davies, with funding from the Volvo Foundation for Education and Research. The Paris case (Halpern, Le Galès, 2015) is one of the cases examined in this project. Some of the material, including interviews done between March and June 2015, which content was not used in the TUT-POL report, was included when relevant in the analysis done as part of CREATE. Findings from the TUT-POL project will be published as part of an edited volume to be published at Oxford University Press in the Fall (Davis, Altshuler, forthcoming Fall 2018).

[3] See Raes (2016) as well as the D3.2 Paris Ile-de-France report (Nguyen, Courel, 2016)

[4] This group interview was jointly hosted by IAU Ile-de-France and Sciences Po, CEE. It took place on January 29, 2016 at Sciences Po. See D4.1 WP4 report.

3 Major drivers of transport policy change in Paris Ile-de-France.

A set of specific contextual elements (demographic, socio-economic, political, etc.) are introduced in this section in order to examine major drivers for change. As in the case of other Stage 3 cities in CREATE, the Paris Ile-de-France area underwent profound demographic and socioeconomic changes over the time period under study. Urban and demographic growth did undoubtedly contribute to shape evolving transport demands and transportation choices in the Paris-Ile-de-France Region, and this relationship was, to some extent, shaped by institutional and political factors. They also account for the high level of fragmentation in transport governance and to the number of variations in the planning, the funding and the organization of transport systems and services.

After having introduced some elements of context about the Paris Ile-de-France region, we successively examined three main drivers of transport policy change: urban and demographic growth, political and institutional competition between the three levels of government, and the organization of transport. In doing so, the report sheds light on three dynamics, which, together, have shaped policy and governance capacities in the Paris Ile-de-France region and discusses their respective role over time:

- Profound and enduring socioeconomic inequalities within the region,
- The critical role of the state through elite networks, state-owned enterprises and political interests,
- Successive attempts by subnational levels of government to increase their autonomy according to a logic of competition.

3.1 Some elements of context

Paris is a 2000 years old city and a globalizing metropolis in cooperation/competition to London in the European context. Although unevenly distributed within the region, it witnessed continued demographic growth from 8,4 million inhabitants in 1960 to 12 million inhabitants in 2015 (see Figure 1a). In 2013, its population amounted to 18.8 percent of metropolitan France's total population and its GDP amounts to 30.1 percent of that of metropolitan France. It is also the location of large share of jobs and businesses (See Figure 1b).

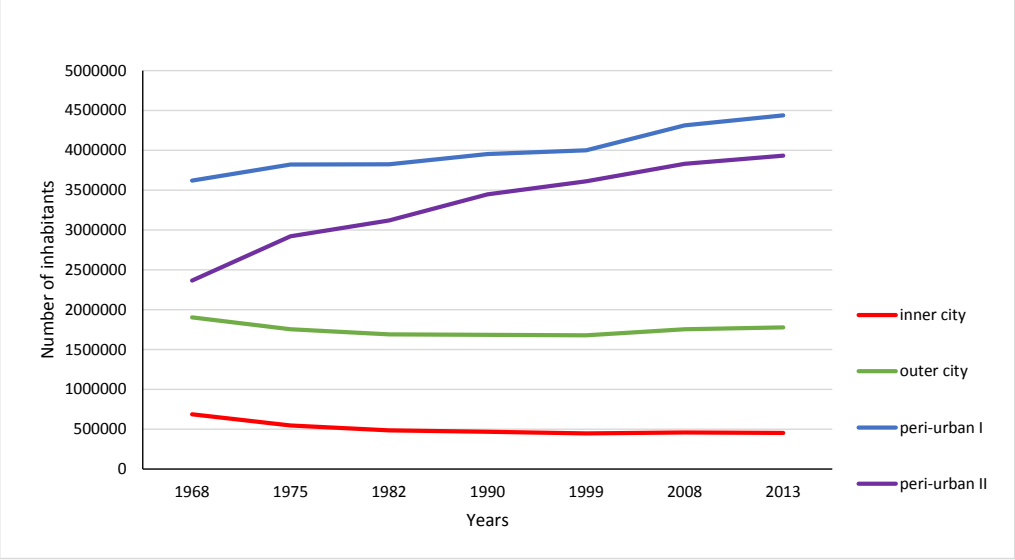
3.1.1 Paris, an old European metropolis in a growing region

The capital-city region is also the country's undisputed political, economic and financial centre (Gilli, 2014, 40-44). From the late 17th century onwards, the French State massively invested in the development of a national and centralized transport network (trains, then motorways) in order to ensure accessibility to the capital-city in a minimum amount of time. It attracts presently a large number of daily commuters from adjacent regions and nation-wide, and the continued development of transport infrastructures and networks over time have contributed to this centrality. This urban area is also a major destination for tourism, with some 30 million visitors every year. City users and transport users are altogether a far larger group than the city's or the region's residents, thus contributing to the diversity of transport and mobility needs in the capital-city region. In 2014, some 33,5 million of tourists came to Paris.

The Paris Ile-de-France area is also a globalizing metropolitan area. It ranks second among the regions of Europe and its per-capita GDP is the fourth-highest in Europe. It hosts the world headquarters of 30 Fortune Global 500 companies[5]. Similarly to London, Paris is structurally different from other European cities (regional capital, capitals of smaller states) and regions organized in networks (e.g., Randstadt, Lombardia, Ruhr area, etc.) (Le Galès and Vitale, 2013).

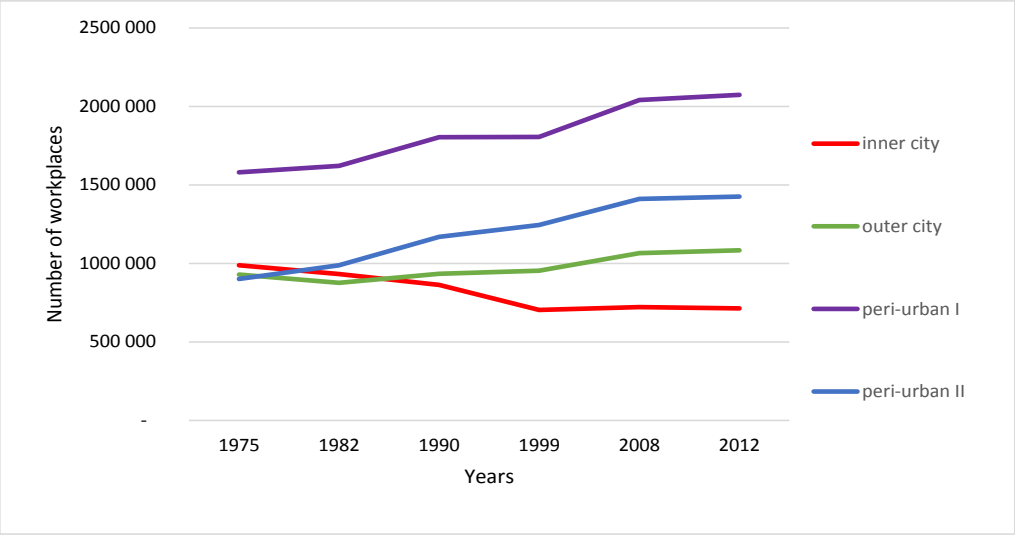
[5] See D3.2 report, p.21. For a detailed account of the economic structure of the Ile-de-France region, see Gilli (2005; 2014).

Figure 1a. Development of the total number of inhabitants by area types [number] since 1968



Source: French General Census, IAU, extracted from D3.2 report (p.15).

Figure 1b. Development of the total number of workplaces by area type



Source: French General Census, IAU, extracted from D3.2 report (p.15).

From a political and an institutional perspective, there is a clear distinction to be made between the city of Paris on the one hand, and the Ile-de-France region on the other hand (see Table 1). In addition, policy developments within the region itself are far from being homogenous and are only weakly governed by the regional authority (Estèbe, Le Galès, 2003; Gilli 2014).

The city of Paris can be traced to an old historical centre of 2,3 million inhabitants. It is very densely populated[6] and surrounded by an orbital motorway that strictly demarcates the core city centre from the urban region. It enjoys a specific political and administrative status, and to some extent, a large autonomy in terms of policy initiatives and projects. By contrast, the Ile de France region contains some 12 million inhabitants. In its current political and institutional status, it is considered a recent creation and its development, as a legitimate policy-making and spatial planning authority, results from successive territorial and administrative reforms that

[6] See also results from WP3 in the CREATE project, D3.4 report, forthcoming.

were introduced by the French state in an attempt to shape urbanization dynamics while at the same time ensuring the effective functioning of the country's powerhouse.

Today, urbanisation dynamics go beyond the region's boarders (Bassin parisien) and raise new issues of coordination and competition with adjacent regions in a number of policy areas, including transport. High-speed train networks and air transport have also considerably increased the level of daily commuting between Paris and other cities in Europe (e.g., London, Brussels, Amsterdam, Cologne) (Cattan et al., 1999).

3.1.2 Implications for the analysis done in WP4

From an institutional and a political perspective, a clear distinction should be made between three historic levels of government and strategic scales of planning (see Table 1 and Maps 1a and 1b): the State, the region and the city of Paris. As a result, the analysis done in WP4 distinguishes between the following areas - and some of the figures were adapted from the D3.2 report by IAU Ile-de-France in order to reflect the choices made in WP4:

- The city of Paris (incl. its 20 districts or *arrondissements*)[7]
- The inner suburbs area or *petite couronne* (incl. 3 départements)[8], which more or less corresponds to the greater metropolitan authority (métropole du Grand Paris[9]),
- The outer suburbs area or *grande couronne* (incl. 4 départements)
- The Ile-de-France Region as an overarching policy-making authority in a selective number of policy areas (see also INSEE, 2011).

Overall, some 70% of the population lives in the core metropolitan area of the Paris Ile-de-France area.

In some cases, the role of specific municipalities within the region or of specific Parisian districts is also discussed in order to account for transport policy developments in the region as a whole.

Since January 2016, one should add the greater metropolitan authority, métropole du Grand Paris, although its precise role and function is still under discussion until 2020. It is likely to play a growing role in the future as a relevant transport planning organisation.

Table 1. Overview of major levels of government in the capital-city region

	city of Paris	métropole du Grand Paris (since Jan. 2016)	Ile-de-France region
Population	2.265.866	7.000.000	11.800.000
Size	105 km2	762 km2	12.011 km2
Density	23685/km2	10334 /km2	996 /km2
Democratically elected political leadership	Mayor of Paris (since 1977), currently Mayor Hidalgo (Socialist party)	President of the Great Paris (since 2016), currently Patrick Ollier (Conservative Party, LR)	President of the Ile-de-France regional council (since 1986), currently Valérie Pécresse (Conservative Party, LR)
Number of local authorities	20 districts	131 local authorities, incl. 4 départements and 12 public authorities.	1291 municipalities, 8 départements.
Budget	Between € 8 and 9 billion	€ 3,7 billion, incl. € 65 million for direct investment	€ 5 billion

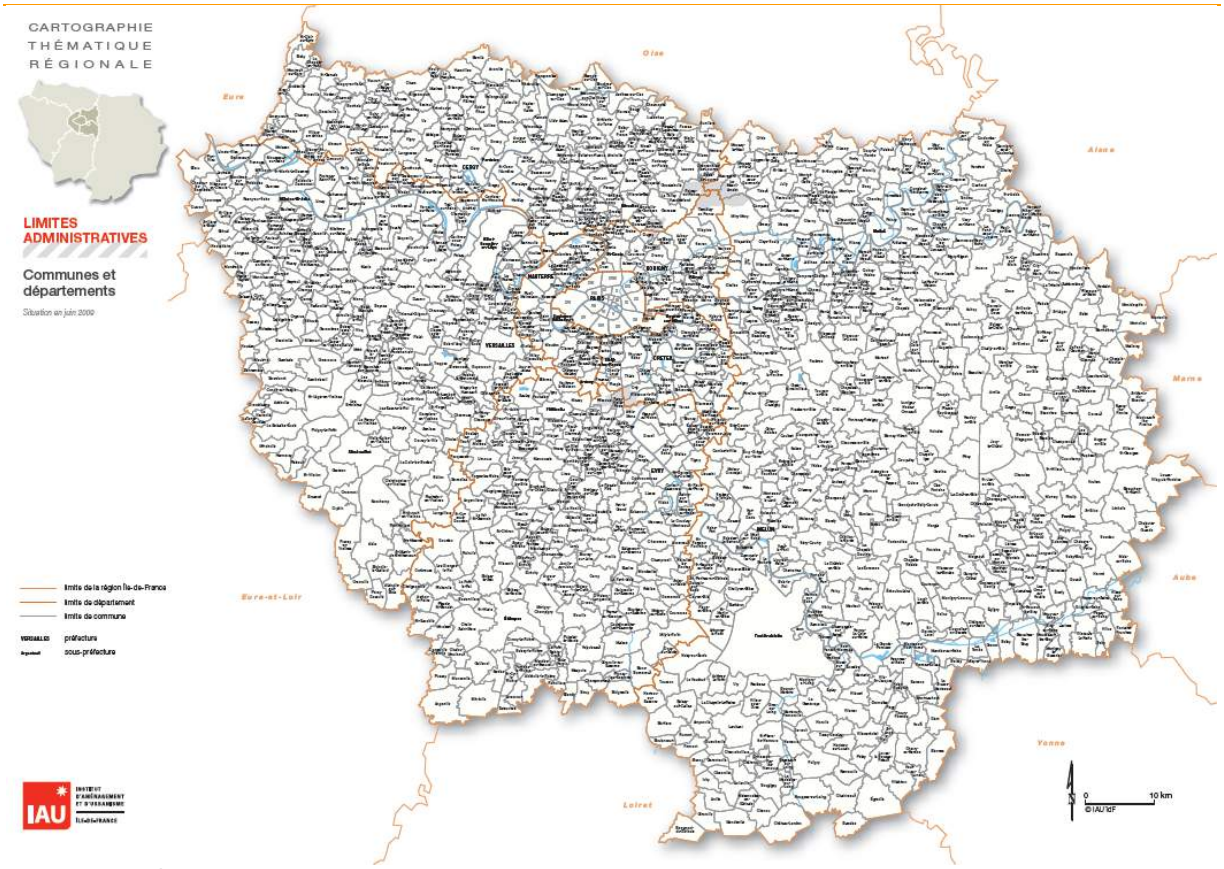
Source: Compiled by Halpern from various sources (Halpern and Le Galès 2016).

[7] This corresponds to the inner- and the outer-city areas, as defined in D3.2 report, p.10.

[8] This corresponds to the "Peri-urban area I" in D3.2 report (p.10), that is the area bordering the city (e.g. closest ring around city), fulfilling the criteria of high population density, high density of workplaces, high number of commuters to or from the municipalities.

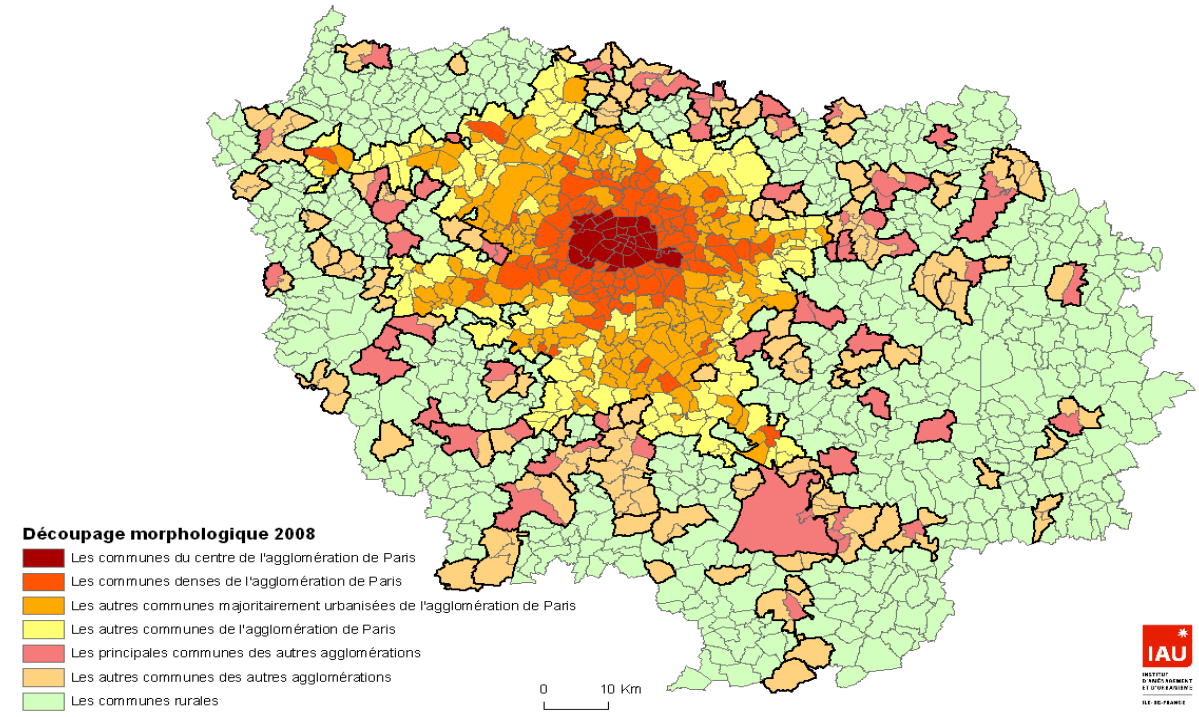
[9] Introduced in January 1st, 2016 as a new metropolitan authority.

Map 1a. Administrative map of the Ile-de-France region



Source: Cartothèque IAU Ile-de-France, 2017.

Map 1b. Morphological map of the Ile-de-France region (2008)



Source: Cartothèque IAU Ile-de-France. Retrieved from D3.2 Paris Ile-de-France report, p.11.

3.1.3 Socio-spatial dynamics: general trends

From the socio-spatial point of view, a rapid overview of the changes observed in the Paris Ile-de-France Region highlight three general trends which are only briefly introduced here but will be further explained in later stages of the report.

First, the region witnessed continued demographic and economic growth, but these changes are unevenly spread and major economic transformations took place. The Parisian urban area grew continuously since the 1960s but at a similar rate than the national average, that is, some additional 48.000 inhabitants every year. Historically, it is particularly attractive for young adults wishing to pursue their training and start their professional career. The functional metropolitan area now spreads beyond the region's borders and demographic growth is strongest in the outer suburbs of the Paris Ile-de-France area and adjacent regions (Clanché, 2011)[10].

Second, the region underwent massive socioeconomic changes. The number of jobs increased over this time period, and was first measured in the 1975 census[11]. Since then, it is less concentrated now than in was in the late 1960s: new economic development centres emerged in the inner and outer suburban areas, but at the same time, it also went continuously sprawling further away from the core urban area, and beyond the borders of the Ile-de-France region. While Paris concentrated some 35% of the total number of jobs in the region in 1975, this reduced to below 25% after 2000. The spatial distribution of the job market and its evolution over time is considered a key dimension of urbanisation dynamics in the larger Parisian urban area and primarily driven by real estate prices for commercial and logistics spaces (Raimbault, 2014).

When it comes to degrees of spatial concentration for each type of activity, few changes were observed over time. Yet economic decentralization followed a vertical pattern and led to the development of specialised clusters. Since 1975, important changes were also witnessed in terms of the metropolitan area's structure. Industrial activities (e.g., automobile industry, mechanics and metallurgy) decreased significantly, as did the number of jobs in the field of non-market services, the building industry and the construction of electrical equipment. By contrast, an increase of jobs was witnessed in the field of services, tourism and the banking industry.

Third, the region is characterized by profound and enduring socio-economic inequalities (Préteceille, 2003). The Paris Ile-de-France region is rightly considered to be a rich region: in 2015, its GDP amounted to €650 billion euros. When compared with metropolitan France and other metropolitan areas in France, the median income of households is, respectively, 15% and 27% higher, and amounts to €1816/month (DRIEA, 2011, p.19)[12]. Nevertheless, there are some major disparities within the region itself, with enduring forms of poverty and segregation that have been identified at infra-municipal levels. Some 60.3% of the working-age population is employed, and approximately one out of ten Île-de-France workers was unemployed in 2014. These inequalities can be measured in different ways: level of poverty and number of households dependent on social welfare, levels of income and spending capacity between local authorities, highly spatially concentrated forms of inequalities etc. (see above, DRIEA, 2011).

These enduring forms of socio-economic equalities challenge the heroic vision of spatial planning in the capital-city region and highlight the shortcomings of forms of governance and policy-making in this area. They have justified a number of social and political initiatives in which transport policy developments are regularly highlighted as a driver for socio-spatial inequalities as well as a consequence of a poorly inclusive policy-making system. We examine, in the following paragraphs, the specific role of urban and demographic growth as a major driver for transport policy change. Map 1c highlights the current distribution of socio-economic inequalities in the Ile-de-France region.

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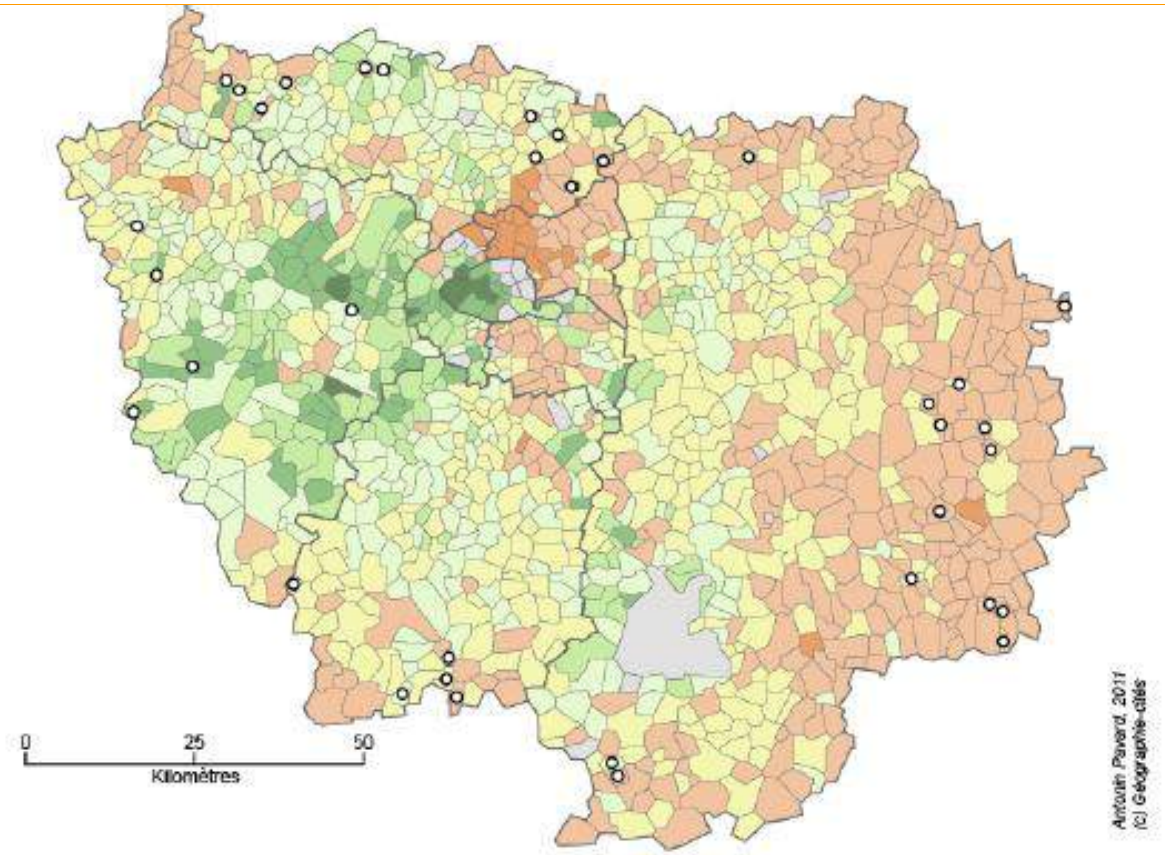
[10] In the Départements of Oise, Eure et Eure-et-Loir, Loiret. See Clanché (2011): https://www.insee.fr/fr/statistiques/1280958 .

[11] For an overview, see Gilli (2005; 2014).

[12] In most studies, the classic indicator used in order to measure households' revenues is the disposable income; that is, the income reported to the administration plus social benefits and employment allowances. All these revenues are net of direct taxes. The standard of living amounts to the disposable income per unit of consumption.

Map 1c. Income inequalities among households in the municipalities of the region as of 2007.



NB: 8 types of municipalities according to the distribution of households between income deciles in the Ile-de-France region.

	Type of households overrepresented	Number of municipalities and share of households in the region
	Very well-off households overrepresented	9 municipalities, 3,6% of households
	Well-off households overrepresented	74 municipalities, 12,7% of households
	Moderately well-off households overrepresented	142 municipalities, 13,8% of households
	Upper middle class overrepresented	268 municipalities, 8,2% of households
	Middle class overrepresented	408 municipalities, 18,2% of households
	No significant overrepresentation	27 municipalities, 13,4% of households
	Lower middle class overrepresented	348 municipalities, 22,7% of households
	Poorest households overrepresented	23 municipalities, 6,7% of households
o	Less than 50 households	

Source: Antonin Pavard, 2011; © Géographie-cités. Retrieved from Rapport DRIEA, 2011, p. 87, translated by the authors.

3.2 Planning urban and demographic growth

Throughout the period considered in CREATE, controlling demographic and urban growth in the capital-city region while at the same ensuring its attractiveness has been considered an overarching goal of policymakers. It is a major obsession among French political elites and in a country in which rural areas and interests are overrepresented in the national politico-institutional system. In this context, all issues related to urban and spatial planning in the region are primarily shaped by national economic development and policy goals, and have justified, until today, strong and direct state interventionism in the capital-city region.

We introduce in this section, a selective list of the most important spatial planning documents that were adopted by national and/or regional authorities in order to structure the development of the capital-city region (Annex 1).

The analysis shows: 1) remarkably stable spatial planning policy objectives throughout the period considered in CREATE, and 2) differentiated capacities to implement and enforce these policy objectives over time and across the region. This holds some important consequences for evolving mobility patterns in the region.

3.2.1 Polycentrism *versus* diffuse urban sprawl (1952-1994)

As of 1960, rapid, and partially uncontrolled urban growth contributed, in combination with rapid socio-economic changes, to the profound transformation of the Parisian region both within and outside the city of Paris. Urban and spatial planning objectives were formalized as part of the 1965 Strategic document for urban and spatial planning (SDAU). The SDAU, which remained the main planning document for the Parisian region until 1994[13], included long-term policy goals and demographic projections that foresaw an increase up to 14 million inhabitants by the year 2000 that is, an additional 7 to 8 million inhabitants (see Map 2a).

The 1965 SDAU as an attempt for long-term spatial planning in the region.

The SDAU recommended that a polycentric structure should be encouraged through the development of five New Towns (known as *villes nouvelles*) in clear reference to the British experience (Fouchier, 1999). By concentrating a large number of urban functions (e.g., housing, jobs, retailing, leisure activities, etc.) new towns were considered a major planning tool against urban sprawl. They also aimed at structuring the decentralization of public services and business areas (see Gilli 2005, above). Five new towns were planned some 30 kilometres away from the city of Paris and on both sides of the Seine River (see Map 2b)[14]. In the capital-city region, this was done under the State's direct leadership and in each new town, a state-led development company was introduced[15] in order to oversee their effective planning and to avoid deviations from original plans.

In addition to new towns, the development of the business district of La Défense as of 1969 is also considered one the most important urban development projects during this period. Accessibility to and from these new urban centers justified the development of a dense network of transport infrastructure, including a rapid transit rail-based system (RER, see below).

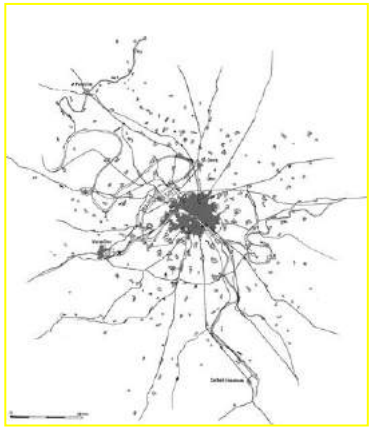
Notwithstanding the efforts to constrain urban sprawl, a large number of individual one-household residential units were built outside the new towns between 1965 and 1975. These developments were driven by the rising demands of a new middle-class generation, but other factors account for the development of this type of private property as well: lower real estate costs, advantageous loans from the banking system and a number of fiscal incentives in the housing policy domain (Baccaini, 2009; Callen 2011). Such contradictions in the way urban development objectives were implemented led to dramatic changes in the outer area of the Parisian region: small villages that were located some 30 to 50km from Paris witnessed rapid population growth, and at the regional level, there was a growing mismatch between the location of housing on the one hand, and that of business areas, public services and transport infrastructures on the other hand.

[13] Some minor adjustments were made during the 1976 revision.

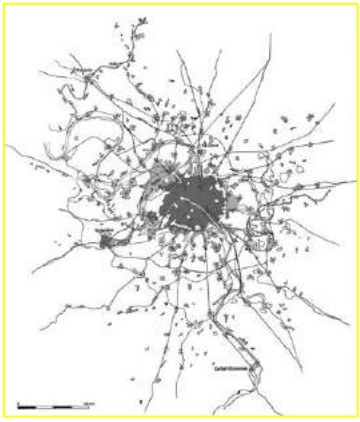
[14] Marne la vallée, Cergy Pontoise, Saint-Quentin-en-Yvelines, Sénart, Evry.

[15] Etablissement Public d'Aménagement - EPA

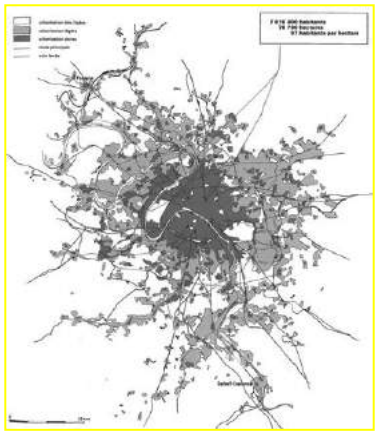
Map 2a. Demographic growth in the Paris Ile-de-France Region (1857-1982).



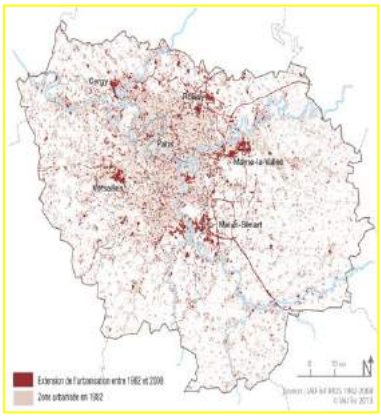
Source : Paris and Ile de France 1857



Source: Paris and Ile de France 1964

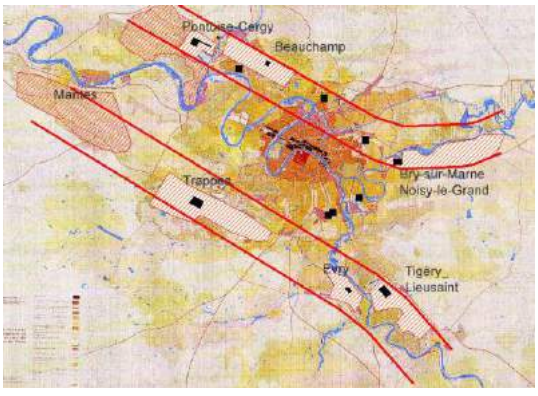


Source : Paris and Ile de France 1907

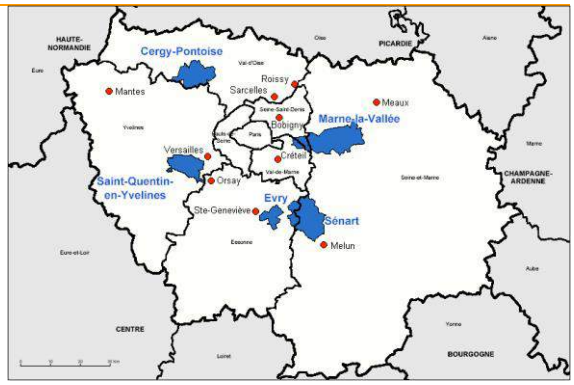


Source : Paris and Ile de France 1982

Map 2b. Proposed urbanization axes and the location of new towns.



Source : SDAU, 1965



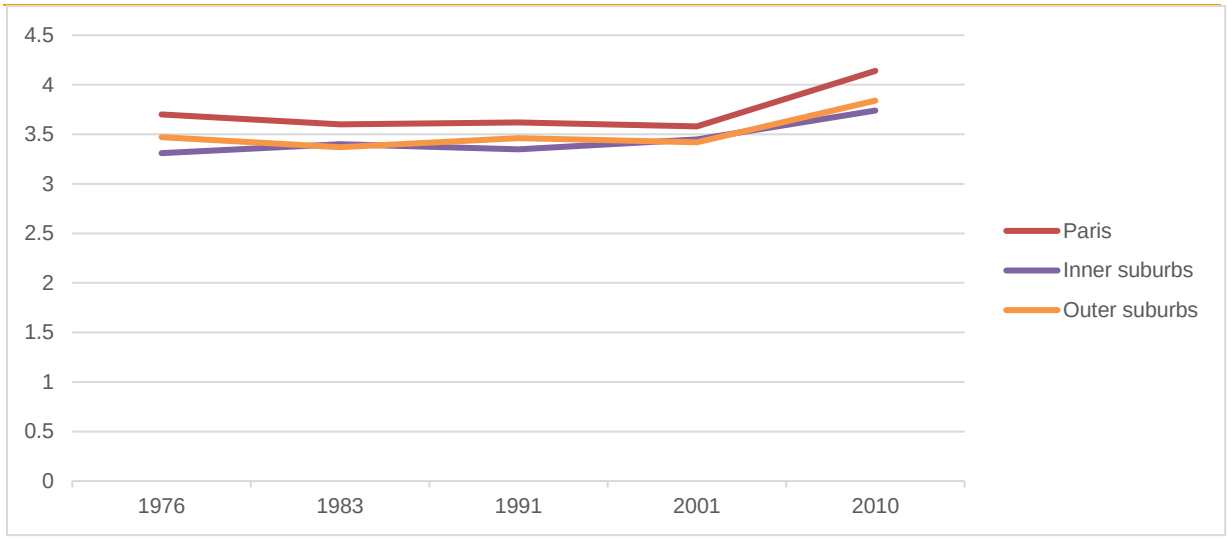
Source: IAU, 2011

By contrast, the city of Paris lost 19% of its population between 1954 and 1974 (Cottour *et al* 2008). While the number of jobs in Paris continued rising, a growing number of the active population moved away from the city towards new planned and unplanned urban developments.

Together, these factors account for increased mobility demands at regional level, which could not be entirely absorbed by exiting public transport and road infrastructure (see Figures 2a & 2b). Public transport and road networks were overloaded at peak hours, and parking areas were insufficient. By contrast to the city of Paris,

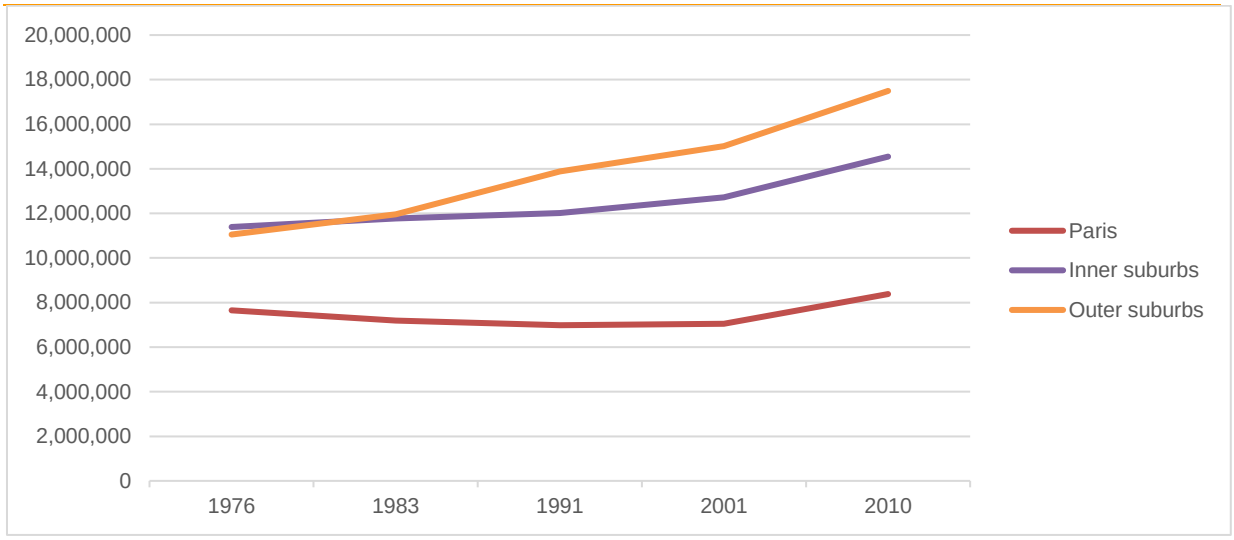
which relied on a dense public transport network, the inner suburbs and emerging outer suburbs were notoriously under-equipped and dependent upon car use (Orfeuil and Wiel, 2012).[16] In addition to centre-periphery commuting traffic, the development of the La Défense business district also induced additional commuting flows. Together, this contributed to growing political profile of transport issues.

Figure 2a. Average number of trips (per tripmaker and per workday)[17]



Fields: Ile-de-France residents aged 6 and over; Travels within the Ile-de-France region; Years 1976, 1983, 1991, 2001, 2010.
Source: EGT 1976-2010 STIF-OMNIL-DRIEA - Traitements IAU-IdF

Figure 2b. Average number of daily trips

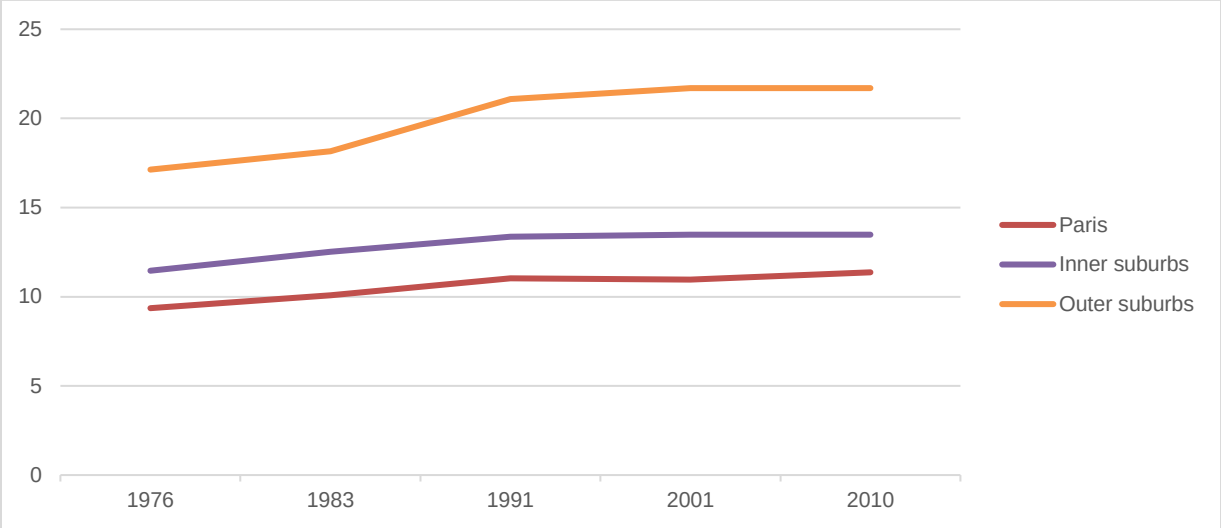


Fields: Ile-de-France residents aged 6 and over; Travels within the Ile-de-France region; Years 1976, 1983, 1991, 2001, 2010.
Source: EGT 1976-2010 STIF-OMNIL-DRIEA - Traitements IAU-IdF

[16] The Paris Metro only served the City of Paris and operated with pre-war rolling stock, only 3 km of additional Metro lines were built between 1945 and the late 1960s. Suburban railway services remained limited, and the lack of connection between public transport networks made transfers extremely complicated. Several road projects were postponed.

[17] We are grateful to IAU for helping us to adapt the figures that were produced for the D3.2 report.

Figure 2c. Evolution of average daily distances (scope)



Fields: Ile-de-France residents aged 6 and over; Travels within the Ile-de-France region; Years 1976, 1983, 1991, 2001, 2010.
Source: EGT 1976-2010 STIF-OMNIL-DRIEA - Traitements IAU-IdF

Urban growth overflows spatial planning objectives (1976-1994).

Both demographic growth and urbanization trends justified the revision of the SDAU in 1976. While spatial planning goals remained unchanged, this revised spatial planning document primarily aimed at strengthening the development of polycentrism through a series of concrete policy measures. This was achieved by strengthening new urban nodes in the suburbs, including in new towns but not exclusively.

National investments and policies also shaped the development of new business centres, as well as their spatial distribution. Only 11,5% of urban growth – and not 24%, as originally planned – was absorbed by the new towns (Larroque et al, 2002, p.269). Similarly, new towns only absorbed part of the total population growth in the region - 44% according to Davezies (2004) (see also Imbert et al., 2011; Table 2) and from the development of new economic activities outside Paris[18] (DREIF, 2002). Those new towns that attracted a largest share of new residents and jobs were those in which the level of concentration of urban functions was highest, most notably public services.

Table 2. The evolution of population of new towns since 1968

Census year	Population	Share in total population of IDF region (%)
1968	178 000	1.9
1975	274 000	2.9
1982	444 000	4.5
1990	654 000	6.1
1999	741 000	6.8
2007	805 000	6,9

Sources : Insee, R.G.P. 1968, 1975, 1982, 1990, 1999 ; RP 2007 (exploitations principales). Adapted from Imbert et al., 2011.

Outside new towns, the rapid development of new business centres (La Défense, Paris-Charles de Gaulle airport, etc.) attracted an increasing number of new jobs and businesses. Small and rural municipalities in the outer suburbs were also deeply transformed by diffuse urban sprawl and the arrival of new inhabitants and businesses in search of lower real estate prices and more advantageous loans (see also D3.2 report, p. 21). Over time, both planned and unplanned urban development contributed to deepening the unequal spatial distribution of housing and workplaces. This benefited the south-western and western side of the capital-city region, where a large share of high-end tertiary and industrial activities, together with research and development activities, are concentrated, whereas the dismantling of industrial activities and the construction of large social housing estates are particularly concentrated in the northern and north-eastern side.

[18] The overall number of jobs within the 5 new towns moved from 92.270 in 1975 to 160.596 in 1982 and 274.870 in 1990 (DREIF 2002)

By contrast to the changes underway in the region, the number of residents continued to decrease in the city of Paris: between 1975 and 1994, the city lost 400.000 inhabitants (Cottour *et al* 2008). Planning documents elaborated under the leadership of central government[19] acknowledge these demographic and economic changes. Housing patterns and the housing market structure exacerbated contrasting dynamics between professional and intellectual categories and working-class categories (see also Desjardins 2007. 2011). Employment decreases also as a result of the reorganization of its labour market structure: the number of unskilled jobs in the service sector decreases while the number of managerial, professional and intellectual jobs increases, firms and economic activities in need of more affordable space moved towards the outskirts of the City centre or the inner suburbs area (see Figure 1b, D3.2 report, p.20). In order to address these changes, the 1977 planning documents seek to enhance the quality of urban spaces through the development of public parks (e.g., Georges Brassens, Belleville, André Citroën, etc.) and a pedestrian area in the city centre.

Impact on mobility patterns in the region.

Urbanization dynamics, in combination with the spatial distribution of population and economic growth, have shaped mobility patterns in the region. As both polycentric and diffuse urban sprawl increased, transport patterns and behaviours permanently transformed in the capital-city region. Car use increased within the region[20] as a result of growing demand for transport between new urban centres outside the city of Paris and because of the above-mentioned disconnect between housing and employment. Due to the centralization of the public transport network, which forced all east-to-west commuters to travel through the city of Paris, existing and new transport services and infrastructure were saturated[21].

By contrast, demographic and economic trends within the city of Paris led to a slight decrease of daily travel within the city and between the city and the *petite couronne* (see Figures 2a, b, c & d) (IAU, 2010). In the late 1980s, 60% of travel in the Paris Ile-de-France region was made by car as opposed to 31% by public transport; and when looking at daily trips made outside Paris, 75% were made by car. By contrast, 61% of daily trips made within the city of Paris and 59% of daily trips made between Paris and the *petite couronne* were made by public transport (Prefecture Ile de France, DREIF, 1988).

3.2.2 Competing spatial planning goals in a context of weak political leadership (1994-2013)

The impact of demographic and urbanization dynamics on housing availability, transport and the job market contributes to the elevation of regional planning back onto the national agenda in the late 1980s in a changed institutional environment. Since then, spatial planning in the capital-city region has been shaped by a continuous struggle for leadership between the state and subnational levels of government, which accounts for remaining contradictions in the definition and implementation of policy investments and priorities.

The elaboration of the 1994 Strategic planning document (SDRIF) under the State's leadership aimed at reasserting the capital region's centrality as a national and European transport hub[22]. With a clear focus on economic development and the strengthening of the capital-city region's competitiveness vis à vis other large metropolitan areas worldwide, this strategic planning document highlighted the need 1) to reorganize the inner suburbs and 2) to contain and structure urban growth in the outer suburbs.

Priority was given to densifying clearly designated areas, including new towns, while preserving agricultural land on the outskirts of the region. It also addresses issues related to socio-economic inequalities within the region by strengthening existing or developing new large projects in the eastern and north-eastern part of the region, such as Eurodisney in Marne-La Vallée (see Map 3a), or recognising the Paris Charles-de-Gaulle

[19] The 1977 Paris Land use Plan (Plan d'Occupation de Sols de Paris) and the 1977 Paris Urban Development Plan (Schéma Directeur d'Urbanisme et d'Aménagement de Paris).

[20] The number of motorized movements in the region increases from 17 million in 1970 to 19 million in 1983 (Cottour, 2008).

[21] See Maps 7a, 7b and 7c below, section 4, for an overview of the RER network evolution since 1977.

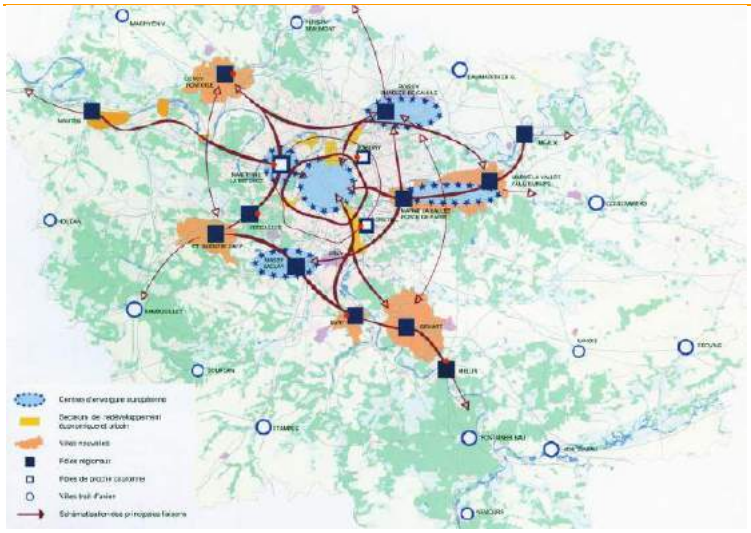
[22] This was the case of the 3rd State-Region Contract (1994-2000) and the 1994 SDRIF.

airport as the main national hub. In this context, housing and transport were confirmed as critical drivers in order to further strengthen polycentrism in the region and transposed into a series of policy measures and infrastructure projects (see section 2). In the case of transport, new TGV stations were developed outside of Paris, at Marne-La Vallée and at Charles-de-Gaulle airport, in order to ensure connexions with the RER network in fast developing areas of the outer suburbs. Priority was also given to the development of tangential transport infrastructure in order to divert traffic flows from the Centre of Paris and to address transport demands outside Paris.

As of 2004, the revision of the SDRIF was led by the regional government in close cooperation with IAU. Its elaboration was driven by a more collaborative approach to policy design and planning. Unlike the 1994 SDRIF, this new planning document was indented as a strategic planning document and sought to increase quality of life within the region through sustainable regional planning goals. Drawing on the regional census survey, demographic estimates diverged sensibly from those included in the SDRIF 1994 and foresaw an increase of an additional one million of households by 2015, while the former SDRIF sought to contain this growth under 870.000 additional households. It acknowledged that present forms of urban development at the time resulted from two contrasting urbanization dynamics that had shaped the region's development since the mid 1980s: extreme levels of density in the core urban area on the one hand, and the steady growth of the functional metropolitan area on the other hand (See Map 3b).

Discussions over the new SDRIF also led to a critical assessment of the legacy of the 1965 SDAU; the way it had been implemented and its long-term effects were critically reviewed. Three issues were considered particularly pressing during discussions over the proposed SDRIF. A first matter of concern was the worsening of employment and living conditions in ageing housing estates and poorly connected areas.[23] Second, diffuse urban sprawl continued shaping urbanisation dynamics outside the region's borders and the search for lower real-estate and housing prices for both commercial activities and housing[24]. While the amount of agricultural land and recreational areas continued to decrease, commuting distances increased and contributed to increasing car dependency for a large share of the population living and working in the outer suburbs area (Cabinet Auxilia, 2014) and for daily commuters from neighbouring regions.

Map 3a. Strengthening polycentrism in the region as in the 1994 SDRIF.

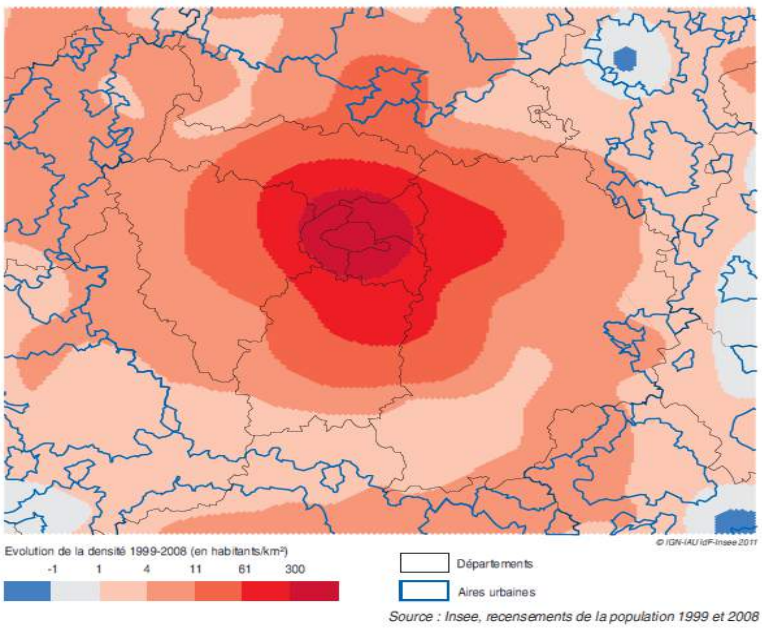


Source: SDRIF 1994, retrieved from Cottour, 2008, p.122.

[23] This in turn was seen as a trigger for successive waves of riots in the suburbs of large metropolitan regions, including the Ile-de-France region. Among other explanatory factors, including the so-called French "assimilatory model", ethnic discrimination and the deterioration of relations between the police and urban male youth as a result of the introduction of a "law and order approach". For an overview, see Jobard (2009) and Garbaye (2014).

[24] See the critical discussion about the mismatch between the sustainable city model as depicted in spatial planning documents and its effective implementation in the Ile-de-France region (Desjardins 2007; 2008).

Map 3b. 20 years of urbanization in the Paris-Ile-de-France Region measured through the evolution of density (residents / km^2) (1999-2008)



Source: INSEE, Census data 1999 and 2008

Third, the number of housing units produced annually between 1994 and 2013 – an average of 40.000 – is considered today as having been insufficient to meet rising demands, while at the same time, triggering major political debates regarding the location and type of housing. In combination with debates about housing, transport – accessibility, connectivity – is considered another area of key concern. On average only a quarter of the economically active population work and live in the same municipality, while another quarter works in an area close by (IAU, 2013). But there are some significant differences between categories of the working population and between areas, with certain municipalities containing more jobs than inhabitants, higher levels of unemployment, or a concentration of specific jobs. Over time, transport policy choices combined with evolving real-estate prices led to circumstances that systematically favoured managerial staff over employees and workers (Desjardins and Drevelle, 2014). This also calls into question the distribution of public transport infrastructures within the region, and the extent to which such socio-spatial mismatch accounts from growing car dependency in the outer suburbs. Among those households living outside the city of Paris, 21% do not own a car and levels of motorization are lowest amongst low-income social categories[25]. Such disparities are further increased when considering the spatial distribution of the public transport offer during the day and, in the context of the capital-city region, mobility is often identified as both a reflecting and driving social and spatial segregation (Le Roux et al., 2017).

The proposed SDRIF, published in 2008, aimed at increasing support within the region in favour of a regional development model conducive to increased liveability and quality of life for its residents while at the same time seeking to increase levels of density in the core urban area. This included clear objectives to limit urban sprawl and densify existing urban centres or urbanizing those areas located closest to existing and planned transport infrastructures. These objectives proved particularly controversial during negotiations between the regional authorities and other institutional and economic actors, including the state and newly elected President Sarkozy. Following a conflict of unprecedented magnitude between the state and the region[26], a revised version or so called SDRIF 2030 was formally adopted in 2013.

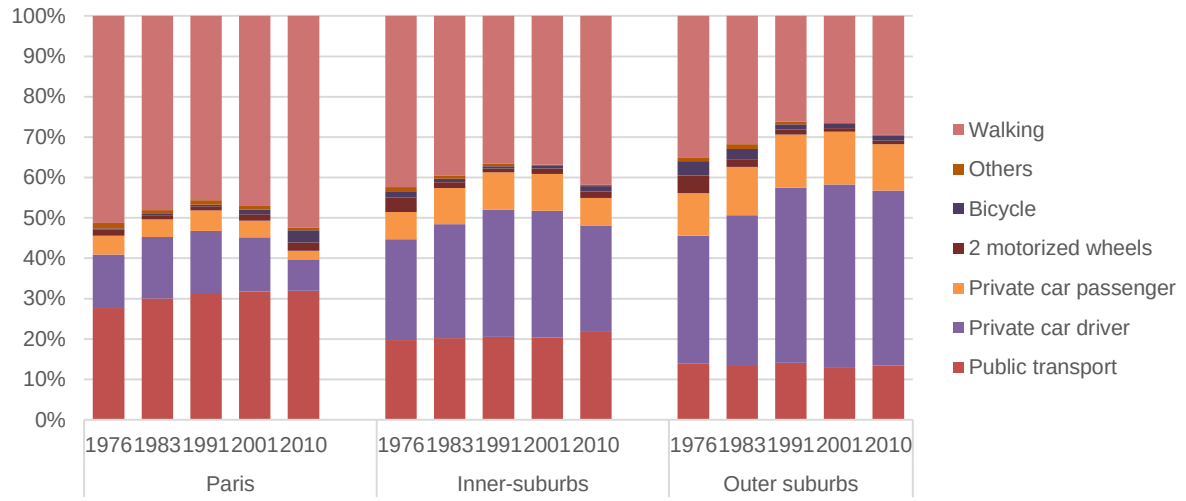
This strategic planning document reiterates the same concerns as its predecessors, while adding the need to strengthen the competitiveness of the French capital-city region (see Map 3c). Urban and infrastructural

[25] The strong relationship between access to mobility and to the job market in the Ile-de-France region was recently confirmed in the work done by Orfeuil (2012) and at the national level (Cabinet Auxilia, 2013).

26 See Section 4.3 for more details.

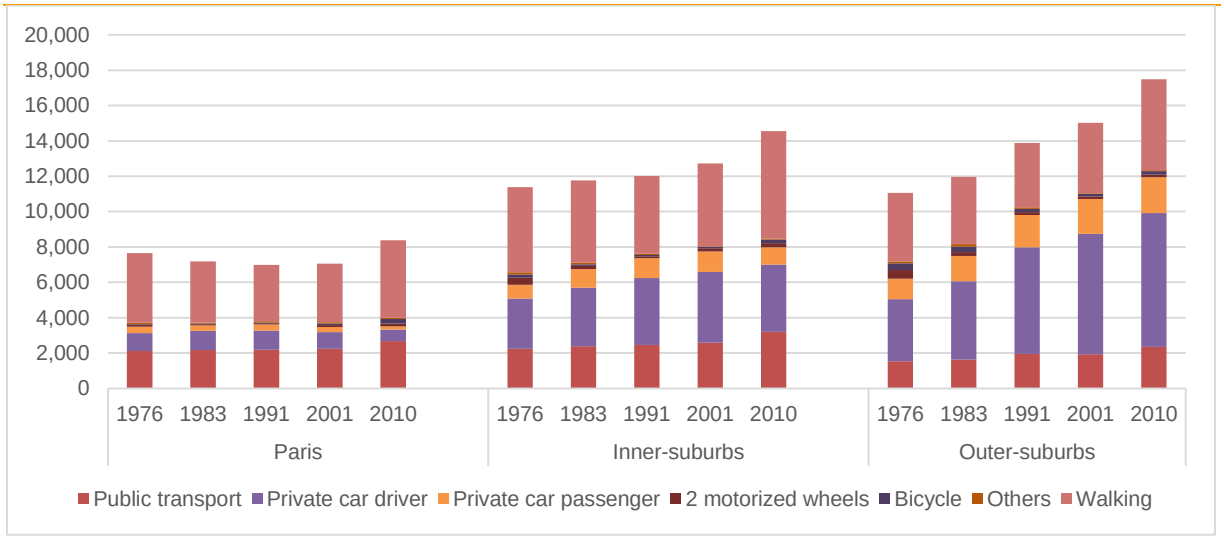
development goals draw on population growth estimates of between 0,8 and 1,8 million additional inhabitants by 2030 (SDRIF 2030, 2013). Housing and transport are confirmed as major tools in order to ensure both economic competitiveness and the reduction of socio-spatial inequalities. The yearly production of 70.000 housing units in designated areas aims at increasing housing affordability in spite of rising real estate prices while at the same time reducing the spatial mismatch between the location of housing and jobs. Last but not least, rising public transport demand within the region is also addressed in the SDRIF by modernizing existing infrastructure and developing new public transport infrastructure as part of the "Grand Paris Express" project. Although the 1994 SDRIF already briefly mentioned local transport infrastructure and services, the SDRIF 2030 is the first planning document bringing this policy objective to the same level as the need to develop rapid transit transport systems.

Figure 2d. Evolution of modal share by area of residence



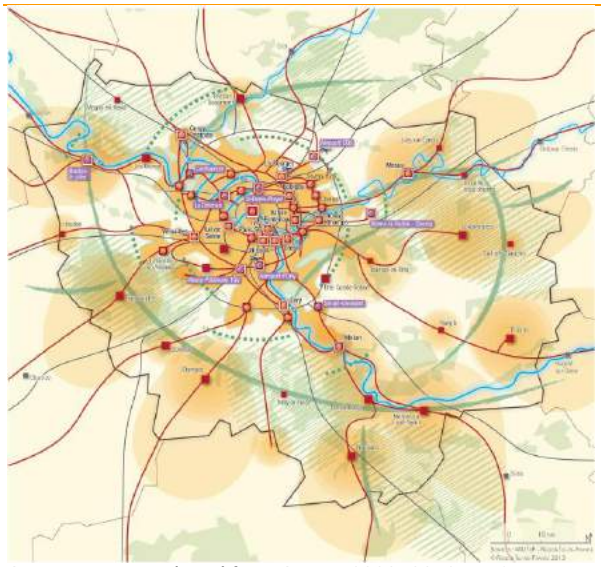
Fields: Ile-de-France residents aged 6 and over; Travels within the Ile-de-France region; Years 1976, 1983, 1991, 2001, 2010.
Source: EGT 1976-2010 STIF-OMNIL-DRIEA - Traitements IAU-IdF

Figure 2e. Evolution of travel volumes by mode and area of residence



Fields: Ile-de-France residents aged 6 and over; Travels within the Ile-de-France region; Years 1976, 1983, 1991, 2001, 2010.
Source: EGT 1976-2010 STIF-OMNIL-DRIEA - Traitements IAU-IdF

Map 3c. Spatial planning as a project: the SDRIF 2030.



Source: IAU. Retrieved from SDRIF 2030, 2013, p.49.

Consideration of the long-term evolution of spatial planning objectives in the Paris-Ile-de-France points to their rather limited role in shaping demographic and urban growth. In order to fully understand the profound changes that took place in the region, the specific role of political and institutional factors also needs to be addressed.

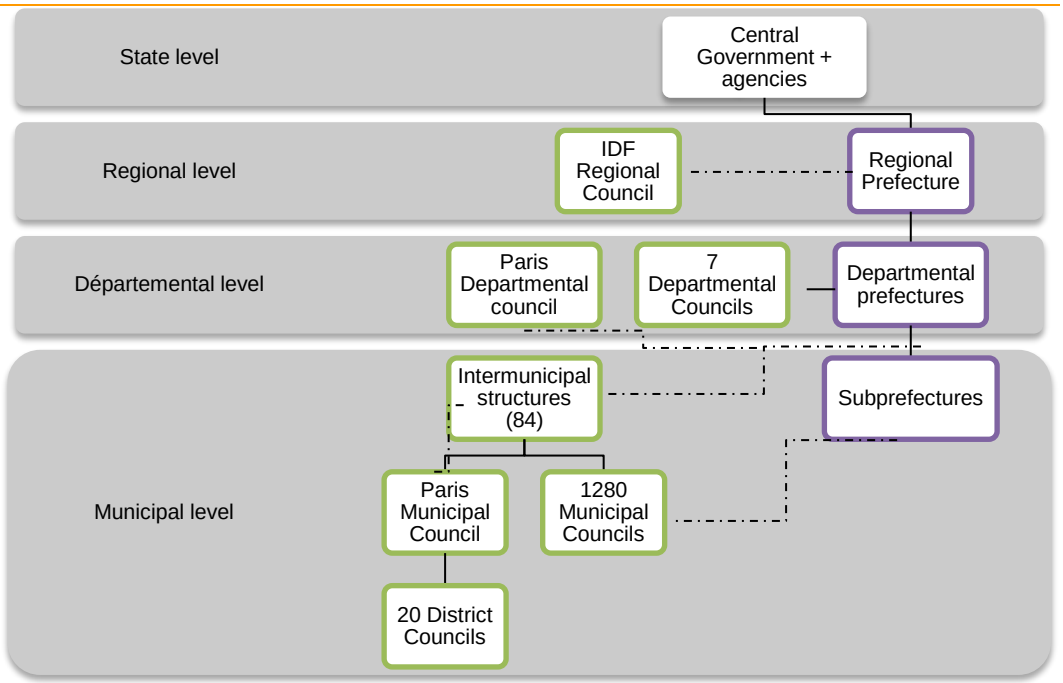
3.3 Competing political and institutional leadership: a three-level game

The governance of the Paris region has long been considered an exception in the French politico-administrative system (Prat, 2012). Both Paris and the Region were under direct control of the State. During the time period considered in CREATE, profound changes were observed in the governance and administrative organization of the capital-city region. A regional administrative entity, the *Région Parisienne*, was established in 1956 in order to plan future urban development, and a strategy of "divide and rule" was developed by state representatives in the region to the detriment of local authorities. In parallel to this state-led form of urban development, decentralization and administrative reforms led to profound institutional changes: the democratic election of political authorities and their strengthening and growing autonomy in a number of policy domains.

Since then, evolving relationships between levels of government have been structured by competitive strategies and unstable forms of governance throughout the period under study in CREATE. This is explained in more detail in the following section by looking successively at the state, the city of Paris and the region.

A selective list of major administrative and decentralization reforms in the Paris region is available in Annex 2, and Figure 3 provides an overview of current politico-administrative arrangements in the capital-city-region.

Figure 3. Politico-administrative arrangements (before 2016).



Green: territorial communities (decentralization reforms)
Purple: central and deconcentrated state administration (deconcentration reforms) [27]

3.3.1 The national state as a key player in the governance of the capital-city region.

Following the election of a Gaullist government in 1959, a new administrative entity – the Paris District (District de Paris) - led by a State-appointed representative was introduced as the authority responsible for coordinating state policies in the capital-city region[28]. President De Gaulle nominated Paul Delouvrier, a trusted senior civil servant, as General Delegate (1961-1969). His main task was to design and implement the 1965 SDAU, and in order to strengthen this administration's authority, its benefited from a transfer of powers in urban planning that were formerly exerted by subnational authorities (départements)[29].

The introduction of the Paris District also sought to overcome local political interests and institutional fragmentation in order to effectively structure spatial and urban planning in the region (Cottour, Lelarge 2008). It overtook all pre-existing municipal powers in the field of urban and infrastructural planning within the Région Parisienne. Through a policy of « divide and rule », this powerful deconcentrated state administration presided over local authorities (municipalities and départements), which lacked policy resources and expertise. At the same time as the District administration, a council was introduced in order to represent local political interests. It was composed of local elected officials, of which half are nominated by the state and half are elected by local government assemblies.[30] In addition, a body composed by representatives from the business sector and unions was created with the stated aim to counterbalance political dynamics during policy-making[31]. Additional technical

[27] In the French context, deconcentrating reforms refers to the reorganization of the state administration at subnational administrative levels. It should not be confused with decentralization reforms, which refer to the transfer of powers to local authorities.

[28] The Paris District was established by law in 1961.

[29] The départements of Seine-Et-Oise, Seine-et-Marne et Seine.

[30] 28 Mayors or departmental councillors were represented in the Paris District council.

[31] The Economic and social consultative committee (Comité Consultatif Economique et Social, CCES) is the precursor of today's Regional Economic, Social and Environmental Council (Conseil Economique, Social et Environnemental, CESER) which advises

expertise was also provided by the Institute for spatial and urban planning in the Parisian Region[32], which was created in 1960 in order to provide technical knowledge and expertise during the development and assessment of strategic regional plans.

An additional institutional reform was introduced in 1964, in order to increase the leadership of the Paris District from both the institutional and the administrative points of view. A total of 7 départements – instead of 2 – were created in addition to the city of Paris, and remained in place until the creation of the Grand Paris metropolitan government in January 2016.[33] The District was replaced by the Paris Region, an administrative authority that enjoyed the status of a regional prefecture, similarly to the changes underway in the rest of the country. Paul Delouvrier was nominated as the region's first prefect, thus combining two sources of power: that of the Paris district with those of the main State's representative in the region, and as such, the legitimate authority for coordinating state policies and agencies[34].

Notwithstanding the appearance of coherence, the system was overruled by political competition between the conservative Gaullist regime and the Communist Party. This political competition largely dominated municipalities in the so-called "Red Suburbs" (Banlieue rouge) in the inner suburbs of the Paris region, where industrial activities and the working class were located (see Map 4a). Within the state apparatus itself, powerful administrations and elite groups, affiliated with the Grands Corps, the most prestigious status groups within the civil service, competed for leadership over governance of regional affairs (Estèbe and Le Galès, 2003).[35] Specialized state agencies were created in order to run important services at the regional level, including transport. The state apparatus is divided between the powerful ministry of infrastructures[36] and the equivalent of the Home Office[37] both claiming for leadership over local policy-making and implementation, including in the capital city-region.

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and assesses the regional council through the provision of policy knowledge in those areas in which the region has specific competences.

[32] Institut d'Aménagement et d'Urbanisme de la Région Parisienne – IAURP. It was renamed as IAU in 1976 following the creation of the Ile de France region (Law n° 76-394, 6 may 1976).

[33] Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne, Essonne, Yvelines, Val-d'Oise, Seine-et-Marne.

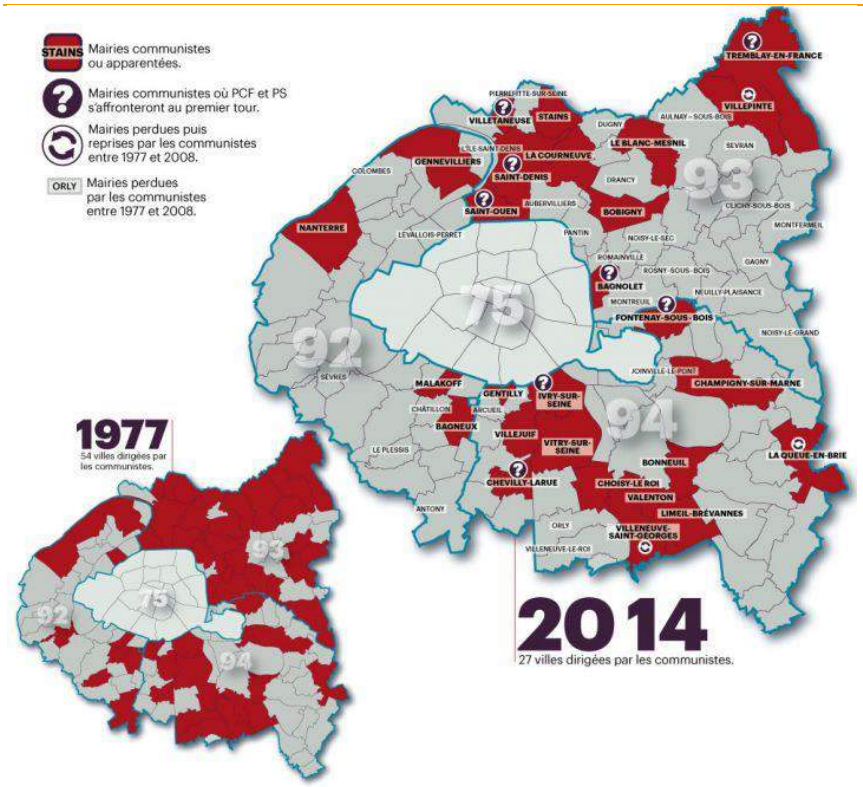
[34] The 1967 Land-use law and the joint 1969 application decree completed this series of institutional reforms.

[35] Working across state departments, state-owned transport companies and in the private sector, state elites were trained in prestigious grandes écoles - as an alternative to universities – such as the Ecole des Ponts-et-Chaussées (School for Bridges and Roads), which was created in 1747 in order to train competent officers for bridges and roads. Over their professional careers, former students remain members of what is commonly known as grands corps, i.e. the most prestigious status groups within the civil service, and long possessed – and to a large extent still do – a monopoly over the production of knowledge on and for policies.

[36] Ministère des Ponts et Chaussées, then Ministère de l'Equipement. Since 2007, it merged with other state administrations as part of a large Ministry for Sustainable Development.

[37] Ministère de l'Intérieur

Map 4a. The Parisian “Red belt” in 1977 and 2014.



Source: ASK media, published in Le Parisien 27/02/2014, available at: http://s1.lprs1.fr/images/2014/02/27/3628391_banlieues-rouges-v4ok.jpg

This decade-long series of institutional and administrative reforms (see Annex 2) confirmed the specific status of the capital-city region and directly contributed to the emergence of a state-led form of regional governance. Despite continued resistance, the State confirmed its critical – and direct – role in shaping policy choices and policy processes. Powers were reluctantly devolved to local authorities: decentralization in the Ile-de-France regions was both slower and less extensive than in the rest of the country. Despite successive decentralization reforms, the institutional and administrative setting in the Ile-de-France region differs from that of other regions in France due to a combination of stronger State influence and heightened competition between political, administrative and technical bodies.

In this new institutional and political context, the city of Paris did, however, retain a specific status and somewhat escaped the Paris District’s authority whosed main focus was on the suburbs.

3.3.2 The city of Paris: a powerful player with a special status.

In spite of successive attempts to strengthen polycentrism, Paris remains the undisputed centre of the capital-city region and plays a critical function in national economic development as its main hub. The way it is governed as well as its institutional role has evolved considerably since 1960 and has contributed to the continued strengthening of its municipal powers and autonomy. The city’s policy choices have competed, on a number of occasions, with those introduced at state or regional levels. The city’s ambiguous status is reflected in spatial planning documents.

Re-introducing the mayoral function in Paris.

Paris enjoyed little autonomy and remained an exception in the French institutional context until 1975[38]. Although the third Republic continuously reinforced the political autonomy of the 36.000 municipalities (since 1884), Paris City Council, the place of 100 years of revolutions (1789, 1830, 1848, 1870), was not to be trusted and its government was considered a state issue (Kuhlman, 2007). Lasting well into the 1970s, the centralist organisation of the city government perfectly fitted into the French tradition of a hierarchic state-dominated administration, which was used and developed for guaranteeing central state predominance and power. The city was governed directly by state representatives, i.e. the prefect, as part of the "two-prefect system": the *préfet de la Seine and of Paris* held the mayor's functions whereas the *préfet de Police* was in charge of enforcing law and order. Although a weak sort of advisory council enjoyed a double political function - a municipal and a départemental function -, since 1968[39], the city of Paris' government remains characterized, until 1975, by the total lack of local self-administration and the direct control exerted by the central state over policy issues and local matters.

Since the re-establishment of the municipality of Paris by law in 1975 and the election of its mayor in 1977, continued decentralization reforms (see Annex 2), together with the direct election of the Paris mayor and the strategic use of policy resources - money, expertise, administration – contributed to the formidable strengthening of the city's political power and legitimacy (Kuhlmann, Wollman, 2007). Today, it is a powerful political organization with major resources and strong political capacity to negotiate with the state and with private companies[40]. These resources also account for the city's ability to develop its own policy initiatives and projects in a number of policy areas. Such a change did not happen overnight; it was incremental and characterized by continued institutional and political struggles. It follows a different rhythm and path that the changes underway in the rest of the country.

The mayor of Paris is considered a prominent political figure at the national level and continuously sought to increase their power and governing capacity vis-à-vis the French State. The debate about the mayoral function in Paris[41] was pushed forward by President Giscard d'Estaing (centrist party, 1974-1981). This institutional reform was originally intended as a way to durably strengthen the centrists' leadership over one of the Gaullist Party's strongholds (O'Leary, 1987, p.381), thus explaining the preference given to a "strong mayor form of local government". Indeed, it took place in the context of strong political competition with the Gaullist party (RPR) and its leader, Jacques Chirac, who served as Giscard's first Prime minister (1974-1976) and was elected Mayor of Paris in 1977 (see Table 3). In its double capacity as mayor and chief executive of the departmental assembly, the Mayor of Paris enjoys more powers than its counterparts in other French municipalities. Following the 1982 decentralization reforms[42], the city of Paris extended its autonomy across a large number of policy areas, including urban development, and was able to develop its own policy initiatives and projects (Urfalino, 1994; Zittoun 2007).

Table 3. Sucessive mayors of Paris.

	1977-1983	1983-1989	1989-1995	1995-2001	2001-2008	2008-2014	Since 2014
Ruling Mayor	Jacques Chirac	Jacques Chirac	Jacques Chirac	Jean Tiberi	Bertrand Delanoé	Bertrand Delanoé	Anne Hidalgo
Political majority / coalition	RPR-UDR	RPR-UDR	RPR-UDR	RPR-UDF	Red-Green coalition (PS, PCF, Verts)	Red-Green coalition (PS, PCF, Verts)	Red-Green coalition (PS, PCF, Verts)

[38] For an extensive review, see the recent parliamentary report (Darnaud, 2016): http://www.senat.fr/rap/l16-082/l16-082_mono.html#toc21

[39] Law n°64-707, July 10, 1964

[40] See the work undertaken as part of the WHIG project on « Governing Paris » (Le Galès, Prat, forthcoming).

[41] Law n° 75-1331 December 31, 1975 portant réforme du régime administratif de la ville de Paris. A number of similarities can be found in the debates about the mayoral function in London, and the Blair-Livingstone rivalry.

[42] These reforms which were introduced under President Mitterrand and the left coalition, and considerably enhanced local autonomy throughout the country.

An ambiguous status within the capital-city region

To a large extent, politico-administrative arrangements in Paris are characterized by a strong hierarchical organizational structure and are often referred to as a"centralised unitary city-government" (Röber, Schröter 2006). The city's administration is organized around strong directorates (Directions Centrales) and specialized agencies, including its own urban planning (APUR) and real estate development (AFTRP) agencies[43], which still constitutes the city's main source of expertise in a number of policy areas[44]. Some of these directorates have established their own "deconcentrated" apparatus at the district level[45]. The role played by these skilled administrative bodies in policy processes, including agenda-setting, policy-making and implementation, is critical, and they often are considered a major enabler and/or veto player when it comes to explaining policy change in Paris. To a large extent, Chirac's personal style of governing between 1977 and 1995 contributed to strengthening the role of the city's administration. By developing close relationships with the municipal administration (Haegel, 1994), Chirac drew upon this powerful stakeholder's support in order to strengthen the mayor's leadership and promote change in a number of policy areas at a time when the mayoral function and the city's political institutions remained weak. Over time, the development of such close relationships also had some perverse effects, including the development of clientelistic arrangements in a number of policy areas (e.g., waste management) and, in some cases, to proven cases of corruption and fictitious employment charges. This form of political arrangements in Paris also explains why, in comparison with other capital-cities in Europe, the mayoral function has often been interpreted as a form of "municipal presidency" or even, "municipal monarchy" when compared to other forms of local leadership in Europe (Wollmann, 1999: 9).

Nevertheless, the effective scope and powers of the Paris mayoral function are strictly constrained due to specific powers retained, in the capital city, by the state through the legal, technical and financial supervision exerted by its representatives: the *Préfet de Paris* remained the most important representative of the state at local level and the powers of the *Préfet de Police* remained completely untouched until 1986, and it still holds important competences in the field of traffic regulation for example. In addition to these restrictions, and following Chirac's continued re-election as Mayor between 1977 and 1995, President Giscard – and President Mitterrand after him – sought to reduce the Paris mayor's political leadership through the development of state-led policy initiatives and projects[46]. Yet the State's ability to constrain municipal autonomy in the daily management of public policies was also made visible in a number of policy areas, due to an unequal distribution of policy resources (e.g., knowledge and expertise) and capacities, and to the resistance of elite networks, state-owned enterprises and agencies. While strengthening municipal powers, the 1982 decentralization reforms also introduced a submunicipal level of government – 20 districts in the case of Paris[47] – in order to enhance local democracy. But it was also understood as a way to counterbalance the mayoral function and through it, that of Jacques Chirac and the Conservative Party (Houk, 2004).

Today, districts (*arrondissements*) mostly enjoy consultative powers, namely rights of consultation, information, recommendation and statement. They also play a critical role in the effective implementation of local policies by mobilizing local support – or resistance – against projects and policy initiatives that stem from municipal – or state – initiatives. In addition to the creation of the districts, political struggles over relentless redistributions of parliamentary constituencies also contributed to the complexity of the city of Paris' political geography.

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[43] Respectively Atelier Parisien d'Urbanisme (APUR) and Agence foncière et technique de la région parisienne (AFTRP).

[44] APUR is an association registered under the 1901 law that was established in 1967 by the Paris Council. Its mission is to document, analyze and develop forward looking strategies for urban and societal evolution. http://www.apur.org/en/about-us

[45] The preference given to single-purpose administrative units at the local level instead of integrating local tasks into a politically accountable multi-purpose organisation, as observed in the Rhenan area (Wollmann 2004), is not specific to the case of Paris.

[46] This was the case of large flagship projects in the field of urban development, such as President Mitterrand's "Great works" policy (Urfalino, 1994).

[47] The 1982 Paris-Lyon-Marseille Law, See Annex 2.

The election of a municipal left-Green majority as a catalyst for change.

The political changes made visible during the 1995 municipal elections confirmed the weakening of the Conservative Party in the city of Paris (Houk 2004). To begin with, Mayor Chirac transitioned from Paris city hall to the national presidency, and his imposed successor, Jean Tiberi enjoyed little support from his own Conservative majority. Also, 6 districts shifted to the left[48] and at municipal level, Mayor Tiberi and the Conservative majority was confronted with growing opposition and resistance within the city council and, at the local level, by district mayors from the Socialist and the Green parties.

Even though they enjoyed little influence over municipal government, they sought to compensate for this lack of institutional resources by developing a strong political alternative, which combined grassroots' initiatives and citizen empowerment, small-scale policy experiments in a number of policy areas and the production of policy expertise and alternative policy solutions. Following the arrival of Jospin as the leader of a Left-Green majority (1997-2002) under the Chirac presidency, a large number of younger members of the Parisian socialists and Greens gained key positions as advisors in a number of ministerial cabinets or in the French Parliament, thus contributing to enhancing their policy-making experience and knowledge of the state apparatus.

Together these factors contributed to the election, in 2001, of a new political majority in the City council, including various parties of the left (Socialists, Greens, and Communists), and that of new mayor, Bertrand Delanoé (Socialist Party). Since then, the hierarchical and centralized organizational structure that prevailed in the Parisian bureaucracy was somewhat transformed through the growing attention given to political and social dynamics at the level of the districts, and in some cases, at neighbourhood level. Consultative and participatory devices were introduced in order to increase the inclusiveness of local decision-making processes. Even though relationships with the regional government, also from a Left-Green political majority, remained highly conflictual, Mayor Delanoé initiated a more cooperative approach with adjacent local authorities from the inner suburbs as part of the Paris Metropole initiative. This was primarily done under the leadership of Pierre Mansat, an elected representative from the Communist Party (PCF) and Deputy mayor in charge of relations with local authorities in the Ile-de-France region. Drawing on his political network in the so-called "red suburbs" (Banlieue rouge) of Paris, new scope for cooperation emerged in a number of policy areas, including transport, waste management, energy and housing. Nevertheless, most of the city's policy-making tasks are still carried out by the municipal administration and its specialized agencies, such as APUR in the case of urban planning.

In addition to these changes, the new Left-Green majority also shared a different vision of the city's development, which put more emphasis on place-making and liveable policies as key dimension of its strategy to increase attractiveness worldwide. Unlike its predecessors, Mayor Delanoé considered Paris as a place rather than a hub serving the rest of the country[49]. This paradigm shift initiated a long process of reshuffling policy priorities and accumulating policy resources. In order to increase political and financial autonomy (see Table 4b), the new Left-Green majority sought to develop relationships with the private sector, to diversify sources of policy expertise, and to strengthen relationships with a larger variety of interest groups and civil society organizations. This justified the introduction of a changed approach to a large number of policy areas, including housing and transport, as well as the reorganisation of the municipal administration and the reshuffling of policy priorities and investments. Recruitment strategies increasingly favoured highly-skilled specialists over generalists. Following the opening of an inquiry – and later conviction – of Mayor Tiberi for corruption, tendering procedures were transformed in order to reduce clientelistic arrangements and increase transparency.

The city of Paris today: a powerful player in the Ile-de-France context.

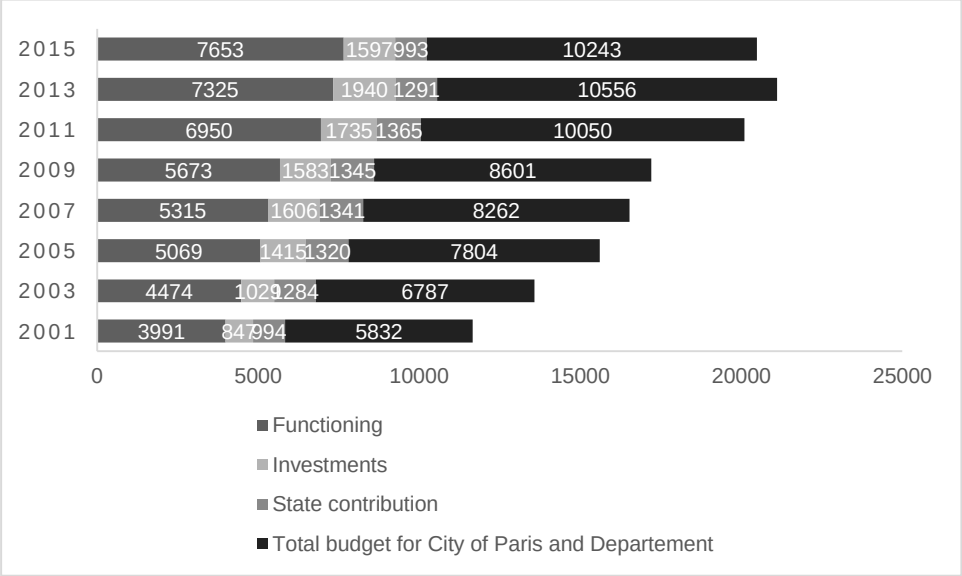
As of today, the city of Paris relies upon a large, autonomous administration and a considerable budget, which can be used with major discretion. In 2015, its population amounted 2,3 million inhabitants and its budget was just over € 9 billion, in sharp contrast with that of the Region (see Graph 1). Mayor Hidalgo pursues the capacity building strategy initiated by her predecessors and recent debates about the administrative status of Paris confirm continued struggles with the State. The city still enjoys a dual institutional function as both a municipality and a department. In some areas, such as police and traffic control, state representatives retain the

[48] The 3rd, 10th, 11th, 18th, 19th, and 20th districts.

[49] On the city as node, city as place distinction, see Veltz (2000).

upper hand. In order to strengthen the city's autonomy and to put an end to its exceptional status within the French administrative and territorial system and put an end to the city's specific administrative status, Mayor Hidalgo recently suggested a new administrative reform as part of the debate regarding the creation of the Greater Paris metropolitan authority (see below).

Graph 1. The evolution of the city of Paris' budget spent since 2001, in million Euros.



Source: Compiled by Maggioni, Rapports financiers Ville de Paris since 2002.

All in all, **party competition partly accounts for continued struggle between the city and the state – and to some extent, the region – as in other cities in CREATE.** Alternative explanations also highlight the struggle between bureaucratic and technical elites in support of the State's continued upper-hand over policy developments in Paris on the one hand, and on the other hand, those favourable to the strengthening of local political leadership and institutions. As a result, understanding governance and policy capabilities in the city of Paris should not be limited to evolving administrative reforms and should also take into account competing power and resource-seeking strategies (Kuhlman, 2007).

3.3.3 Weak political and institutional regional leadership.

By contrast, the regional level is considered politically and institutionally weak in the French context, and this is particularly the case of the Ile-de-France regional Council. The first step towards the regionalization of the governance system occurred in 1976, four years after other regions in France and without being directly elected. state representatives retained the upper hand over this functional level of governance, with 50 delegates out of 164 representatives in the regional assembly[50].

The creation of a democratically elected Ile-de-France regional council in 1986 far from guaranteed regional autonomy in spatial and transport planning. Despite successive decentralization reforms (see Annex 2), the State's reluctance to devolve authority to the capital-city region limited its ability to develop its own policy initiatives until the mid 2000s. Negotiations over the preparation of the 1994 SDRIF and during successive state-region Contracts[51] (*Contrat de Plan Etat Region*) have been particularly representative of this level of government's weak political capacity. This major policy tool was introduced in close combination with the 1982 decentralization reforms in order to ensure coordination between the state and the regions in the planning and funding of regional policy priorities and investments through a six-year contract. In the capital-city region, it offers extensive opportunities to state administrative elites, affiliated with state-owned enterprises as well as successive

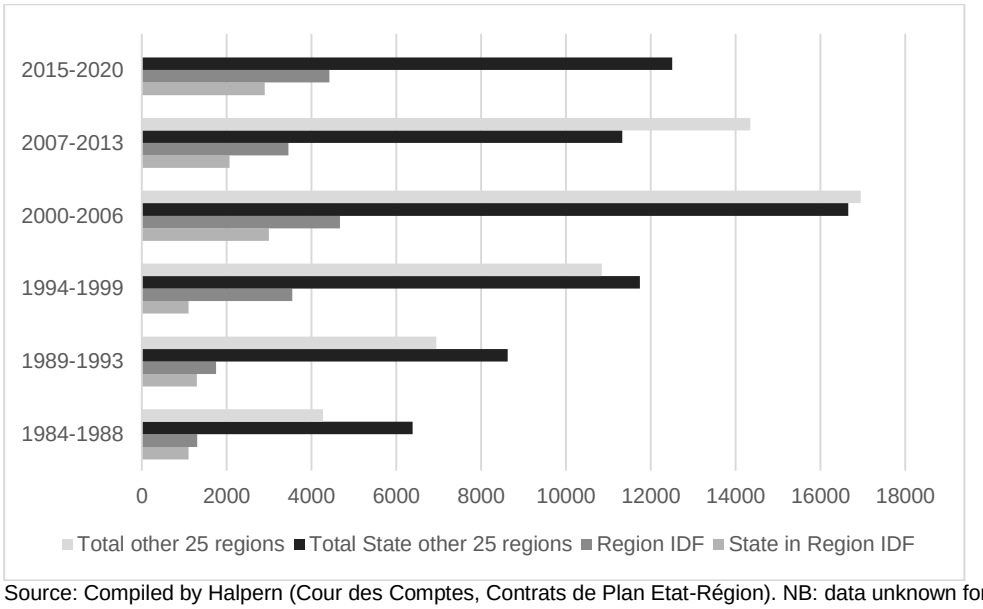
[50] The city of Paris had 30 delegates, six delegates were elected at the regional level together with six mayors representing each department.

[51] Insofar as they enclosed critical decisions regarding short-term investments and policy measures, these documents were systematically taken into account in the analysis done as part of WP4.

Prime Ministers' cabinets, to shape regional policy priorities and investments while stymying development of policy proposals and plans stemming from regional authorities.

Even though the region benefited from a generous share of funding when compared to the other 25 regions (see Graph 2), the Ile-de-France regional Council enjoys limited autonomy in regards to its budget, expertise and organizational resources. In a number of policy areas, it nominally executed joint decisions with the central government on transport investments and policy priorities until the late 2000s.

Graph 2. Programmed investments in Euros: state-region planning contracts (1984-2015).



Source: Compiled by Halpern (Cour des Comptes, Contrats de Plan Etat-Région). NB: data unknown for total other 25 regions (2015-2020).

The election of a regional Left-Green majority as limited driver for change

After the 1998 elections, the Left-Green majority likewise assumed leadership over regional governance from 1998 - three years before they took Paris itself (see Table 4). With Jean-Paul Huchon (Socialist Party) at the helm, the coalition won three consecutive elections (1998-2015) during the course of which it developed transport innovations at the regional level[52], both with cooperation and competition among municipalities, the city of Paris, and the State. During this time period, the Regional Council rapidly expanded its staff and budget and began defining its own policies with support from suburban municipalities. As the Parisian Left-Green coalition had partnered with city planners in APUR to promote transport alternatives and urban regeneration, the Regional Council joined forces with IAU against state representatives in drafting a new SDRIF (see below).

That said, the Regional Council still enjoys a limited autonomy in planning and developing its own policies. The regional administration did hire new staff members and the rise of budget and expertise has been a strong and consistent feature of the last 15 years. It also relies on a growing number of specialized agencies that provides its elected representatives and staff with some information, knowledge and expertise, as well as some operating capacities. Nevertheless, its budget remains under € 5 billion in 2015. Its resources and the discretion to use them are far more limited that of Paris City Council. In a number of policy areas, regional initiatives often experience delays, whether due to late payment or indefinite postponement of amounts owed by the state (see above) or project-level conflicts between technical agencies, project managers and municipal interests. In the absence of strong political leadership at regional level, subnational levels of government (e.g., municipalities, departements) develop and strategically use their own powers in order to challenge the region's authority by developing their own resources. As discussed in more details in the following section, transport is particularly representative of this paradoxical situation (Gilli 2014).

[52] This will be further developed in section 4.3.

The reluctance of municipal and state elites to strengthen the regional level of government was made particularly visible during the revision of the SDRIF (2004-2007), with the Regional Council exercising the authority to formulate its own strategic planning objectives and leading the design process for the first time.

Table 4. Successive leaders of the Ile-de-France Region council.

	1976-1988	1988-1992	1992-1998	1998-2004	2004-2010	2010-2015	Since 2015
Ruling Head of regional council	Michel Giraud	Pierre-Charles Krieg	Michel Giraud	Jean-Paul Huchon	Jean-Paul Huchon	Jean-Paul Huchon	Valérie Pécresse
Ruling political majority / coalition	RPR-UDF	RPR-UDF	RPR-UDF	PS-MRG-PCF-Verts	PS-MRG-PCF-Verts	PS-MRG-PCF-Verts	LR

The proposed SDRIF contrasted with earlier spatial planning documents in a number of ways. First it advocated a shift towards more compact spatial planning, incremental urban investments, and a more autonomous future for the capital city-region that prioritized the interests of its local inhabitants rather than that of the State[53]. Second, and in order to compensate for their lack of experience in steering such a spatial planning process, regional actors drew on a collaborative strategy through the extensive use of partnership building across a large number of stakeholders and consultation with local authorities[54]. New working relations were established upon this occasion. Unprecedented amounts of resources were mobilized in order to identify the need for additional information and knowledge, produce it with the support of IAU, and make it available to the wider public.

The elaboration of the new SDRIF gave way to massive local mobilizations, during which local elected representatives resisted proposed changes (e.g., densification through housing developments, nature protection through restrictive land-use planning, etc.) while trying, at the same time, to attract as much public investment and infrastructure as possible. In addition to such pressure from local authorities, state representatives in the region found it difficult to recognize the legitimacy of their regional counterparts to lead the spatial planning process. Systematic competition for leadership resulted into incessant conflicts and profound distrust between the state and the region's respective administrations and agencies.

In the end, the entire planning process was characterized by unusual levels of conflicts. The Region was blamed for the absence of a "grand vision", its lack of political ambition and its incapacity to foster an agreement about the capital-city region's economic future. The SDRIF project itself had a limited operational dimension, and unconvincingly attempted to reconcile vague, broad policy objectives on the one hand, and on the other hand, a profusion of extremely detailed projects at the local level[55].

State-region rivalry about spatial planning objectives

In this context, President Sarkozy's initiative to launch the Grand Paris Strategy[56] was understood as a political and institutional 'declaration against the regional Left-Green majority and local autonomy in the capital-

[53] Interviews IAU, march 2015.

[54] As explained by one interviewee working with the regional council's administration: "During the 2008 SDRIF, it was the first time a regional authority took over the regional planning competence without any other legitimacy to do so. Overstretching the meaning of it, one could say that in 2008, intense consultation was a way for the region to legitimise itself as a planning authority, … to create a narrative that would, at some point, become a vision of what the Ile-de-France region would be in 2030. We tried to foster some level of consensus, in spite of the all the limitations it involves in terms of big projects, infrastructure development, governance etc. Similarly, we used the idea of partnerships as way to strengthen the region's new competence vis-à-vis other actors and within the region itself" (12/05/2015, Translated by Authors - TbA).

[55] One interviewee working with IAU at that time summarized the general feeling at regional level as follows: "This was our biggest mistake at the time, but we realized it too late. There was nothing to be dreamed about in our project. … . We put so much energy in convincing local politicians about densifying urbanized areas that we lost sight of the bigger picture. … Our plan was serious, hard-working, but boring." (TbA, 13/04/2015).

[56] The Grand Paris strategy was launched in June 26, 2007: Déclaration de M. Nicolas Sarkozy, Président de la République, sur ses projets en matière de politique d'aménagement durable, à Roissy le 26 juin 2007: http://discours.vie-

city region. He drew on his own experience as former local elected representative in the western inner-suburbs in order to criticize the region's wish to promote urban densification and place-making strategies[57]. By proposing a clear alternative to the Region's proposed SDRIF and blocking the formal adoption of the 2008 SDRIF project, he openly challenged the region's authority as well as local prerogatives[58]. However dissatisfied local authorities may have been with the 2008 SDRIF project, Sarkozy's Grand Paris Strategy attracted unanimous criticism of the State's denial of regional and local autonomy.

This conflict also highlighted the long-term effect of capacity building at subnational levels of government and changed state-local power relations in negotiations over policies and investments in the capital-city region. This will be demonstrated empirically in section 4 by looking at transport policies. This conflict also impacted on recent discussions about the status of Paris and the Ile-de-France region.

3.3.4 The current state of central-local relations in the capital-city region

As of 2017, competition for political and institutional leadership still characterizes current struggles about the Greater Paris metropolitan authority, the Grand Paris Express project or the candidacy to host the 2024 Olympic and Paralympic Games. From the perspective of subnational authorities, it highlighted the need to develop new forms of cooperation at the regional level in order to oppose state interventionism, including with the city of Paris, which had remained external to the state-region disputes until then. From the State's perspective, it showed the limits of classic interventionism and the need to develop alternative policy tools. Political debates over the creation of the greater metropolitan authority offered a timely opportunity to test emerging forms of regional governance.

La métropole du Grand Paris, the Parisian Greater Metropolitan Authority

Debates over the creation of the métropole du Grand Paris opened a new series of lengthy political and institutional negotiations (2010-2016) in order to shape the transfer of new powers and responsibilities across a large number of policy areas (e.g., urban planning, housing, economic development, and the environment). In President Sarkozy's view, the métropole du Grand Paris initiative played a pivotal role in the state's strategy to ensure the capital-city region's competitiveness. It was eventually introduced as of January 1st, 2016 in the context of the 3rd wave of decentralization reforms[59].

As of today, Grand Paris Metropole covers an area of 7 million inhabitants and accounts for 21% of the national GDP. It is a weak institution, which is characterized by a high level of fragmentation: it is composed of 131 municipalities, that were gathered into 12 public authorities, each belonging to a total of 4 départements which, so far and unlike the situation observed in other French cities such as Lyon, have not been removed (see Map 4b). It is led by a metropolitan council, with a total of 209 councillors stemming from the 131 municipal councils. It enjoys a limited budget, most of which is provided by grants from central government and is redistributed to municipalities with little room for manoeuvre to directly invest. Moreover, this new entity is formally required to submit to those policy priorities defined at regional level.

Such institutional ambiguity increases scope for conflicts and competition between local authorities in order to assert leadership over the new metropolitan authority and access policy resources. The State's policy of "divide and rule" offers numerous opportunities to local authorities to successfully develop resource-seeking strategies in order to develop their own policy priorities (e.g., urban planning, land-use regulation and specific policy areas such as transport and mobility).

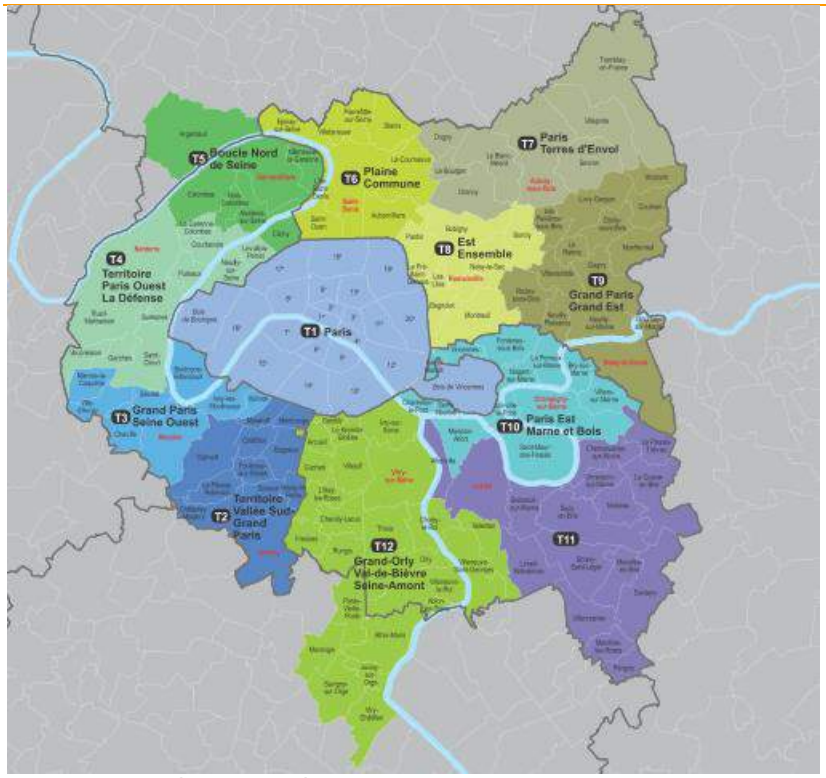
publique.fr/notices/077002121.html It made clear reference to the pre-1975 period and the "Golden age" of regional planning under State leadership.

[57] President Sarkozy built his entire political career in the municipality of Neuilly-sur-Seine, the wealthiest municipality of the Ile-de-France Region, just next to the city of Paris, in the Hauts-de-Seine département. He is a member of the Conservative Party (former RPR, then UMP and now Les Républicains - LR).

[58] The regional council pursued the SDRIF formal adoption process: it was adopted twice, first in February 2007 and second, after the public inquiry, in September 2008. Central government never transmitted it to the Council of State for final approval.

[59] Law nº 2015-991, 7 august 2015, on the new territorial organization of the Republic (Loi NOTRe). See Annex 2.

Map 4b. Métropole du Grand Paris, as of January 2016.



Source: APUR, Décret du 11 décembre 2015.

In addition to the above-mentioned political and institutional rivalry, the election of a Conservative majority at the regional level in 2015, led by Valérie Pecresse (LR), increased levels of competition for political leadership with central government and Mayor Hidalgo (PS). In order to strengthen the city's autonomy, Mayor Hidalgo called for normalising the status of Paris and for the devolution of specific powers that are still held by the state through its representative – Préfet de police – such as access to full autonomy over parking management, parking fees and traffic control (Darnaud, 2016). Following the experiment led in Lyon since 2015[60], she suggested 1) merging the city of Paris with the département as a way to further rationalise the effective organization of administrative work and the management of resources; and 2) reducing the number of districts from 20 to 17, by merging 4 of the less populated districts located in the centre of the city[61].

Concluding remarks

Over time, subnational authorities in the capital-city region have been able to gain new powers, develop their competences and invest considerable political resources in order to assert their role as legitimate actors in various policy domains. By leveraging its influence in both Paris and the region, the Left-Green majority contravened existing patterns of unilateralism and conflict among local authorities, instead facilitating inter-municipal collaboration around transport planning and policy implementation at local and regional scales.

Nevertheless, legacies of state interventionism are still visible through the role played by national government and actors in policy-making. This is partly due to funding mechanisms, such as state-region contracts, and to the ability of specific branches of the state to develop resource-mobilizing strategies in support of specific large infrastructure projects and policy initiatives. In addition, the "divide and rule" strategy still characterizes the State's policy in the capital-city region in a number of policy areas. This is particularly the case in transport.

[60] Following the 2014 MAPTAM Law (see Annex 2), the Greater Lyon metropolitan authority exercises the competences of both a metropolis and a département.

[61] The Law was adopted in march 2017. See Annex 2.

3.4 Transport planning and organization

In this section, the current organization and governance of transport in the capital-city region is introduced in more detail, together with a synthetic overview of the current policy offer. This has changed remarkably over time in conjunction with above-mentioned political and institutional dynamics. Even though subnational authorities were able to gain and develop new competences in transport, the State's role in the governance, the planning and the organization of transport in the capital-city region has been – and to a large extent still is – central.

In this context, transport repeatedly emerged as a major issue of contention in central-local relations on the one hand, and in relations between political and technical actors on the other hand. This affected the distribution of competences and resources between actors, as well as their evolving ability to shape policy priorities, infrastructural developments, the transport policy offer as well as their spatial distribution.

As a result, and unlike the situation observed in London, Vienna or Berlin, the organization and the governance of transport in Paris remains highly fragmented and important differences can be observed between transport modes and across levels of government.

3.4.1 Key legislative and transport planning documents

The legislative framework pertaining to transport planning and governance has undergone a number of significant changes over the last forty years within the French context. Since the first decentralization reforms in 1982, a number of laws organized the transfer of responsibilities over transport to subnational levels of government (Gallez, 2010). While some of these key pieces of legislation were designated as transport laws, other dispositions were made as part of spatial planning, decentralization, urban regeneration and environmental legislations, thus explaining why subnational authorities were able to strategically tap into resources provided in other policy domains in order to challenge main stakeholders in the field of transport. Successive devolution reforms also led to changed State-local relations in the funding of transport infrastructure and more generally, in the organization of transport.

It should be noted, however, that specific arrangements were made for the Paris Ile-de-France region. Today, the state maintains a strong hold on transport governance and policy developments in this region, mainly through indirect resources, such as the elaboration of transport planning documents, state-region contracts and state-owned companies or transport systems. There are some important variations between transport modes and systems. In the analysis done in CREATE, and following the suggestions made during the workshop we organized jointly with IAU in January 2016, we focused primarily on what was considered the most relevant documents for fully understanding evolving central-local relationships in the planning and the governance of transport in the capital-city region. These included 1) spatial planning documents, 2) successive generations of state-region contracts, 3) Mobility plans introduced across subnational levels of government.

A selected list of those major pieces of legislation that shaped transport governance and organization in the capital-city region is given in Annex 2.

3.4.2 The growing role of STIF as the region's transport authority.

Since 2006, the responsibility for transport planning rests with the Regional Council and the Regional transport authority, STIF (Syndicat des transports d'Ile-de-France)[62]. This major reform results from a long process of evolving central-local relations in the planning and organization of transport in the capital-city region. Successive reforms[63] sought 1) to reflect the growing role of local authorities in the governance of public transport vis à vis the state and its representatives in the region, 2) to increase its authority over transport companies, both public and private, and public transport services, and 3) to increase its financial autonomy.

[62] Article 1-II de l'ordonnance n°59-151 du 7 janvier 1959 relative à l'organisation des transports de voyageurs en Île-de-France, dans sa version issue de la loi n°2009-1503 du 8 décembre 2009.

[63] See chronology in Annex 3.

From transport to mobility planning: successive institutional reforms.

STIF is the distant heir of the Syndicat des Transports Parisiens (STP) which was created in 1959 as a public transport authority in the region. In this early phase, its role was to organise and modernise public transport in the capital-city region under the responsibility of the State, with some limited room for manoeuvre given to the city of Paris and 3 départements. Over time, a number of changes were brought to this organization, first in 2000, when the state reformed STP into a new agency, STIF as a result growing pressure from subnational authorities in the region, and second in 2006, when STIF gained additional competences in the context of a new wave of decentralization reforms in the capital-city region (2004 Act, see Annex 2).

Since 2006, STIF acts as the region's transport authority. Due to STP's legacy, its powers and capacities are particularly strong in public transport and now extend to the entire public transport offer (incl. river transport, school transport and transport on-demand). It also gained considerable powers in transport planning.

Today, STIF's main responsibilities include:

- Defining and organizing public transport services (all modes)
- Setting the fare policy
- Regulating contractual relationships with service providers
- Ensuring the financial balance of the system
- Planning and monitoring network extensions
- Defining quality standards for interchange hubs
- Evaluation and revision of the Regional Mobility Plan, i.e. PDUIF, on behalf of the Ile-de-France Regional Council. So far, two PDUIF have been introduced, in 2000 and in 2014 (see below).

In those areas were existing services providers and transport planning authorities resisted its strengthening, STIF has used its rights to delegate these tasks to local authorities or second level administrative bodies that act as "local" transport authorities. In a limited number of cases, STIF is able to negotiate loans autonomously and to act as project manager for capacity investment and developing users' facilities[64].

In order to increase their information and knowledge about transport in the region, local authorities agreed to the creation of an observatory – OMNIL – that works in close relationship with STIF, IAU and the Region. Its aim is to support the region's transport initiatives by developing comprehensive data production and management, various types of indicators and tools for appraising, monitoring and assessing policy initiatives. This is achieved by drawing on the information provided by local authorities.

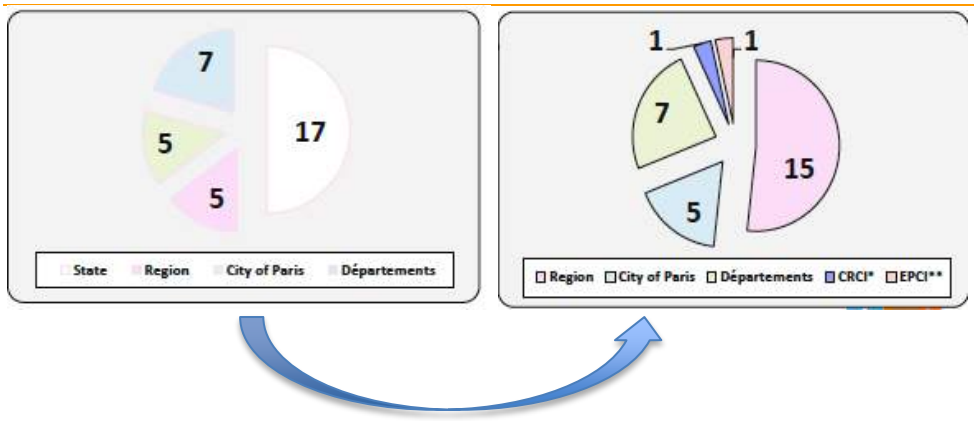
The governance of STIF

Since 2006, changed power relations between the state and subnational levels of government is also reflected in the governance of STIF. Up until this reform, the state chaired and claimed the majority of seats on the STIF's Board. Since then, it has pulled out of its Board and some changes were brought to its governance (see Figure 4). At present, the Board entails a total of 29 members and is composed as follow:

- the Regional Council holds a majority of seats as well as the chairmanship
- the city of Paris
- the départements
- The regional Chamber of Commerce and Industry (CRCI), which represents business actors
- Other stakeholders are presented (labour unions, users' associations, municipalities), but do not have voting power.

[64] This was the case of the T-Zen bus system for example. See below.

Figure 4. The governance of the STIF before and after the 2005 reform.



Source: STIF - Adapted from the contribution to the CREATE networking event between IAU and Skopje, March 2016.

In spite of such considerable increase in its powers and responsibilities (Orfeuil, Wiel, 2012), there are a number of issues that still escape the Region's and authority in the planning and the provision of transport. In those cases, the regional level acts, at best, as a preferred venue[65] for resource-seekers and only plays a limited role in shaping policy initiatives.

3.4.3 Outside public transport, a fragmented governance system.

Apart from STIF, a large number of actors contribute to the governance of transport. This is explained due to the role of other levels of government – local authorities and the State.

The state as a key player in the development and management of transport

Outside public transport, two transport dimensions still rest with the state and its local representatives as of 2017, thus escaping the Region's authority.

- Motorways and expressways in the capital-city region.

The development and operation of the road network – some 40.770 kilometres in 2012 (Table 5) – is fragmented. First, the Parisian road network is jointly managed by the city of Paris and the state representative (préfet de police). The latter is responsible for traffic conditions on main roads, including the ring road (Boulevard périphérique).

Table 5. Length of roads network in 2012 for the whole region [km]

Roads	Length (km)
Motorways and expressways	1 314
National and departmental roads	9 992
Important secondary roads	2 675
Others	26 790
Total	40 771

Source: extracted from D3.2 CREATE report, p. 22.

Second, and apart from local authorities' responsibilities over the secondary road system (see below), motorways and expressways are regulated and – mostly – operated by state authorities. This rapid transit road system is characterized by a radial structure that converge towards the city of Paris. In 2015, the network was used by a total of 44 million car users. The road network is much denser in the central urban agglomeration (See

[65] This refers to the concept of "venue shopping", which, in the policy studies literature refers to the activities of a variety of stakeholders (advocacy groups, policymakers, etc.) who seek out a decision setting where they can voice their demands and push for alternatives to current policies. (Pralle 2003)

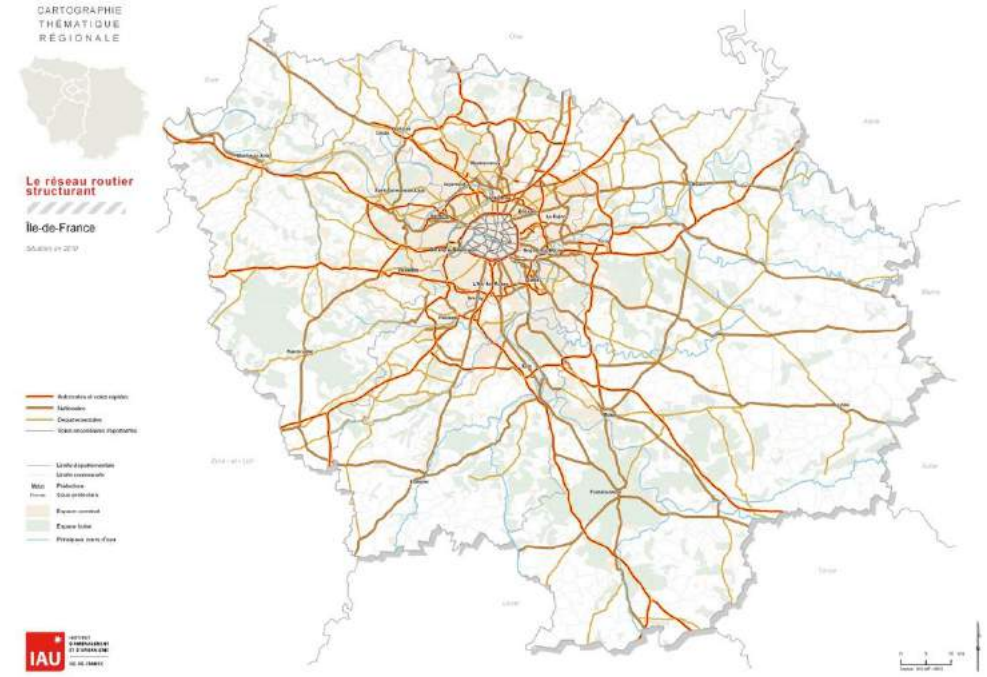
Maps 5a&b). It follows a radial pattern with a number of roads (e.g., A1 to 116) that converge towards Paris and a series of secondary hubs.

This regional motorways and expressways network is structured in three ring roads:

- The Boulevard périphérique, which was completed in 1973 and strictly delimits the city of Paris
- The A86 motorway, that was completed in 2011
- The Francilienne, an unfinished ring of some 50 km.

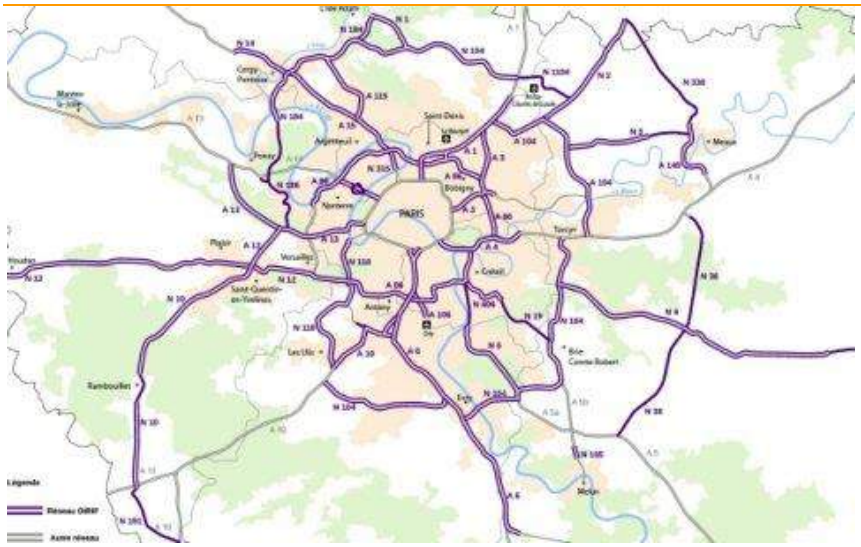
Outside the Ile-de-France region, a wide loop - le *Grand contournement de Paris* – was developed in order to bypass the capital-city region.

Map 5a. The institutional distribution of power over the road network



Orange: Motorways & expressways / blue-orange: National / Light orange: Departmental / Dark blue: main secondary roads.
Source: IAU, 2010

Map 5b. The public-private divide in the management of motorways and the high-capacity road network



===== Managed and exploited by DIRIF - Direction Interdepartemental des Routes
===== Other exploiters

Source: DIRIF

This regional motorway and expressway network has been continuously developed under the direct supervision of state administrations since the 1960's. Since 2010, it is placed under the supervision of a single state administrative division at regional level[66]. This administrative authority includes several directorates, including the Regional Roads Directorate (Direction des Routes de la Région Ile-de-France - DiRIF)[67], which develops, operates and maintains the none-franchised road network across the entire region outside Paris that is some 1300 kilometres, including 454 km of urban high-speed roads and 336 km of national roads[68].

In addition, four other private companies operate the licensed road network through motorway concessions[69]. Unlike the situation observed in other EU member states, financial instruments have rarely been selected in the French context and motorway concessions are one of the few exceptions[70]. This policy tool was introduced in the post-WWII period in order to levy sufficient resources for developing and maintaining motorways through the payment of toll fees. In this respect, the governance of the Ile-de-France motorway network does not differ from the situation observed in the rest of the country.

Information policy tools were introduced under the responsibility of the DiRIF in order to measure traffic and produce real-time information for car users. Traffic management is achieved through the use of the SIRIUS device whereas the SYTADIN system was introduced in combination with an observatory produces systematic data on transport and mobility by drawing on geographic information systems. Up until now, this information system has not been developed into an integrated platform on urban mobility that can be used in order to better integrate private and public transport and to optimize the use of existing infrastructures at the metropolitan level.

- The regulation of taxi services.

Taxi services are also regulated by state representatives in Paris (préfet de police) and the region (préfet de région). The regulation of taxi services was first introduced in the post-WWII period in order to limit congestion on the road network. It was achieved through the issuing of a limited number of licenses distributed free of charges by state representatives, and contributed to effectively constraint the increase of taxis - only some additional 3,000 taxis since 1930. Following the development of the taxi industry, the 1995 Pasqua law confirmed this licensed-based regulatory system as well as their limited number, but allowed the trading of taxi licenses[71].

In addition to the state's remaining powers in the organization of transport, local authorities play a growing role.

Local authorities as key players in the planning and provision of local transport policies.

Local authorities have also been able to maintain or develop some competences as a result of successive decentralization reforms:

- *départements* are responsible for developing, managing and maintaining roads (see Map 5a) as well as public transport services outside urban areas.

[66] Direction régionale et interdépartementale de l'équipement et de l'aménagement.

[67] Following a major reform of the central administration in 2010, it has replaced the powerful Roads Directorate.

[68] For an overview of the road network, see map:

http://www.dir.ile-de-france.developpement-durable.gouv.fr/IMG/pdf/Reseau_DIRIF_2_cle59a858.pdf

[69] E.g., Vinci Autouroute (ASF network), Abertis (Sanef network) and Eiffage-Macquarie group (APPR/AREA network).

[70] See presentation by J.P. Orfeuil, CREATE WP3 workshop, Sciences Po, 8-9 March 2017.

[71] For an estimation of the average price of taxi licenses in France, see the study published by 6t (2015). In Paris as of 2015, it was estimated that some 19.000 licenses were in circulation at an average rate of €190.000 / license. Taxi services are particularly sought after for occasional purposes, as opposed to daily transport behaviours, or for leisure purposes in the evening or at night. The impact of app-based technologies and ride sourcing services, including the development of Uber in the French context, is discussed in Section 4.

- Municipalities and groups of municipalities are responsible for developing, managing and maintaining local roads, as well as for the delivery of goods and parking management. Municipalities may also develop their own Local Mobility Plans (Plan Locaux de Déplacements, PDU). Since 2004, the city of Paris was also granted the right to develop its own mobility plan (Plan de Déplacements Parisien – PDP) under the authority of the Council of Paris. Municipalities are also responsible for planning and developing bike- and car-sharing systems.

The example of parking management is developed here as an example of the way through which STIF's powers and competences are exerted in practice.

First, municipalities regulate parking availability through building permits for commercial and residential developments, the management of public parking facilities and land-use plans. Since 2010, the Regional Mobility Plan also defines maximum numbers of parking places in the densest areas of the capital-city region that constrain municipal land-use plans. Nevertheless, the total amount of parking space in the region is often highlighted as oversized in regards to car use reduction objectives (OMNIL, 2014). Second, municipalities set the rates and collect the proceeds of parking. The Regional Mobility Plan also provides some guidelines regarding the role of on-street parking management in the promotion of sustainable mobility and identifies some 150 municipalities located in densely urbanized areas where introducing such regulations is considered highly recommended. A recent study done by the STIF on parking management in the capital-city region shows the high level of diversity that characterizes parking availability and strategies regarding the regulation of on-street parking across the region: through price or duration – or both, reducing on-street parking availability, etc. Moreover, the pricing structure varies across the Ile-de-France area, thus explaining why parking management is often considered a strategic tool that exemplifies municipal competing strategies[72].

In the context of the Ile-de-France Region, Paris is considered an exception: residential parking availability is low due to the urban morphology and free parking facilities – both on- and off-street parking – have almost entirely disappeared to the benefit of alternative transport modes or systems (bus lanes, cycling, car-sharing, tourist busses, etc.).

The high level of fragmentation of the transport system also impacts the organization of public transport. This is explored in the next section.

3.4.4 The organization of public transport in the capital-city region.

The organization of public transport in the capital-city region is representative of evolving relationships between local authorities and the state on the one hand, and between state authorities and transport companies on the other hand. Together, both dynamics have been a source of constraint for STIF and the Region, and have shaped their ability to effectively steer public transport provision in the capital-city region. This historical legacy also accounts for STIF delegating a large share of its competencies in public transport to transport companies or to local authorities and municipalities.

Overcoming fragmentation: the State's policy in the Paris Ile-de-France region.

Historically, competition has been particularly exacerbated in the field of public transport. The development, ownership and operation of public transport networks – railways, bus and tramways – in the Paris agglomeration was shaped by a series of struggles between the private sector and the state on the one hand, and between these actors and local authorities on the other hand. Three major controversies had a long-lasting impact on transport policy offer in the capital-city and the surrounding regions.

- *Controversy about connectivity between networks:*

A first controversy addressed the issue of connectivity between regional and national railway lines entering the city of Paris. The development of railways in the 19th century had led to a debate regarding the centralization of the network in a single train station. In the case of Paris, the decision was made in 1842 not to centralize the railway networks in the Saint Lazare station but to favour the development of 7 train stations. This

[72] Available on the website of the regional observatory for mobility: http://www.omnil.fr/spip.php?article144

solution was advocated by rival railway companies and their respective investors as a preferred way for each of them to secure leadership over one of the seven regional networks. A decade later in 1851, in a changed political context and against the wishes of the railway companies, the state initiated the development of a rail belt around Paris in order to connect the 7 stations and ensure increased coordination onto the network. In spite of the private sector's continued resistances, parts of the rail belt were eventually completed in 1869 (33 km, 21 stations). Following the 1871 defeat, this infrastructure project was never completed.

- *Controversy about capacity investment funding:*

A second controversy emerged in the early days of the third Republic (1870-1940) regarding the most effective way to develop and fund local public transport in the capital city. Two different systems emerged in this early period, each of them being organized in a different way.

Although lacking powers to impose its views, the city of Paris favoured the development of a dense urban network that would be fully integrated to other public transport modes (e.g., urban tramways). This eventually led to the development of the Paris metro from 1897 onwards that is, a combination of 6 under- and over-ground lines, whose technical characteristics prevented any form of interoperability with railways. The metro was first developed by the Compagnie du Chemin de Fer Métropolitain de Paris (CMP) in the form of a concession, and from 1921 onwards, by the same company acting on behalf of the city of Paris.

By contrast, the Département de la Seine was designated as transport authority for the entire tramway (109 lines) and bus (41 lines) networks in the city of Paris and the département in 1920. It designated a single operator, namely the Société des Transports en Commun de la Région Parisienne (SRCRP), a private-owned company. Due to the streets' narrowness, the SRCRP chose to progressively dismantle the urban tramway network (between 1925 and 1937) and to develop the bus network.

A first step towards the network's integration was taken in 1941 by the Vichy regime (1940-1944), with the CMP taking over the entire network. The creation of RATP in 1949 finally completed the network's nationalization with the state-owned companies acting as transport operator and the STIF's ancestor being designated as transport authority.

- *Controversy about the regional rail network's autonomy:*

In parallel to the choices made in the early days of the 3rd Republic regarding the organisation of public transport, a third controversy focused on the most effective way to convey freight and passengers to the capital-city. State organizations and elites[73], their regional representatives, technical agencies and railway companies advocated the development of a regional railway network that would be strictly segregated from the local public transport network. From 1879 onwards, the state initiated a slow process by which it would eventually take over full ownership over the railway network and create a single state-owned operator, namely the SNCF, in 1946.

Since the post-WWII period, nationalization reforms have led to the creation of two state-owned companies, who share ownership and responsibility over the region's public transport network. Both RATP and SNCF have played a critical role in the development of public transport infrastructures and systems in the region (Larroque et al 1997) through capacity investment and the development of transport services[74]. Both companies are placed under the direct responsibility of Central Government and have been run by state elites (i.e., engineers from the powerful Corps des Ponts-et-Chaussées) in cooperation and conflict with powerful trade unions[75]. Both companies enjoy a large autonomy; they are weakly controlled by the government. Since 2000, STIF has mobilized massive resources in order to exert its regulatory functions. This is developed in further detail below. Figure 7 provides an overview of the public transport offer in the capital-city region since 2000.

[73] Corps des Ponts et Chaussées

[74] This will be further developed in Section 4.1

[75] Such connections between State administration and large public enterprises are mainly explained by elites' recruitment and training (Hayward, 1995; Biland, Gally 2018).

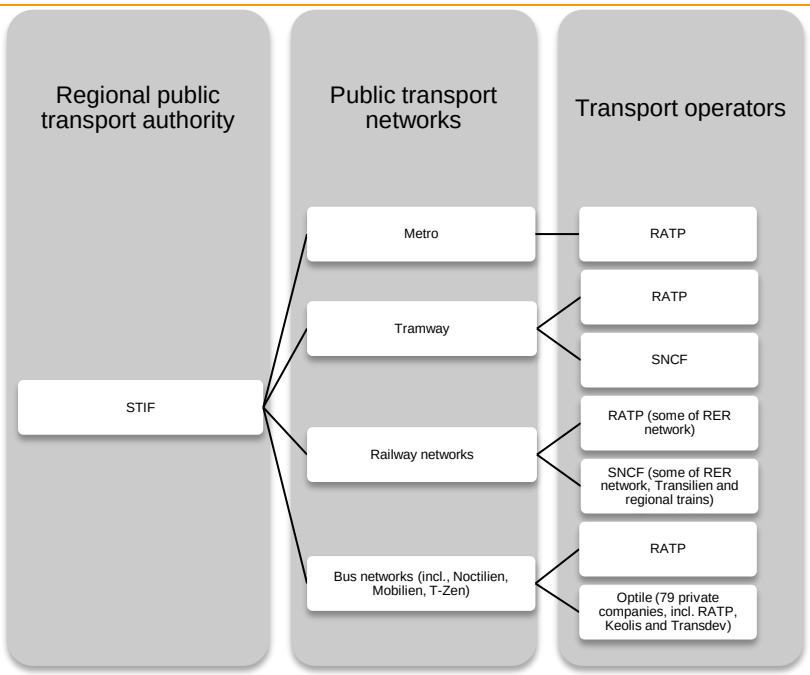
The strengthening of STIF's ability to exert its role as public transport authority.

Until 2000, operating costs were almost automatically compensated through public subsidies without any requirements. Since 2000, STIF's relations with transport operators have been defined by 4-yearly network operating contracts (see Annex 3). These contracts establish the framework for the network operation (service quality levels based determined by indicators, paired with a bonus/penalty system, investment to be made, etc.) and specify terms of compensation. They are established under the control of the State Council, the highest administrative jurisdiction.

The process through which the STIF (and the region) progressively increased their effective regulation capacity of the planning and organization of public transport in the capital-city region vis-à-vis the powerful RATP and SNCF is unanimously described as a slow and chaotic process, and reflects these two public companies' ability to bypass the STIF and successfully develop influence-seeking strategies at state level. Relations with RATP and SNCF also led to several struggles in order to allow for the STIF and local authorities to introduce and strengthen policy objectives in terms of both quality and quantity. The latest struggle took place in 2012 with the SNCF, during negotiations about the 2012-2015 operating contract. In spite of resistances and conflicts, this policy tool contributed to increasing the STIF's capacity to increasingly structure transport planning and policies in the region according to the policy priorities defined in the regional mobility plan (PDUIF).

In addition to RATP and SNCF, STIF has developed similar relationships with 2 additional transport companies: OPTILE and Société du Grand Paris (SGP). In the following paragraphs, some elements of context are provided for each transport company. In addition, an overview is provided in Figure 6; Tables 6a & 6b provide an overview of the existing public transport offer in the region and Map 5c an overview of the network. In spite of the Region's efforts to develop comprehensive information about the public transport offer in the capital-city region, it should be noted that the overall data about the scheduled (offered) public transport service supply, all types (i.e., million seat-km per year) is not yet available (see D3.2 CREATE report, p.24).

Figure 6. The organization of public transport: an overview of the current situation (since 2000).



- RATP (Régie Autonome des Transports Parisiens)

RATP oversees public transport in Paris and for some segments of the suburban railway network and since 2005, it was recognized as a rail infrastructure owner. It is responsible for operating the Metro and parts of the tramway systems in Paris, 2 RER lines (jointly with SNCF) as well as some 320 daytime bus lines, running mainly in the central agglomeration of the Region. In addition, the Noctilien network (night bus lines) are jointly operated with the SNCF, the RATP respectively 31 lines by RATP and 16 by SNCF. Following the 2009 EU

regulation, the opening of the RATP bus network to competition is foreseen in 2024 and as part of the Grand Paris Express project, the operation of 3 additional tramlines will be opened to competition.

- SNCF (Société Nationale des Chemins de Fer)

The national railway company, was established in 1938. It operates the country's national rail services, including the high-speed rail network (TGV), as well as railway services for passengers and freight, and maintenance and signalling of rail infrastructure. Since 1997, a separate network operator was created (Réseau ferré de France), and since 2015, it was reintegrated under the name of SNCF Réseau as one of the SNCF's three subsidiary companies. SNCF Mobilités is the SNCF's second subsidiary company, which coordinates all activities related with rail passenger services and train stations were also regrouped as part of SNCF Mobilités. Its current status and functioning follow the principles laid out in the 2014 Law reforming the railway system. It was confirmed as a state-owned company operating under the direct control of the state (Transport Department).

In the capital city-region, SNCF has responsibility over regional railways. It operates suburban trains (Transilien Network), namely 5 RER lines (of which two are operated jointly with the RATP) and 8 regional train lines. It also operates some night bus lines on the Noctilien network (16 lines) and some tramway lines. It should be noted that the Transilien network goes beyond the borders of the Ile-de-France Region, with some lines being operated in neighbouring regions. Alternatively, parts of rail network located at the fringes of outer suburbs are operated as part of the regional train network (TER).

- Optile (Organisation Professionnelle des Transports d'Ile-de-France **)**

It is a professional organization that brings together some 80 private bus companies, running over a thousand lines outside the city of Paris and mainly concerning local or departmental connections within the inner and the outer suburb areas. Its main role is to represent its members' interests during negotiations on plurennial network operating contracts with STIF. Together, bus companies operate over 1.200 bus lines, including 43 lines pertaining to the Mobilien network, and over 27.000 bus stops in the region.

Prominent transport operating companies such as RATP, Keolis (subsidiary to SNCF) and Transdev, are members of Optile.

Table 6a. Overview of the public transport offer (as of 2015)

		Number of lines (Total)	Length of lines (in km)
RATP	RER	2	113
	Métro	16	218
	Tramway	5	75
	Bus (Paris)	6	709
	Bus (petite & grande couronne)	209	2744
	Noctilien	31	462
SNCF	Transilien	8	850
	RER	5	488
	Tramway	1	8
	Noctilien (night bus network)	16	588
Optile	Bus (inner & outer suburbs)	1142	28058

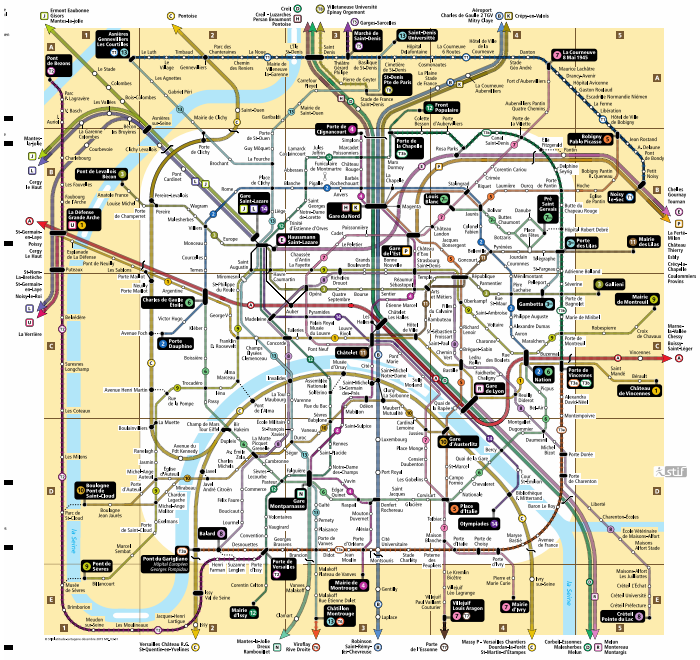
Source: compiled by Halpern with data from OMNIL/STIF, all operators and network owners.

Table 6b. Overview of the public transport offer per mode (as of 2015)

		Number of lines (Total)	Length of lines (in km)	Operator
Rail (incl. RER)		13	1651	SNCF
Métro		16	218	RATP
Tramway		7	145	RATP
Bus		1 505	33 047	RATP/OPTILE
	- City of Paris	61	709	RATP
	- Inner & outer suburbs	1 351	30 802	Optile
	- Noctilien (night bus)	47	1 050	RATP
	- Mobilien	2 (+ 5 planned)		Optile (Transdev)
Fluvial		1	6	RATP

Sources: compiled by Halpern with data from OMNIL/STIF, all operators and network owners.

Map 5c. The Ile-de-France public transport network (as of June 2017)



Source: RATP 2017

- Société du Grand Paris (SGP)

SGP is a newly-created state-owned organization, which was created in 2010 in order for the purpose of planning and developing infrastructures pertaining to the Grand Paris Express infrastructure project. It is bounded by similar obligations to the STIF as those applying to other transport operators. In terms of revenues, it is able to raise capital investment and benefits from a newly-created tax on business spaces in the capital-city region. Since its creation in 2010, the SGP has developed strong expertise and steering capacity, including some 160 employees with a diversity of training and professional background.

Public transport funding

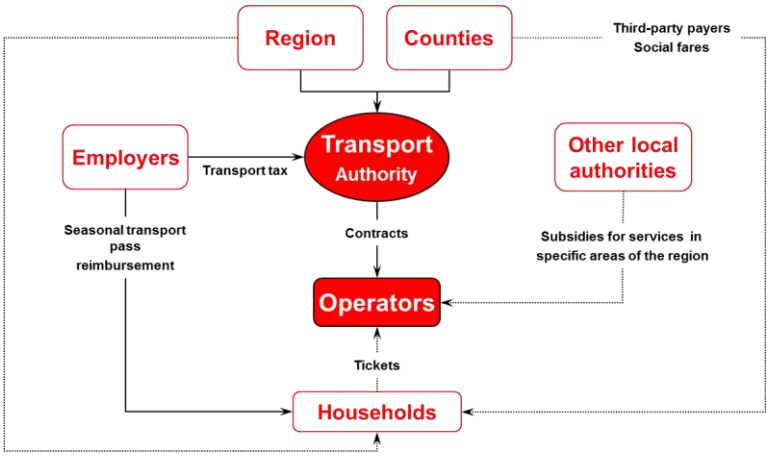
A distinction should be made between public transport investment funding, maintenance and renewal, and, finally, public transport operating costs.

Transport investment funding is shared among the State, local and regional governments through subsidies. This includes capital costs for new lines and extension of existing lines. New rolling stock is funded by the STIF. It should be noted that special funding is made available for large infrastructure development projects such as the Grand Paris Express project, for which funding lies with SGP.

Transport operators fund ordinary maintenance and renewal, in accordance with operating contracts signed with the STIF. In 2014, 51% of the STIF's investment funding was allocated to RATP, 33% to SNCF and 12% to private bus companies. During the duration of the 2016-2020 operating contract, RATP also committed itself to a € 4,2 billion capital investment plan from its own capital (out of a total of a € 8,5 billion capital investment) (RATP, 2015).

Transport operating costs are mostly covered through the STIF's budget. It stems from a variety of revenue sources (see Figure 7 below) (STIF, 2016). Figure 6 provides an overview of public transport funding in the region.

Figure 7. Overview of public transport funding in the Ile-de-France region



Source: STIF, retrieved from presentation given on March 16, 2016 at IAU Ile-de France as part of peer-training activities within the CREATE project.

- The *transport tax or versement transport (VT)*:

VT is its largest source of income for transport funding (39.1% of total operating revenue in 2014). The tax rate is defined by STIF as a percentage of companies' payroll and within a ceiling that is fixed by the government. Since 2013, the steady increase of VT rates (see Table 6) has been justified due to the introduction of the Grand Paris Express initiative in 2010 and to the 2014 Government's decision to change the tax base – all companies, both private and public, with a minimum of 11 employees instead of 9[76]. As of today, VT still constitutes the STIF's largest source of income – 39% in 2014[77].

Table 7. The evolution of the versement transport rates applicable since 1996.

	1996-2003	*2003-2013 (Finance Law 31/12/2003, confirmed in 2004 decentralization reforms and in the 2010 Grand Paris Law)*	*2013-2014 (Finance law, 29/12/2012)*	*2015-2016 Finance law, 29/12/2014)*	*2017 (Finance law, 29/12/2016)*
Paris and Hauts-de-Seine Department	2,5%	2,6%	2,70%	2,85%	2,95
Seine-Saint-Denis and Val-de-Marne Department	1,6%	1,7%	1,80%	1,91%	2,12%
(Since 2017) Municipalities from the Hauts-de-Seine, Seine-Saint-Denis, Val-de-Marne Departments located outside the Grand Paris area	Not applicable	Not applicable	Not applicable	Not applicable	2,01%
Others	1,3%	1,4%	1,50%	1,50%	1,60%

Source: compiled by Halpern from data available on http://www.legifrance.fr

- *Fare revenues*

STIF is responsible for the fare policy. It counts among those few areas that cannot be delegated to local authorities and municipalities. As of 2014, it contributes to some 39% of public transport funding in the region, incl. employer's reimbursement of monthly passes[78]. The tariff structure was long divided according to the

[76] Provisions regarding the Versement Transport in the capital-city region are laid down in the General Code of Local and regional authorities (Code Général des Collectivités Territoriales), Article L2531-4. See http://www.legifrance.fr

[77] See summary table in Section 2. Since 2004, State funds are mainly available for capital investment. The Regional Council and counties provide funding that cover for the costs of discounted fares, and local governments also directly fund public transport subsidies.

[78] Public and private employers in the region must reimburse 50% of their employees' season fares, according to the law of July 4, 1982. In 2014, their contribution represented 9.3% of all operation expenses.

region's polycentric structure[79],with full integration between modes and operators. Since then, an "All zone" passe (or "Single" Pass) was introduced in the entire region. Since the change of political majority at regional level, discussions are underway in order to increase fare revenues by increasing the price of the Single Pass.

- *Public subsidies*

Local, regional and state subsidies account for 19.2% of STIF's operating revenues in 2014. Since its withdrawal from the STIF's Board of Directors, the state has stopped subsidizing operating costs, apart from school transport. State funds are mainly available for capital investment. The Regional Council and Counties provide funding that cover the costs of discounted fares, as part of their social action competencies. Local governments (municipalities and their groupings, départements) also directly fund transport operators. Their subsidies are intended to cover services running on a deficit.

Other income sources include advertising revenues and proceeds from traffic fines collected at the regional level (2.7% of STIF's budget).

- *A critical discussion of the long-term impact of public transport funding:*

Beyond the Paris Ile-de-France case, it should be noted that current debates about public transport funding are particularly vivid in the context of the post-2008 crisis and following the 4th wave of decentralization reforms. Over the recent period, discussions about capacity investment in public transport and transport policy funding in the capital-city region repeatedly highlighted the need to develop alternative funding sources in a context in which there is little incentive to increase commercial revenues. Recent controversies about public transport funding in the capital-city region should thus be understood in the context of national discussions about evolving state-local relations, whether or not the contribution of businesses to public transport funding should be reduced in the context of the post-2008 crisis, and the extent to which commercial revenues – and the contribution of public users – should be increased.

While most experts recognize the joint contribution of versement transport and increased policy capacity at the local level as having played an instrumental role in the shift away from the automobile city and the development of Stage 2 and 3 policies in a number of French cities, their long-term impact on public transport funding and transport policy priorities at the local level has also been critically assessed. In the context of continued decentralization reforms, it encouraged a project-led approach to public transport that favoured highly visible and short-term political strategies (Desjardins and Sykes, 2014). Insofar as national funding sources encouraged the development of standardized solutions, such as the urban tramway or guided buses, the development of urban public transport infrastructures contributed to prioritizing means over goals, and to local authorities' growing dependency on transport companies and the industry. Furthermore, insofar as it prioritizes home-work transport demand, VT contributes to a general tendency to overlook other forms of transport demands and to detach political decisions about public transport from a comprehensive approach to mobility that would include other transport modes (Offner 2015).

Second, in a number of cities, the changes brought to tariff structures are not linked with debates about revenues: in a recent comparative assessment of public transport networks' performance across a number of French cities between 2004 and 2014, the French Union of Public Transport highlighted the growing gap between increasing numbers of passengers and stagnating commercial revenues (GART 2015). In spite of generating large amounts of fiscal revenues for capacity investments in public transport infrastructure, the introduction of VT did not contribute to reducing the share of public subsidies allocated at municipal level to public transport capacity funding[80]. Since 2008, over 75% of municipalities eligible to introduce a VT have increased rates up to their

[79] 8 concentric fare zones until 2007, a progressive "de-zoning" process between 2007 and 2011, 5 zones bbetween July 2011 and July 2015. For a discussion see Lemoine, Predali (2007), Beaufils, Sagot (2007).

[80] According to AdCF (*Association des Communautés de France*), an organization that brings together groupings of municipalities (intercommunalités) since 1989, there was an average increase of 36 percent of the share of local public subsidies allocated to public transport capacity funding between 2001 and 2008. This organization also produces a number of studies and briefings on policy issues that are of interest to its members, including public transport, and has played a pivotal role in shaping the last series of devolution reform.

maximum level. In those cases in which VT rates were increased by expanding the size of intermunicipal authorities or through the changes brought to the law, the introduction of VT led to the spreading out of urban public transport infrastructure away from urban cores, including low-density areas. In its current form, VT is being criticized of encouraging a negative-sum-game between land-use and transport planning, and of being an indirect driver for urban sprawl (Desjardins, 2008). Third, as part of their complaints against high levels of taxation, business groups' representatives obtained from Prime Minister Valls a concession that enterprises with less than 11 (rather than 9 before) would be exempted from VT.

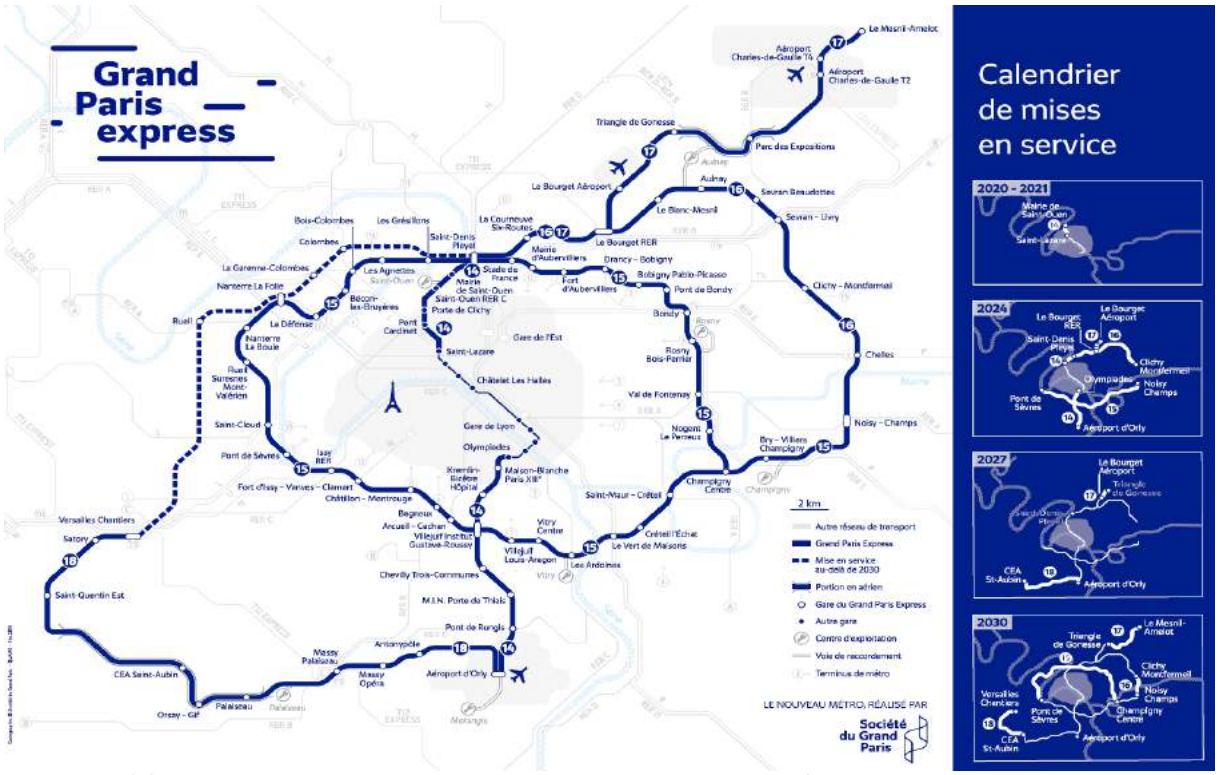
Current large-scale capacity investments in public transport

As of today, the state retains extended powers through its agencies and companies in the development of two large infrastructure projects: Grand Paris Express and CDG Express. Both initiatives showed strong resistance from within the state to grant the region full autonomy over large capital investments in transport and explain why they have led to the creation of a new entity, SGP.

The infrastructure planned as part of the Grand Paris Express network will be progressively introduced between 2018 and 2035 under the authority of the Société du Grand Paris (see Annex 2). This transport authority acts under the authority of several ministries[81]. Among other things, it is in charge of developing the new automatic metro line around Paris and across major economic development centres. Together, these infrastructure projects will add up to 205 km of additional metro lines in Paris and the inner suburbs to be built by 2030 (see Map 6, which also includes a revised schedule as of March 2018):

- Several metro line extensions (lines 4, 11, 12 and 14)
- New, automated metro lines (lines 15, 16, 17 and 18)
- 72 new stations, including 17 interconnecting stations
- The average operating speed will be around 60 km/h

Map 6. The Grand Paris Express Project: overview and revised schedule (as of March 2018)



Source: Société du Grand Paris, April 2018 – retrieved from Presentation by C. Barbé, Study visit of the CREATE project to Paris, April 18, 2018.

[81] Ministries of Housing & Regional Equality / Ecology, Sustainable Development & Energy / Finance & Public Accounts.

In the case of the CDG Express project, it was repeatedly postponed since the mid 1990s, due to the lack of consensus between the state and local authorities in the north-eastern part of the region, as well as excluded from successive legislations and agreements about the Grand Paris Express network. The decision to build this rapid and direct rail connection to Charles de Gaulle airport was made in 2016 and will be funded through operating revenues and a new tax on incoming air passengers. It is closely related to the Paris Ile-de-France's application to host the 2024 Olympic and Paralympic Games.

3.5 Remaining challenges in the governance and organization of transport

Together, demographic, socioeconomic, political and institutional factors account for the complex and fragile governance of transport in the capital-city region. Unlike other cities in CREATE, such as London, Berlin or Vienna, where some level of functional coordination is achieved through a single integrated transport authority at metropolitan level, the Paris Ile-de-France region remains characterized by a high level of institutional and functional fragmentation. This partly results from the State's historical "divide and rule" strategy in order to structure the development of the capital-city region and maintain some ability to directly shape its governance, policies and critical infrastructure while at the same time accommodating pressure for decentralization. In this context, the organization of transport stands at the crossroads between different policy dynamics – decentralization reforms, transport governance, spatial planning and environmental policies – it also offers many opportunities for new entrants to develop alternative and small-scale transport initiatives.

The following drivers for change and continuity are expected to be form the basis for transport policy developments:

- A low level of cooperation between main stakeholders and a limited capacity of public authorities to develop and implement a comprehensive approach to urban transport.
- A high degree of institutional, political and organizational conflict which benefits those actors able to develop and maintain active resource-seeking and venue-shopping[82] strategies over time, such as state elite networks or Left-Green coalitions.
- A growing number of opportunities for new entrants to develop alternative and small-scale initiatives by strategically tapping into other policy domains, e.g., decentralization reforms, environmental protection, spatial planning etc.
- A profound disconnect in the organization of rapid transit systems as opposed to local transport, which results from highly differentiated forms of transport governance across levels of government and across transport modes.

In the following section, the analysis of historical transport developments shows how competition has played a critical role in strengthening policy capacities to promote a shift towards a sustainable urban transportation agenda while at the same time preventing the emergence of robust forms of regional governance.

[82] See note above, Pralle (2003).

4 Historical transport policy developments: objectives, processes and measures

While the previous section focused on drivers of changes, this section examines the concrete way through which specific combinations of above-mentioned drivers of change shaped historical transport policy developments. This is done by analysing the selection of policy objectives, processes and measures. To begin with, the analysis carried out within CREATE highlights an interesting paradox: the existence of robust and stable policy objectives throughout the largest part of the period under scrutiny, while at the same time, a number of alternatives policy initiatives are introduced on a small-scale basis and progressively extended. Three different types of policy developments have emerged in this context and will be successively introduced:

- Rapid transit solutions in close combination with state-led forms of regional governance. These policies were introduced from 1959 onwards and shaped the development of the RER network, motorways and expressways, and today, the Greater Paris network.
- A myriad of small-scale policy initiatives across levels of government and types of organizations in order to promote urban-specific forms of mobility and transport. These policies were introduced by transport policy outsiders and/or subnational authorities from 1970s onwards in the context successive waves of decentralization.
- The emergence of a comprehensive sustainable transport agenda, first in a limited number of cities, before spreading towards the rest of the region. This last type of policy is closely related to the arrival of Left-Green majorities across levels of government from the 2000s onwards.

Moreover, the analysis shows that only a limited number of actors (e.g., state elite networks, Left-Green majorities) were able to overcome fragmentation in order to develop and implement a comprehensive transport agenda. Indeed, institutional competition between levels of government still shapes transport policy developments today. More precisely, there is a continuing tension between, on the one hand, the attempts by state elites and organizations to maintain leadership over transport policy initiatives, the allocation of policy resources and the choice of policy tools, and on the other hand, the growing autonomy of subnational actors as a result of decentralization dynamics. In this context, local authorities strategically tapped into urban regeneration and environmental policy resources in order to develop strong alternatives to national policy objectives and measures, thus fostering the emergence of an alternative urban transportation policy agenda.

Last but not least, the analysis provides some explanation for these challengers' ability to promote policy change in the absence of strong forms of regional governance. It argues that competition and resource-seeking strategies are the main explanatory factors in explaining transport policy developments in the capital-city region. This form of policy change is, however, a source of socio-spatial differentiation and inequalities. More generally, it accounts for the limited comprehensiveness of the alternative transportation agenda across transport modes and the region.

4.1 Prioritising rapid transit solutions in a context of state-led regional governance (1959-1977)

As the capital city-region was experiencing major urban and demographic growth, investment in transport infrastructure and services has been considered critical to the development of a polycentric model and to decongesting the heart of the agglomeration. Car use and ownership was growing steadily. This was partly due to this transport mode's emerging status as a symbol of freedom and modernity and to the central government's efforts to securing opportunities for the national car industry[83]. Few resources were pulled into modernising and extending public transport networks. The existing regional public transport system was unable to cope with the growing demand for transport. The rail-based network suffered from chronic underinvestment. The Paris Metro only served the city of Paris and was still operating with pre-war rolling stock. Only 3 km of additional metro lines were built between 1948 and 1958. Suburban railways were extremely limited. As for buses, which had replaced tramways after their dismantling in the 1930-1940s, their daily operations suffered from traffic congestion. Moreover, these transport networks were poorly integrated between one another.

[83] Unions and the industry were directly involved during consultation phases as part of the General Planning Commission (Hayward and Watson 1975).

In this context, the Paris District sought to foster cooperation between a large number of actors and policies in the region, including those promoted by state elites and organizations. Major transport initiatives were developed during this time frame, including the development of rapid transit transport solutions. All of these aimed at containing rapid demographic growth and urban sprawl as well as exploring new technologies that could later be exported worldwide. In spite of these coordination mechanisms at regional level, policy implementation highlights the growing autonomy of state organizations as well as various types of institutional, social and political resistance against the priority given to mass transit transport solutions.

4.1.1 State elites and organizations take the lead

Until the mid-1980s, transport in the Ile de France region was a world of engineers, planners, state agencies, and civil servants in competition and, at the margin, some influential mayors and ministers[84]. Discussions among state elites and organizations were strongly grounded in Pre-WWII controversies regarding the networks' form and function (e.g., star-shaped or polycentric, regional or national), the need to ensure public sector control over ownership, capacity investment and maintenance, and the distribution of power between levels of government. In this context, the creation of powerful actors at state level – RATP and SNCF for public transport, the National Roads Directorate for car traffic – opened new opportunities to develop rapid transit systems in the capital-city region. Notwithstanding fierce levels of competition between pro-rail and pro-car coalitions, these elite networks shared a similar interest in developing mass transport solutions that could later be transferred to the rest of the country and beyond. The choices that were made during these years, the way they were implemented in terms of policy tools and forms of governance, have shaped transport policy developments and are still very relevant today.

Technology-led transport policies in the name of the national interest

Similarly to ongoing debates in London about the Victoria line (see D4.2 London report), the Paris Ile-de-France region was considered a major showcase for national initiatives and a preferred location for developing new technologies and systems. Under the pressure of national transport companies (SNCF, RATP), the construction and automobile industries, and with the support of major workers' unions, national investments in rapid transit systems were promoted in successive planning periods[85] in the name of the wider national interest.

Planning documents were entirely produced by state elite bureaucrats with the support of President de Gaulle and under the leadership of Paul Delouvrier. In adapting national policy preferences to the capital-region context, rapid transit transport solutions were considered a preferred way to increase polycentrism and reduce the car-oriented city model's negative externalities over land consumption[86]. Ideas behind this infrastructural design were driven by a rational and positivist approach, according to which the rise of car use called for increased road capacity whereas the planned Villes nouvelles required major transport infrastructures in order to attract real estate developers and economic activities[87]. In order to ensure implementation, political agreement was negotiated between the Gaullist and the Communist Party, which held a large majority in most of the municipalities surrounding Paris (except the west)[88]. By contrast, local interests such as those of municipalities and their populations of commuter workers and immigrants were regarded as 'low politics' and their demands as obstacles to the development of the greater good.

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[84] This section draws on Halpern, Le Galès (2015).

[85] The way through which the national state ensured direct support to industrial sectors in decline or highly competitive industrial sectors is often referred to as "high-tech colbertism" (Cohen 1992). It seeks to foster the emergence of national champions and technological innovations under the leadership of state elites and through the strategic use of great projects, public tendering and limited competition (Hayward and Watson, 1975). In transport, the high-speed train system (TGV) was developed according to this model (Fourniau 2001).

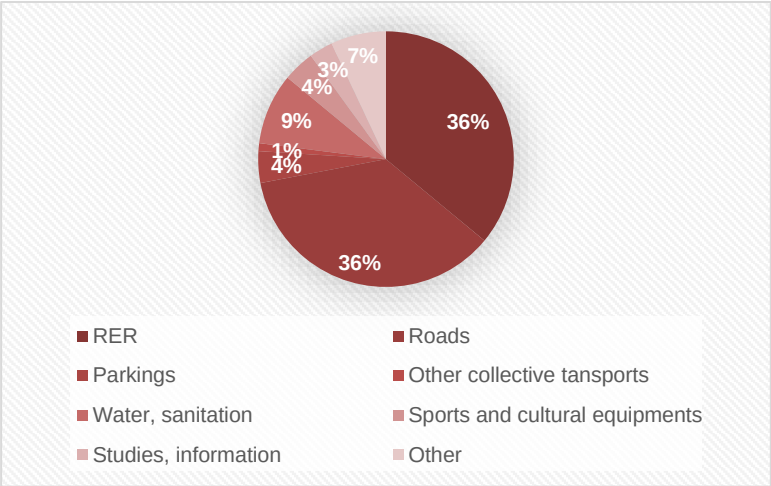
[86] See List of key spatial and urban planning documents, Annex 1.

[87] Group interview, WP4 CREATE project, Paris, January 29, 2016.

[88] The so-called red belt, where most firms and the working class were located.

The national political and policy priorities embodied in the 4th and the 5th national plans were translated in regional planning documents (PADOG 1961; SDAURP 1965, revised in 1969 and 1976), and in the District of Paris' capital investment spending during the 1960s (see Graph 3). During this period, priority was given to the development of two high-capacity rapid transit networks: a rail-based public transport network, the RER, and the regional motorway network.

Graph 3. Capital spending, investments, District of Paris (1962-1968).



Source: reproduced from Larroque et al. (2002).

The Regional Express Railway network

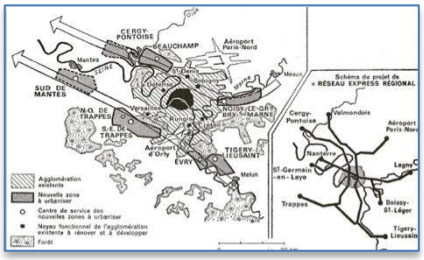
The Regional Express Railway (RER) network was designed as an efficient rail-based public transport network for commuters coming into Paris. This proposed network was designed during the pre-WWII period by the RATP's ancestor and was eventually picked up by RATP during the 1950s. It was originally planned in an H shape (see Figures 8a & b), including two north-south routes. While it runs underground in the Paris city centre, it serves as a commuter rail in the suburbs. During this early planning period, the SDAU tried to ensure the future network's coherence with spatial planning objectives. More precisely, Delouvrier's team suggested the RER was meant to: 1) provide links between the main metro and railway stations within Paris; 2) compensate for the lack of suburban transport links; 3) structure transport flows at the regional scale and facilitate access to the centre. It was formally adopted in the 1960s and, in order to reduce investment costs and when possible, public authorities chose to reopen or modernize existing railway infrastructures. This justified granting the two companies the shared operation of the network, thus leading to long-term rivalry between both operators and a direct impact on daily operations[89].

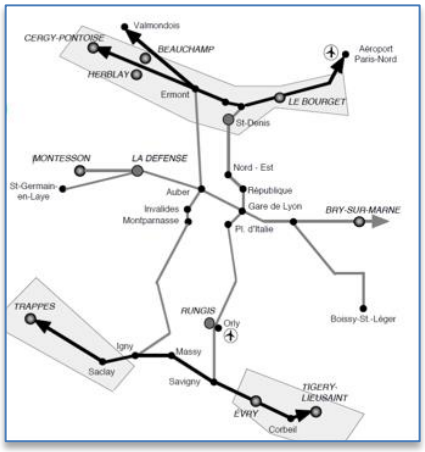
As RATP and SNCF competed against one another in order to gain leadership over the new system, both companies increasingly questioned the District of Paris team's infrastructural and technical choices and used every opportunity to impose their own preferences over the spatial planning objectives laid down in the SDAU. Planning the RER network played a critical role in strengthening their role vis à vis public authorities across levels of government. Even though both companies' management was selected – and still is – by the State, this large-scale infrastructure project offered an opportunity to gain considerable resources in terms of knowledge, expertise and influence up to a point when the State administration was considered to have lost most of its supervision capacity (Larroque et al, 2002). During the planning process, both RATP and SNCF pushed forward their own preferred technical and engineering solutions (Latour, 1987) and increasingly questioned the District of Paris team's infrastructural and technical choices.

[89] Although RATP had dominated the planning of the RER system until the 1960s, Prime Minister Chaban Delmas required for SNCF to be involved as well. This raised a number of compatibility issues, some of which have never been resolved. SNCF and RATP used different electrification systems, and as a result, different vehicles. The training of their staff as well as career advancement plans also differed considerably from one company to the other.

In doing so, RATP and SNCF followed different strategies. In the case of RATP, most of the companies' activities had been concentrated on modernising the metro network through small-scale improvements: increasing speed through the introduction of new rolling stock and technologies and improving the service's quality and efficiency through engineering works in stations and automated flow management techniques. The RER project offered RATP an unprecedented opportunity to develop new skills and resources. It massively invested in additional human resources, mostly trained engineers, and created a new division entirely devoted to infrastructure development (Margairaz, 1988; Gaillard, 1991). As of 1961, a department for studies on urban transportation was created in order to allow RATP disseminating its know-how worldwide. The project also justified intensifying relationships with local municipalities and elected representatives, parts of which were ensured through the strong connections between workers' unions and the Communist Party. This included the production of yearly reports and the development of active lobbying strategies at subnational levels of government. Nevertheless, the pivotal role played by the RER project in the company's rapid development shaped its preference for large-scale rail-based infrastructure projects to the detriment of other forms of public transport.

Figures 8a & 8b. Initial RER network proposed by the 1965 SDAU, Source: SDAU 1965.





Similarly, the SNCF primarily focused on targeting state representatives and organizations, and progressively concentrated a vast share of its organizational resources in the development of the high-speed national network as opposed to regional railway services and infrastructures, which were regarded as less prestigious. In spite of such differences, these organizational resources eventually allowed both companies to bypass regional spatial planning objectives in order to promote their own policy initiatives and solutions through active lobbying at national level.

The development of the regional motorway network

In spite of the attention given to the development of public transport, the largest share of transport policy investments in the capital-city region favoured road infrastructures. From 1945 until the late 1990s, the development of road capacity was considered the main solution in order to reduce traffic congestion and to accommodate growing transport demand. This "all-car" paradigm was particularly prevalent among State elites but gradually spread towards subnational levels of government and professional worlds[90]. Separate traffic and grade separation was advocated in order to facilitate flows of motorized traffic and ensure the capital-city's function as the main national transport hub. This policy was directly supervised by the powerful national road directorate in close cooperation with state representatives in the region. The District of Paris' preference, as repeatedly acknowledged by Delouvrier himself, was to favour car use outside Paris as the most efficient solution to ensure accessibility to the Villes nouvelles (Flonneau, 2003). Every spatial planning document that was published during this period highlight these objectives as a major priority.

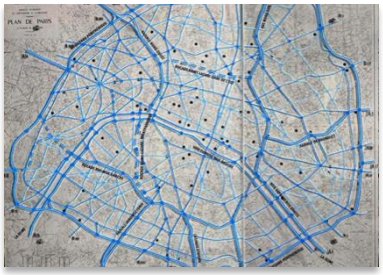
[90] See the comparative work done by Lecroart at IAU: http://www.villetransports.fr/assets/Themes-de-travail/2015-Autoroutes/autoroutespres-T2-P.-Lecroart.pdf

Most large road infrastructure projects had been initiated prior to the introduction of the SDAU. However, this strategic planning document accelerated the extension of the road network. A 900-km network of motorways was included in order to enable high speed connections. Continuity over time was ensured through the continued efforts demonstrated by the national road directorate in order to maintain these policy objectives and measures high on the agenda, as well as to ensure sufficient resources in order to fund and enforce them. A series of projects aiming at developing a dense network of urban motorways were elaborated in cooperation with local state representatives (préfecture de la Seine) and the District of Paris' support. Not all proposed roads were built but those that were effectively developed absorbed a large share of the State's available investment capacity in the region - the 4th and the 5th Plans respectively invested 60% and 63% of total investment capacity in roads (i.e., some 3 billion Francs). Due to the mobilization of massive institutional, political and financial resources, and in a context in which little opposition could be raised by local authorities, a large share of the proposed network - radial routes, the Parisian ring road and the urban motorway alongside the Seine river - were achieved by 1975. Remaining segments were developed in a different economic, institutional and political context, thus highlighting the remarkable ability of the National road directorate to pursue large-scale infrastructure projects over time. A good example lies in the A86 motorway – a 2nd ring road around Paris located between some 2 and 7 km away from the Boulevard périphérique – which was included in the 1960 PADOG and only completed by 2011.

These policy choices had a long-term impact over transport patterns in the region. At first, the motorway network follows a radial pattern with Paris at its center and the "villes nouvelles" as secondary hubs. The proposed network also provided direct routes between the suburbs through to the centre of Paris. The Villes nouvelles particularly benefited from road developments with the opening of the western highway towards Mantes (1963), the A1 (1968) and later on the A15 which serves the new town of Cergy-Pontoise, located toward the west of Paris. Such thinking also applied to the city of Paris itself, for which no autonomous transport policy objectives were developed, and where national bureaucrats retained the upper hand in elaborating and implementing transport policies. Most efforts were devoted to developing the road network as a preferred strategy to reduce congestion. The Paris ring road (*Boulevard périphérique*) (1953-1973) was completed in 1973 and created a physical barrier between the city of Paris and municipalities in the inner suburb area. In addition, a highway that was planned alongside the right bank of the Seine river[91] (1966) also offered a good example of the roads projects that were developed during this period. In addition, some efforts were made by state representatives in Paris (*préfecture la Seine*, *préfecture de police*) in order to adapt the inner city to the automobile and reduce congestion by increasing road capacity throughout the city[92].

Although the role of State elites were pivotal in the development of motorway projects in the capital-city region, the city of Paris' technical services, together with architects and urban planners, also contributed to promote this thinking by developing the "Paris motorway plan" in close cooperation with architects and urban planners, in order to ensure connection with the centre of Paris (Figure 9).

Figure 9. Proposed urban highways in the Paris inner city



Source: http://www.slate.fr/story/68489/voies-sur-berges-france-pompidou

This pro-car policy intensified in the late 1960s in a context in which public transport solutions were losing momentum on the national political agenda.

[91] Voie sur berges rive droite, renamed Voie George Pompidou in 1976. Cars were banned this major urban expressway following a decision by the Paris Council (2016).

[92] In the case of the Boulevard Montparnasse, Avenue Terne and Boulevard Malesherbes, road capacity increased respectively from 13.5 to 21 meters, 16.5 to 22 meters and from 14 to 22 meters.

Following the choice made at national level to prioritise the development of the high-speed train technology and system, public transport in the region found itself without a champion and additional opportunities were given to pro-car alternatives and in a context in which prominent national political figures supported this approach. This was particularly the case of George Pompidou, who served as President De Gaulle's Prime Minister (1962-1968) and was eventually elected President (1969-1974) after he became the leader of the Gaullist party (UDR). During his term as president, he pursued and intensified a modernizing policy agenda, and put a specific focus on motorway infrastructure, which also extended to large urban areas. Unlike his predecessors, he believed this pro-car approach should also be extended to urban areas - "the city must adapt to the automobile" (political speech, 1971) - and promoted a car-oriented city model[93]. In this perspective, car accessibility was considered a key dimension of the modernizing agenda in the region and its promotion was prioritized throughout policy documents.

Similarly to the rationale observed in rail-based infrastructure, a large-scale motorway programme was developed at national level in order to allow the construction industry to experiment with a new generation of tunnels. The government's decision to legalize public-private partnerships in order to finance and build road infrastructure also contributed to this new momentum. In the capital-city region, a large-scale initiative jointly developed by state representatives and urban planners within the city's administration proposed developing a network of subterranean highways under Paris, with a series of 8 entry points located in the inner-suburbs areas and directly connecting the planned *Villes nouvelles* to the centre of Paris. In addition, two urban motorways were built on both sides of the Seine River, including the so-called "Pompidou road" whose development was placed under the President's direct leadership.

In spite of such support to the car-oriented approach, the decision made by Prime Minister Chaban-Delmas (1969-1972) to withdraw State funding to RATP and, indirectly, to public transport, opened a wave of social protest.

Concluding remarks

To some extent, the District of Paris did succeed in increasing coordination between transport infrastructure developments and spatial planning objectives. This form of policy-making is often referred to as a period of "strong leadership" from the State and in particular the De Gaulle – Delouvrier tandem: for some, it is considered as a "golden age" in transport planning which was irremediably lost following decentralization reforms but justifies State interventionism; by contrast, others consider it as technocratic, contrary to the functioning of any democratic regime and strongly oppose attempts at reviving State interventionism.

Nevertheless, transport policy processes in the capital city region also remains characterized by a strong disconnect between policy objectives, which aimed at strengthening these infrastructures' contribution to limiting urban sprawl, and resource-seeking strategies at implementation stage.

4.1.2 Competitive resource-seeking strategies

In a context of growing political and institutional competition, a growing number of stakeholders sought to shape transport policy developments as part of their resource-seeking strategies. Yet none of them promoted an alternative to the state-led regional governance model. The creation of STP had not contributed to overcoming fragmentation in the organization of public transport. It lacked financial autonomy and sufficient authority to effectively shape transport planning and operation in the capital city region. Even though local authorities were formally represented in the STP's board and could, as such, discuss transport investments and tariffs, this organization remained under state's control.

In addition, the focus on rapid transit road and rail connexions was achieved at the detriment of local public transport, thus fostering a number of claims in support of increasing the public transport offer and strengthening the role of local authorities in transport governance.

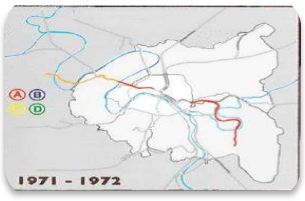
[93] In the case of Lyon for example, this led to the development of the Fourvière Tunnel and to locating the connection between major national – and European – highways in the very heart of the city.

SNCF-RATP rivalry over the RER network

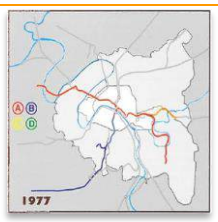
The planning and implementation of proposed road and rail infrastructures started during the final years of Delouvrier's mandate as head of the District of Paris, thus opening new opportunities to limit the SDAU's effectiveness. State administrations (e.g., roads, housing, etc.) sought to maximising their own resources and promoting their own policy preferences as opposed to the principles laid down in the 1965 and the 1972 SDAU.

The development of the RER network (see Map 7a below) is particularly representative of such limitations to heroic decision-making and sheds light on profound political and institutional divisions which, up until now, constrain transport policy developments at regional scale. The first line (RER A) opened in 1977[94]. In spite of being recognized as a major achievement, it differed from the original plans in a number of ways. Politically charged discussions between local mayors and state authorities accounted for chaotic planning and permanently weakened the system's reliability and efficiency. In addition, continued conflicts between SNCF and RATP also stymied development of the RER network (Sfez 1981) as shown by the number of controversies over the network's development. Both companies considered the RER project a major opportunity for strengthening their respective positions and ensuring access to considerable resources for capital investment in the following decades. It also opened some opportunities for major organizational development and experimenting with engineering and technical solutions, some of which emerged as hotly debated issues. The choice made to build a series of large underground stations in the centre of Paris led to a first controversy over the project's costs but contributed to its international fame as an engineering work. Another controversy concerned RATP's choice to increase the network's centralization at the Chatelet-les-Halles station, a massive intersection of RER and metro lines: even though the principles laid down in the 1972 SDAU highlighted the need to increase the network's polycentrism and to develop within-suburbs connections, the construction of a single underground tunnel would undoubtedly contribute to traffic congestion on the RER network. In spite of such controversies, RATP teamed up with the regional Préfet in order to ensure central government's support. The station opened in 1977 and despite later efforts to increase polycentrism on the network, it is still very much considered the capital-city's main public transport hub[95].

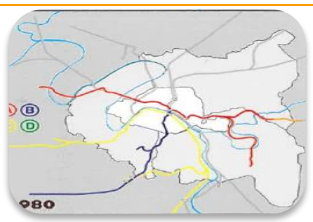
Map 7a: The extension of the RER network (Phase 1, 1971-1980).



1971-1972: Lines A (red) and B (blue)



1977: adding lines C (yellow) and D (green)



1980

NB: New lines are represented in orange in the above maps. Source: IAU Ile-de-France

All in all, the RER project played a pivotal function during these companies' early years and exerted a longer-term impact on their respective preferences and influence-seeking strategies. First it contributed to shaping both companies' preference for rail-based projects to the detriment of other forms of public transport. Second, in ensuring both companies with a considerable source of income for capital investment, the RER project also led to somewhat neglecting operation and maintenance costs. Together, these developments account for the RER also having been highlighted as an example of chaotic decision-making (Sfez 1981; Hebbert, 2012). It is indeed

[94] The central part of the network's planning and completion was achieved between 1962 and 1977, but it was continuously expanded until 2006 and today, as part of the Grand Paris Express project (Morange, 2012).

[95] A number of public transport networks intersect at this station (3 RER lines, 5 metro lines and a number of buses) and RATP estimates show that over 26 million travellers commuted through the station in 2015. It centrality was further increased through the concomitant opening of a large shopping centre at Forum Les Halles. In the 2000s, a major urban regeneration programme was led in this emblematic public space (see further on, section 4.3 about the pedestrianization of the Montorgueil area) with some measures aiming at redistributing flows of passengers and visitors both under- and over-ground.

considered a symbol of chaotic planning, bad management, lack of reliability, ageing infrastructure and continued rivalry between RATP and SNCF.

Resistances from below: local authorities, unions and emerging urban social movements.

In addition to within-transport dynamics, the growing mismatch between socio-spatial dynamics in the capital-city region and the available transport policy offer fuelled a growing number of protests. Congestion on the road network and delays on the bus network added to the users' discontent, which culminated during the 1968 strikes as in the rest of the country. First, unions and public transport users jointly protested with the support of political parties from the left against the tariff structure and highlighted the poor quality of public transport services as well as the need for further investment[96]. These protests in the capital-city region found some echo in other cities in France, where elected mayors in Grenoble, Lille, Lyon and Marseille asked for increased financial autonomy and support in order to develop ambitious urban transport systems. Together, these demands contributed to the introduction of a local business tax, the *versement transport*, which was first introduced in the capital-city region in 1971 and in large medium-sized cities in 1973 in order to fund transport infrastructure projects (Gallez 2010)[97]. As Prime Minister Chaban-Delmas threatened withdrawing State funding to RATP, the newly-created social-democratic workers' union (CFDT) suggested introducing a single transport card, the cost of which would be supported by employers – a policy measure that was introduced in 1982 following the election of a Left majority at national level under President Mitterrand. More generally, this first stream of social protest contributed to strengthening the rise of the Socialist Party in urban areas and to the development of the decentralization reform agenda[98].

In addition to this first wave of protest, environmental movements and civil society organizations increasingly mobilized against the dominant role of the automobile. Anti-road protest was nothing new but grew stronger as these groups joined the urban social movement (Mayer 1997). Together, they called for improved quality of life in the name of protecting the urban environment, defined broadly and including architectural heritage, noise and air pollution, and safety issues. As car mobility took off, concerns over road congestion in urban areas and high traffic fatalities increased. In the city of Paris, heritage protection groups protested against the damages caused to the historic city-centre of Paris by the pro-car policy and proposed urban motorways. They urged public authorities to put an end to new road developments[99]. The first pro-cycling demonstration was organized in order to protest against the risks associated with the car-oriented city. These demands found some echo in the political sphere during the 1974 presidential campaign and the 1977 legislative and municipal campaigns, during which new issue linkages between transport issues and growing environmental concerns were discussed. Ecological concerns were championed by a new generation of leaders and grassroots' organizations who opposed the Gaullist modernizing agenda across policy sectors (e.g., nuclear energy, motorways, etc.). In a changed political – the election of President Giscard D'Estaing in 1974 initiated the decline of the Gaullist movement – and economic context, several highway projects in the capital city-region and outside Paris were put on hold or abandoned.

Only parts of the proposed routes were effectively built – mostly alongside the Seine River. The highway project alongside the left bank of the river Seine was abandoned in 1974, followed by the Vercingetorix road project in Paris in 1978. Indeed, most urban motorway projects were abandoned or implemented on a smaller scale by converting existing streets into higher capacity urban transit roads. Similarly, some attempts were made to convert these proposed open-air urban motorways into covered road projects, but the rise in car costs highlighted the need to encourage energy-efficient alternatives to road transport and car use through state policies and objectives.

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[96] The following slogans ringed vividly at that time due to the pun it included: "l'Etat ne nous transporte pas, il nous roule" ("the state does not transport us, it's cheating us"). See also A "Black book of transports" was also published in order to highlight their demands (Flonneau, 2003, 196).

[97] It was first introduced in large urban areas (Paris, Lyon, Nantes, Strasbourg, etc.), and later, in smaller cities provided they were able to create intermunicipal cooperation.

[98] For a rapid overview, see Annex 2.

[99] During those years, the city's architectural heritage emerged as a symbolic value of prestige (Hai-Vu et al, 2013).

Together, these drivers for change – weakening forms of regional governance, political pressure from cities outside the capital-city region, urban and environmental movements in Paris and changed political and economic context – led to the development of alternative solutions across levels of government and transport organizations. This is further explored in the following section.

4.2 The ungovernable capital-city? Increased competition and small-scale innovations (1978-1997)

In the capital city region, the urban transport agenda emerged at both the national and the municipal levels. Nevertheless, this had a limited impact on transport policy developments in the capital-city region in the absence of strong forms of regional and urban governance. It should be noted, however, that transport policy objectives remained stable throughout this second sequence as successive planning documents reiterated the policy priorities that had been defined in the late 1950s. Unlike the situation observed in other large urban areas in France, the decentralization agenda followed a different scope and rhythm in the capital-city region. In the transport policy domain, this particularly benefited large transport organizations and bureaucracies, whose interests remained in line with the objectives designed as part of the modernising agenda and primarily focused on developing high-capacity transport infrastructures. The largest share of transport investments and funding is allocated to these projects.

By contrast, the development of alternative transport policy initiatives – mostly at the local level – results from strategically tapping into the resources made available in other policy domains such as decentralization reforms, environmental protection and urban regeneration. More fundamentally, these policy initiatives advocated the development of an urban-specific transportation agenda that would address rising urban mobility issues.

During this period, contrasted types of transport policy measures were introduced in the capital-city region:

1. Infrastructure investment in rapid transit systems that is, both roads - extending the motorway network – and in public transport - extending the RER and the metro networks.
2. Policy measures aiming at mitigating the role of the car and in support of public transport:
   - Traffic calming measures, parking management, bus lanes and cycling routes
   - Urban tramway systems
   - New funding sources, new tariff structure

4.2.1 Addressing the specificity of urban transport

As a follow up to the late 1960s' social and urban movements, some state elites, urban planners and transport experts recognized the need to address the negative externalities of national transport policy objectives and programmes. This included two series of policy initiatives. First, the specificity of urban transport was acknowledged in the context of the decentralization agenda and justified the development of new policy resources at national level in order to support policy developments across a number of cities outside the capital-city region. Second, traffic mitigation measures were developed by the National Road Directorate in order to address concerns related to road safety and congestion in large urban areas. Together, these developments contributed to the strengthening the urban dimension of transport resulting into the shift from transport towards urban mobility (see D4.1 report) and to the invention of a new policy domain at national level, which held different characteristics than those observed in the transport sector.

The invention of a new policy domain at national level.

Following the adoption of the versement transport and in view of the growing number of transport initiatives in large medium-sized cities in France, some state elites and organisations recognized the need to foster the development of new transport solutions better fitted for dense urban areas as well as the emergence of national champions that would ensure their promotion by channelling local authorities' increased investment capacity. Evolving spatial planning policy objectives and pressure from elected representatives outside the capital-city region also contributed to the development of an urban transport policy framework, which primarily benefited large medium-sized cities. This changed approach was particularly fruitful outside the capital-city region as decentralization reforms opened additional opportunities for local authorities to shape transport initiatives pertaining to the modernizing paradigm.

Even though a larger share of funding was made available at national level for public transport initiatives in urban areas[100], little interest was found among major transport companies to develop alternative transport systems. In order to foster the emergence of new technologies, the transport Ministry chose to organise a public competition (Concours Cavaillé, 1975) that would reward the invention of a novel urban transport mode; that is, a transport mode that would be guided, using electric power and able to circulate on roads[101]. Two different proposals were eventually selected to be developed: the "standard urban tramway" model (Tramway Citadis), which was developed by Alstom in 1980 and introduced in Nantes in 1985 on the one hand, and a light rail metro model, developed by Matra (formerly Lagardère Group and Siemens Transportation Systems) and introduced in Lille in 1983.

In the context of the rising urban transport agenda, the arrival of a younger generation of traffic planners and engineers also led to some adjustments in national transport policy tools and techniques in order to better address the specificity of urban transport. To begin with, some changes were brought to those policy tools and techniques pertaining to the production of information and knowledge about transport demand. During the post-WWII period, transport engineers and traffic planners working in national administrations and their technical studies units had drawn on policy tools and traffic modelling techniques imported from the United-States, and favoured the use of generic analysis tools that could applied throughout the national territory (Debizet, 2011). Economic appraisal techniques, such as cost-benefit analysis, feasibility and impact assessment studies, business cases etc. mainly drew on quantitative analysis. But from the 1970s onwards, a new series of policy tools and methods were developed at national level in order to support the development of urban transport planning and policies and to foster a certain level of standardization among local authorities and transport companies (Mazoyer, 2011)[102]. In addition, a national household survey was introduced in 1976 in order to produce knowledge about transport behaviours across large cities[103] and to understand the modal shift structure by collecting data about urban movements, namely, their origin, final destination and reason. Drawing on a standardized methodology and techniques imported from the United States, the national household survey primarily sought at collecting quantitative data about transport behaviours and their evolution in time. Indeed, the household survey was done every 10 years under the leadership of the Transport Ministry and its regional technical services.

Finally, some transport experts advocated, from the earliest stage, a focus on "how" people travelled taking into account the qualitative dimension of transport patterns and behaviours,[104]. This included moving away from an individual-centred approach in order to include additional categories that would help putting these transport behaviours back into a broader spatial and social context. In the capital-city region, Jean-Pierre Orfeuil progressively emerged as a leading transport expert in the region and played a pivotal role in advising regional stakeholders (IAU, STP then STIF, the region) on complementary needs in terms of data production and alternative ways to analyse it.

Together, these initiatives contributed to the accumulation of knowledge and expertise about urban transportation at national level.

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[100] This tendency is visible from the 6th Plan onwards, in which the maximum threshold for investments in public transport is set higher than that for road infrastructures, with respectively 6,7 billion francs against 5,8 billion francs. Nevertheless, road investments were allocated to the development of new infrastructure whereas public transport investments primarily aimed at improving the existing network.

[101] See the catalog edited by IAU on the occasion of the exhibition "Tramway, une école française" (IAU, 2014). Available at: https://www.iau-idf.fr/fileadmin/NewEtudes/Etude_1062/tramwayWeb2014.pdf

[102] In a circular published in 1973, the transport Ministry states that "Above all, it is essential to avoid the need for each city to reinvent a new forecasting method. Therefore, we need to develop models as universal as possible, which only entails limited possibilities to include context-specific parameters". (IAU, 2014)

[103] As the possibility to introduce the versement transport was later extended to smaller municipalities (Gallez 2010), the household survey was also extended to medium-sized cities (EDVM) and peri-urban areas (EDGT).

[104] Interview Orfeuil, 16/04/2015.

Traffic mitigation measures as a way to ensure road safety

In parallel to the rising urban transportation agenda, traffic mitigation measures were also being introduced in national road policies under the leadership of the roads directorate and with the support of local state representatives at the implementation stage (Spenlehauer, Hamelin 2008). More specifically, two types of measures were introduced across levels of government as part of the growing concern for road safety issues. First, this concerned policies aiming at raising awareness among car-drivers, the wider public and local authorities such as the campaigns launched in 1982 ("Réagir") and 1983 ("Objectif moins 10 %") by the Ministry of Public Works[105], or the program launched by CETUR[106] in 1984 about "Safer City, neighbourhoods without accidents"[107] that provided guidelines for the experimentation of new traffic calming measures by local authorities. On the other hand, some policies aiming at reducing speed on the network were introduced at the national level: tighter speed limitations were introduced in the Highway Code (*Code de la route*) such as a 50 km/h speed limit, and 30 km/h zones.

In the capital-city region, as in other cities in France, few local authorities implemented these measures and those that did mainly centered on road safety aspects and rarely favoured a restrictive approach to traffic calming. Speed bumps were used as the main enforcement measure and they were introduced on selected segments of the road network. All in all, these initiatives were not introduced as part of an integrated approach to car use reduction and lacked consistency in terms of their location within urban areas as well as in terms of being coordinated with other traffic mitigating initiatives.

Some interest in cycling policies also emerged during this period and closely related to the traffic mitigating agenda due to safety issues. At national level, the State invested in a first generation of cycle paths and lanes. However, following the 1982 decentralization laws, responsibility over road management was transferred to the *Département*s, which lacked, at the time, both the manpower and financial capacity to develop a proper cycling network. Over time, these initiatives contributed to initiating a change in representations about traffic speed and to increased awareness and knowledge among those local authorities wishing to develop alternative policy solutions at the margins.

All in all, these initiatives only had a limited impact on transport policy developments in the capital-city region due, on the one hand, to the state and its representatives' reluctance to devolve additional powers to local authorities, and to the policy choices of local authorities themselves.

4.2.2 Business as usual and the politics of transport in the capital-city region

In spite of the emergence, at national level, of an urban transport agenda and of rising concerns for safety issues, transport policy objectives in the capital-city region – as defined in state-region contract plans and the 1972 SDAU – still followed the principles laid down during the post-WWII period as part of the modernising agenda. Such stability was mainly due to the pivotal role held by State elites in transport policy-making and implementation in the region. Updated funding priorities were defined at State level and managed by its representatives (*préfets*) in the region, whereas elected representatives nominally executed these decisions.

The analysis of transport politics accounts for such levels of stability in the capital-city region. This is done by looking successively at RATP-SNCF rivalry and municipal competition.

Growing RATP-SNCF rivalry and its impact on transport policy developments.

Unlike the situation observed in other large urban areas, transport planning and policies retained some level of continuity in the capital-city region due to the role of State elites and organizations. The State reluctantly devolved authority to municipal and regional authorities in the region. In spite of the 1976 and the 1986

[105] Ministère de l'Équipement

[106] The CETUR is a center for studies on networks, transport, urban planning and public works (CETUR) under the auspices of the Ministry of Ecology. Since January 1st, 2014, it has been replaced by the CEREMA.

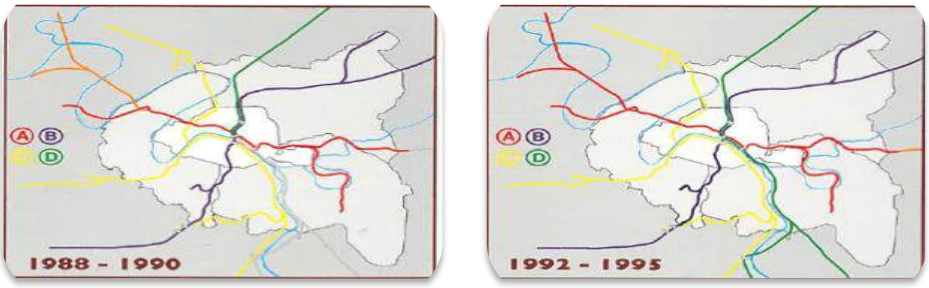
[107] Ville plus sûre, quartiers sans accidents

regionalization reforms, State administrative elites, affiliated with RATP and SNCF as well as successive Prime Ministers' cabinets, retained the upper hand while stymying development of alternative policy proposals and plans by subnational levels of government.

State representatives appointed the regional executive, nominated half of the regional public transport authority's members and decided upon levels of investment and their allocation within the region and between transport modes. Indeed, SNCF and RATP increasingly prioritised direct relationships with the State in order to shape transport policy priorities, thus contributing to limit STP's role as a policy-making arena[108]. The dismantling of the District of Paris further contributed to nationalizing policy-making processes in transport, thus contributing, on the one hand, to reducing formal opportunities for local authorities to channel their demands and on the other hand, increasing both SNCF's and RATP's ability to bypass local demands. In the absence of a single public transport organizing authority at regional level, RATP and SNCF exerted a *de facto* monopoly on transport expertise in the region and played a critical role in developing local transport and mobility plans. Insofar as competition between local authorities prevailed, transport policy choices were shaped by resource-seeking strategies. In this context, political parties – through the possibility for local representatives to hold multiple mandates – and workers' unions played a critical role in channelling local demands and ensuring their representation at State level.

In this context, infrastructure and network developments were primarily shaped by continued rivalry between RATP and SNCF who jockeyed to lead regional rail-based transport provision and aggressively competed for new infrastructure projects to the detriment of system efficiency. Each of them focused on extending their respective rail-based networks in the region, with a specific interest on connecting existing and new railway lines in Paris. RATP favoured a technologically-led approach in order to extend the metro network. In the meantime, SNCF self-promoted itself as a transport service provider in the suburbs and operator of a growing regional rail network. During the 1980s, some 16 extensions were brought to the metro system in order to serve the areas located on both sides of the Boulevard périphérique as well as adjacent municipalities, the Business district of La Défense, or some Villes nouvelles. By the early 1990s, the RER network took shape. Most of the public transport investments planned in the 1960s were in their final phases of implementation (see Map 7b).

Map 7b: The extension of the RER network (Phase 2, 1988-1995).



1988-1990: line E (purple) 1992-1995

NB: New lines are represented in orange in the above maps. Source: IAU

RATP-SNCF competition also fuelled construction of a large tunnel, which only worsened traffic and delays around the Châtelet-Les Halles Station, in place of an orbital ring road around Paris that would have relieved traffic on radial routes. The opening of the tunnel allowed extending the RER B line northwards, towards the Charles de Gaulle airport. Over time, a somewhat coherent regional railway network emerged: the number of "interconnected" trains rose from only 12 in 1983 to 16 in 1985 and 20 in 1987. During the second phase of the

[108] As part of the systematic press review, we found a number of press articles highlighted the STP's weakness ("une simple chambre d'enregistrement") in shaping transport policy priorities that were designed in national administrations under the influence of RATP and SNCF's research and development departments. See Sciences Po library's collection of press clippings about "RATP" and "SNCF". http://www.sciencespo.fr/bibliotheque/fr/nous-connaitre/nos-collections/dossiers-de-presse

RER network's development, SNCF was allowed to develop its own RER routes, namely lines C (1979) and D (1995): the originally planned H-shaped network was definitely abandoned as a result. Meanwhile, this large rail-based network faced with several crises such as the earlier-than-anticipated congestion of the RER A line in 1985 (Gaillard 1991; Merlin 2005)[109].

The "Météor-Eole debacle as a final blow to state-led regional governance?

In order to solve this problem, SNCF and RATP proposed separate technical solutions for new rapid-transit capacity: SNCF championed a rail-based solution – Eole - while the RATP favoured an automated metro line – Meteor – with the support of the city of Paris. Both projects were eventually adopted in 1989 under Prime Minister Rocard (Socialist Party, 1988-1991), leading to the construction of the RER E line by SNCF, and the metro line 14 by the RATP. In close relationship with these two rail infrastructure projects, Prime Minister Rocard also initiated a major revision of regional spatial planning objectives under the leadership of the State. The capital region's centrality as a national and European transport hub was reasserted in the 1994 SDRIF.

By re-enacting the modernizing agenda, mass transportation solutions and large-scale infrastructure projects were considered an opportunity to highlight the attractiveness of the capital-city region and to showcase the know-how of French companies through the development of a selected number of flagship projects. Nevertheless, the elaboration of the 1994 Strategic regional planning document (SDRIF) also made visible the strong dependence from central government and State bureaucrats to the solutions put forward by technical elites in close cooperation with RATP and SNCF in the case of rail-based infrastructures, or with the construction industry in the case of motorways, throughout the policy process. Adopting the Eole and the Météor projects also required the construction of another independent and underground tunnel in the centre of Paris connecting to RER D in order for to ensure sufficient capacity for traffic expansion[110]. Moreover, with a total cost of over 15 billion Francs (approx. € 2.9 billion), over 10 years of future funding dedicated to public transport would be spent on these three large-scale infrastructure projects so as to divert resources from network maintenance and integrated transport planning in the wider region[111]. The outcome was chronic underinvestment in public transport, sluggish development and lacking reliability of the RER, and an ageing suburban train system (Carrez, 2009; Goldberg 2012).

Moreover, the decision to adopt RATP's project was particularly controversial as it favoured the city of Paris vis-à-vis alternative solutions in the suburbs, to the detriment of an alternative solution championed by local authorities from the inner suburbs in favour of an orbital ring road around Paris. This option, which was already included in the 1965 SDAU but had never been implemented, would have relieved traffic on radial routes and helped address rapidly rising transport demand in the suburbs. All in all, this choice highlighted the city of Paris' growing role within the STP and its ability to develop multiple influence-seeking strategies (RATP management, the State, etc.) in order to influence the selection of transport infrastructure projects in the region. In addition, close connections between RATP's top management and Prime Minister Rocard, as well as the need to grant RATP with a large flagship project in a context of a contested managerial reform, are regularly mentioned as the main explanation for this political decision to support both the Eole and the Météor projects.

Yet apart from these flagship infrastructure projects, auto-centric urban development and sprawl played a growing role in a context in which local public transport was considered less of a priority by RATP and SNCF.

The car as a dominant transport mode in the region.

Although much attention was given to the developments underway on the RER network, the car remained a dominant transport mode in the region and in the city of Paris.

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[109] This was particularly the case of the segment located between the Gare de Lyon and Gare Saint Lazare stations.

[110] The press was particularly critical of the choices made at that time. The left-wing newspaper Libération declared "With the money from Météor (fast east-west subway), we could almost have developed a light rail system around the suburb" (15/10/1998).

[111] 7 billion Francs were spent on Météor (approx. €1.3 billion), 8,12 billion on the Eole project (approx. €1.55 billion). Additional projects included the extension of the RER D line, some renovation of the RER network and the slow extension of some metro lines in communes next to Paris.

Transport was merely considered a problem of traffic planning by the first elected Mayor of Paris, Jacques Chirac (1977-1995). More interested in cultural flagship projects that rivalled those of President Mitterrand (Urfalino 1994), he did not considered transport a domain in which urban authorities could develop their own thinking due to their limited resources. In addition, as he still had to negotiate issues of traffic congestion and road capacity expansion with state elites in the regional administrations and organization of public transport services with the RATP, he chose to challenge national authorities over other policy issues.

Nevertheless, Mayor Chirac's choices had long-term unintended impacts on transport policy developments in the city of Paris. First, most of his transport policies combined parking management and planning tools as a way to accommodate the development of bus lanes (since 1975) while at the same time maintaining a similar amount of road space for car traffic. Between 1977 and 2015, the city's successive Local Urban Plans (PLU) required from real-estate developers that a minimum of one parking space should be built for 100 m^2 of housing. By fully exerting its licensing authority, Mayor Chirac accelerated the dismantling of on-street parking spaces and supported the development of underground parking spaces through concessionary rights. Throughout his successive terms as mayor, this was considered the city's preferred strategy to support car traffic at minimum costs and it would later serve the interests of those advocating the reduction of road space for car traffic[112]. Second, some attempts were made in order to develop cycling. The accident of the cycling advocate Jacques Essel – he was hit by a car in 1982 – led the newly elected mayor Jacques Chirac to introduce a plan of some 80 km of "courtesy corridors" for cyclists. At that time, however, the municipality was not willing to take road space away from car traffic in order to reallocate it to alternative transport modes and some resistances from within the city administration hindered the plan's implementation. In addition, bus operators strongly opposed the idea of opening bus lanes to cyclists. Bus lanes were considered a hard-fought achievement and cyclists as a hindrance to their operation. In an attempt to reconcile these conflicting goals and interests, the city of Paris decided to place the "courtesy corridors" between bus and car traffic lanes. These lanes were soon renamed "corridors of death" and cycling was considered extremely dangerous. In this context, cycling initiatives were brought to an end and considered a political taboo for another 15 years.

Outside the city of Paris, a large share of transport policy objectives and investments were concentrated on developing and improving road networks, as stipulated in the first generation of State-Ile-de-France Region Contract Plans (Contrats de Plan). This is first explained by the allocation of substantial shares of national spending in road infrastructures between 1975 and 2004. This increase primarily benefited the construction of circular motorways and expressways in order to reduce congestion in Paris, by contrast to secondary road networks. Moreover, in a context of reduced public funding capacity, the effective amount of spending in road infrastructure developments in the region decreased steadily.

A number of private-led initiatives, such as the LASER[113] and the HYSOPE[114] projects, were jointly developed by the construction industry and real-estate developers in order to promote underground rapid transit road infrastructures. Building on the knowledge that had been acquired during the planning and development of the RER network, a 50-years-old idea of developing a regional rapid-transit underground motorway network was brought forward by the Grand Travaux de Marseille company (now part of Vinci construction) or so-called LASER project (Dufaut 2007). The city of Paris eventually rejected the idea under the pressure of environmental groups (see picture below), but more fundamentally, of a strong level of opposition to the project among Mayor Chirac and the Conservative Party's electorate insofar as it would increase incoming traffic and visitors from the suburbs.

This policy solution was later introduced on a case-by-case basis for future motorway segments in the capital-city region, such as in Neuilly-sur-Seine or in the case of the A86 between Rueil and Versailles. In such cases, these costly investments primarily took place in the wealthiest neighborhoods of Paris and the western inner-suburbs with the support of the Conservative majority and were justified in the name of speeding traffic, road safety and anti-noise measures. In addition to their cost and technical flaws, these private-led initiatives were also denounced as representative of strong levels of interests' collusion between real-estate developers, the construction industry and local political representatives in the capital-city region.

[112] Interview City of Paris 1, June 2015.

[113] Liaison automobile souterraine express régionale

[114] Name of a plant that favours the decongestion of the respiratory system. It was jointly developed by the construction firm Bouygues and SPIE Batignolles, also based in Neuilly sur Seine, in the Hauts-de-Seine département.

Picture 1. Call to protest against the LASER project

Source: Amis de la terre

The widening gap between transport planning and transport demand

The slow dismantling of regional coordination capacity around spatial planning led to increased competition between municipalities in the capital-city region and accelerated low-density urbanization and urban sprawl (Desjardins, Drevelle 2014). As automobile dependence increased in the region, a large share of transport policy objectives and investments concentrated on developing and improving high-speed road networks in and outside Paris. As observed in the case of public transport infrastructure, and in this case due to the national Road Directorate's preferences, the largest share of capital investments was concentrated in large flagship projects to the detriment of the secondary road network[115].

In spite of shifting policy objectives, transport investment and policy measures continuously prioritized the need to develop additional road capacity throughout the region. But even though the region maintained high levels of investment in road infrastructures, the State's overall and effective contribution to capital investment in the region decreased steadily[116]. The first generation of State-Ile-de-France Region Contract Plans (Contrats de Plan) and the 1994 SDRIF confirmed the pivotal role of the car as a dominant transport mode outside Paris. Expressing a clear preference for high capacity at the expense of the secondary road network, the powerful National Road Directorate secured funding as part of the 1994 SDRIF to develop several ring roads in the inner and outer suburbs. In doing so, it drew on some of the projects that had been abandoned or suspended during the 1970s. Reports published by the State administration and their local representatives regularly highlighted the need to reduce congestion, and measured its progression over time by looking at a distance/speed ratio[117]. Until the late 1980s, these reports argued congestion was mainly due to increasing transport demand alongside main radial routes and all recommended increasing road capacity in order to ensure accessibility towards Paris. By contrast, towards the end of the 1980s and throughout the 1990s, most reports highlighted the need to reduce congestion on ring-roads and to develop additional road capacity outside Paris in order to address the growing within-suburbs traffic demand.

In this context, private-led initiatives particularly appealed to local elected representatives in the region. Two infrastructure projects are particularly representative of the rapid evolution taking place during the 1990s: the ICARE project, whose development was advocated by the Conservative majority in the region, and the MUSE project, in the Hauts-de-Seine département. Similarly to previous transport infrastructures in the region, the ICARE was promoted by the construction industry and motorway concessionaires. It sought to develop a 150 km long and 50 m deep underground ringroad that would connect major infrastructures in the region (e.g., Charles de Gaulle airport), business districts (La Défense) and some Villes nouvelles (e.g., Marne-la-Vallée) (Marchand 1993).

[115] SNCF led a similar strategy in the development of the railway network: priority was given to the development of high speed as opposed to regional and intercity lines (see section 4.5 below).

[116] In his book, Marchand (1993) suggests they have been divided by two between 1975 and 1994.

[117] Such as the Ile-de-France White Book which was published in 1990 in preparation of the 1994 SDRIF *Livre blanc de l'Ile de France*, 1990.

The MUSE project[118] drew on the experience gathered by the construction and the banking industries during the construction of the Channel Tunnel. It sought to increase rapid transit systems in this wealthy suburban department through the development of a 5,5-km tunnel between Clamart and Paris. By accommodating the development of both an urban motorway and a light rail system, this large infrastructure would increase accessibility from Orly airport and La Defense Business district to the city of Paris. This private-led initiative was formally adopted in 1991 by the leader of the local Conservative majority, Charles Pasqua (RPR), but without the support from the State: more than €300 million were spent in preliminary studies. Dissensions within the Conservative party offered new opportunities for the left-green opposition to propose alternative solutions in order to increase accessibility in these western inner suburbs. In a context of rising suspicions – and proven cases – of corruption in the Conservative majority in the capital-city region, this infrastructure project was considered particularly representative of interests' collusion between local elected representatives and the building industry in the capital-city region (François, Sauger, 2004; Lascoumes, 2009) and led to the opening of an enquiry for favouritism in 1999[119]. Following the arrival of the Left-Green majority at national level in 1997, the State eventually rejected this infrastructure scheme.

Concluding remarks

Unlike the situation observed outside the Capital-city region, successive decentralization reforms proved unable to foster a changed approach to urban transportation. For many observers within and outside the state administration, the "Météor-Eole debacle" and the national road directory's dominant role signalled weakening political leadership and institutional dysfunction in the capital-city region. In this context of political contention and dissonance among state elites and organizations, an air pollution crisis and major strikes in the public sector fostered the articulation of suburban municipal interests and facilitated policy experimentation, as with urban tramway development.

4.2.3 Innovative transport solutions at the local level: new issues, new players

Air pollution peaks and a major strike in the transport sector unexpectedly opened new opportunities to challenge transport policy developments in the capital-city region. New players across levels of government, including a new generation of political leaders, opposition parties, urban planning and health professionals, civil society organizations, and citizens, challenged existing transport policies to reframe transport as an urban policy priority. Paradoxically, in a context in which spatial planning objectives, investment priorities and dominant forms of transport policy-making favoured large-scale rapid transit infrastructures, these initiatives were developed at the margins or outside the traditional confines of State elites, by strategically tapping into policy resources made available in the environment and the urban regeneration policy domains. Outside Paris, it was only in those cities in which strong political support in favour of traffic mitigation policies was found that some continued efforts were introduced in order to develop strong alternatives to auto-centric urban development and sprawl.

In this context, transport issues were increasingly politicized: first, they attracted increased attention from political parties across levels of government and regularly emerged on the local and the regional political agendas in the capital-city region, second, they contributed to redefining the role attributed to transport in urban development from a traffic planning perspective towards an urban development perspective, and third, by championing mobility and transport as an urban issue, mayors and local elected representatives increasingly challenged standardized transport policy solutions.

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[118] MUSE (Maille urbaine souterraine express). In the context of the 1995 presidential campaign and due to the division of the Conservative Party, the controversy over the MUSE project received sustained attention from the national media. See for example the articles published by Les Echos, Le Parisien and Libération about the MUSE project.

[119] See the 1999 report by the Regional Chamber of Accounts, highlighting the lack of competition in the tendering process as well as the lack of financial and political control over spending (CRC IDF, 1999). The role of the local mixed economic company (sociétés d'économie mixte) – SEM 92 in this case – was repeatedly highlighted.

The northern inner suburbs take the lead: the Tram'vert project

Outside Paris, political authorities and parties answered to working and lower middle class majorities that were overwhelmingly affected by the ageing and insufficient transport network, some of whom actively responded with public mobilizations over the poor quality of suburban train services. Municipalities had gained new responsibilities in land-use and transport planning following successive decentralization reforms. Following the introduction of new environmental regulations and decentralization reforms at national level[120], proposed transport developments were required to better assess their socio-economic impact as well as their impact on the built environment. In reaction to their lack of influence over transport policy-making in the region, municipalities increasingly used these new powers in order to delay or veto the implementation of new projects (e.g., roads and highways, new bus lines, etc.). In the inner-suburbs area, local authorities alternatively lobbied SNCF or RATP in order to develop urban tramway projects and extend the regional rail and the metro networks (Heurgon, 1998). By contrast, local authorities in the outer suburbs invested their own resources in completing and extending the road network.

In the northern suburbs in particular, the Socialist, Communist and Green Parties each picked up the issue of transportation to denounce growing inequalities within the wider region, cast blame on the Conservative majority in the region, and strengthen their respective positions. Together with départements, municipalities started acting as second level transport authorities in order to compensate for the lack of investment and projects outside the city of Paris. These claims had been on the political agenda since the early 1980s, with Socialist and Communist mayors from the northeastern Seine Saint-Denis département lobbying the State, the region, and RATP for large-scale public transport infrastructure developments. During preparations for the 1998 World Cup, including the location of the future national stadium in Saint Denis, these claims gained new momentum and the decision was made to build the capital-city-region's first urban tramway line.

The "Green tram" project (Tram'Vert) or T1 tramway line between the cities of Bobigny and La Courneuve opened in 1992. Although RATP had initially resisted the project, its later support should be understood as a reaction to growing criticisms against the priority given to projects located in the city of Paris, including the Météor project. As Christian Blanc, RATP's CEO (1989 – 1992), was trying to introduce a profound managerial reform in this state-owned enterprise[121], he grew interested in alternative technologies and projects that would support the work of the newly created International Division in disseminating urban transportation solutions worldwide. The growing success of urban tramways in cities outside the capital-city region reflected pressure from the manufacturing industry (Alstom) and funding made available at national level for over-ground rail-based transport systems located in large cities' deprived areas. The Tram'Vert project was indeed considered a transport initiative as much as an urban renaissance flagship project. It was designed by star architect Paul Chemotov as a symbol of the northern suburbs' revival and benefited from funding made available as part of the national programme for urban renewal beginning in the early 1990s (Desjardins et al., 2014; Hall 2015). It combined significant landscaping measures, the use of high-quality materials and the opening of a green corridor alongside the tracks (see Picture 2).

Picture 2. The urban tramway as an urban renaissance flagship project

Source: RATP, 2016

Following RATP's decision to support an urban tramway project, SNCF developed its own approach to urban tramway development, which prioritized speed and reusing existing rail track. This approach prevailed

[120] Notably the 1992 decentralization laws and the 1996 LAURE law, see section 2.

[121] This included decentralizing management processes, a shift from a user- towards a customer-oriented service. Blanc eventually failed due to the government's lack of support on measures aiming at ensuring continuity of service on the subway in the event of a strike.

during the development the second urban tramway line (T2) between La Défense and Issy-les-Moulineaux -Département des Hauts-de-Seine, in the south and west of Paris, which opened in 1997. Both projects met with immediate success and several line extensions were built during the 2000s.

The 1995 General strike as a catalyst for transport policy change in the region.

The 1995 General Strike is considered another outgrowth of statist governance failure and helped catalyze a paradigm shift away from automobility in large city-regions in France, including the capital-city region. With the start of the Chirac presidency, the new Prime Minister, Alain Juppé (1995-1997) announced a raft of welfare cutbacks, including public sector pay freezes with the stated aim of reducing the rising budget deficit and a retirement reform plan in the SNCF. Public sector unions organized a series of national strikes from October, with demonstrations in some 80 cities across the country. It peaked during 4 long weeks between November 15 and December 1995, when transportation workers across the country where called on strike. Most modes of transport for commuters were shut down and, RATP and SNCF networks came to a near halt in the capital-city region before Prime Minister Juppé abandoned much of the retirement reform plan while other welfare cutbacks were maintained.

With the public transport network paralyzed for three weeks in December, users spontaneously turned to cycling and car sharing *en masse*. Hence, the strike unexpectedly demonstrated to policymakers across levels of government that transport alternatives existed and should be encouraged across the region. The Regional Council put out a specific grant for financing additional public transport investments and developed its own Plan for Soft Mobility (May 1996).[122] Beyond these crisis events, local authorities highlighted the limited impact of decentralization reforms in the capital-city region as the regional council and local authorities outside Paris had few opportunities to shape the policy process and called for an alternative governance system in transport. Tensions in state-local relationships were made visible as many local elected representatives in the Ile-de-France region criticized continued leadership of the state over spatial planning in the region and the preference given to the city of Paris. In transport, these criticisms also denounced the preference given to new, high capacity infrastructure, as opposed to investment in local public transport services in the suburbs. In addition to institutional tensions between levels of government, political tensions between Conservative and Centrist Parties on the one hand, and the growing Left-Green opposition on the other hand, contributed to further politicizing transport issues with the support of local anti-road initiatives.

In this context, air pollution peaks in the city of Paris were seized upon as an opportunity by new political forces in the city of Paris to promote alternative urban transportation initiatives.

Air pollution peaks as catalyst for change in urban transport

Air pollution peaks accelerated the search for new transport policy solutions in the city of Paris and at the National level. The rising frequency of ozone alerts in Paris and other French cities led to renewed protests over air pollution in particularly badly hit areas and heightened public awareness and concern over air quality[123]. National debates preceding the LAURE Law (1996, see Annex 2) ushered in new policy evidence and expertise, accentuating the profile of urban pollution (Boutaric et Lascoumes 2008). Organized networks of public health professionals, urban planners, and proponents of non-motorized transportation drew research and discursive linkages across their respective policy domains to spark public debates about air pollution. In the capital city region, these networks were led by AirParif, a non-profit organization accredited by the Ministry of Environment since 1979 which monitored air quality in the region and the city of Paris. The knowledge gained as part of their contribution to European and national debates about air quality legislation contributed to strengthen this organization's expertise and to the development of new methodologies and techniques to assess the impact of mitigation measures, and to inform authorities and the wider public. Moreover, the LAURE Law introduced a

[122] This laid the groundwork for a regional cycling policy, which would come to fruition after 1998.

[123] Since the 1996 LAURE Law (see Annex 2), the status and role of AirParif was considerably enhanced and its board gathered a large number of stakeholders, including environmental non-governmental organizations and consumers' groups. As of now, it draws upon a € 7 million annual budget and 50 employees in order to assess the role of some 60 pollutants, control air quality measurements, and produce daily forecasts. See also annual reports, available online since 1998: https://www.airparif.asso.fr/publications/

number of obligations and policy resources – knowledge and information, policy tools, policy measures – across policy domains (transport, energy, agriculture, etc.) in support of anti-air pollution initiatives.

Harnessing these policy resources, the Green Party blamed the automobile as the main source of air and noise pollution in Paris and challenged the Conservative majority in council sessions throughout Mayor Chirac's last term (1989-1995) (Boutaric 1997)[124]. Among his traditional electorate as well, car traffic was increasingly considered as a source of degradation to the urban environment. The Chirac administration avoided blame by pointing to the responsibilities of the State and State-owned organizations like RATP in delaying the construction of the new metro and RER lines in Paris. State representatives (Préfet de police) were also blamed for limiting themselves to symbolic measures, such as the creation of a task force on air pollution and traffic bans, with little to no impact on policy measures to effectively restrict car use or reduce emissions.[125] During unusually high pollution peaks in June 1995, State representatives exhorted residents to use alternatives to the automobile until the end of the crisis.

Following Chirac's election as President, Mayor Tiberi – also from the Conservative Party – publicly announced the new administration's commitment to preventing pollution peaks in the future, in part through sustainable transport measures designed to reduce automobile traffic by 5-10 per cent. Seeking to differentiate himself from his predecessor's policy platform (Zittoun 2013), he broke with State representatives in rejecting coercive measures such as congestion tolls and traffic bans, instead promoting alternatives to car use, including bikeway planning, bus and taxi-only lanes, car-free initiatives, sidewalk improvements, and urban tramway development. Actual policy and program achievements by the Tiberi administration were limited in scale, but they are considered a first step towards the emergence of an urban-centric approach to transport policy developments.

Following recommendations made by the Environment Ministry at national level, car-free initiatives were selectively introduced by Mayor Tiberi's administration as part of their efforts to reduce air pollution. The "Promenade et détente" initiative was first introduced from 1995 onwards on Sundays from 7am-5pm in a small area located in Mayor Tiberi's constituency (5th, secteur Mouffetard). It was later extended as "Paris Piétons Vélos" to those areas alongside the Seine river (voies sur berges) and northern waterways (quartier Jemmapes)[126], including a weekly traffic ban on the Pompidou expressway alongside the Seine River during the summer months.

In addition to car-free initiatives, Mayor Tiberi also introduced policy initiatives aiming at reducing speed onto the road network. The "Quartiers tranquilles" initiative had been introduced in 1990 under Mayor Chirac's administration with little efforts to implement it. By contrast, Mayor Tiberi drew on the funding made available at national level as part of the LAURE Law and the 2000 Regional mobility plan (PDUIF) in order to effectively implement this policy initiative between 1995 and 2001 in some 31 neighborhoods in Paris. With the support of city planners in the Paris Urban Planning Agency (*Atelier Parisien d'Urbanisme*–APUR), this policy initiative combined the reduction of the road space allocated to car traffic with the reduction of speed limit to 30 km/h (Zones 30). Among urban planners and the left-Green opposition, critics highlighted the need to expand and intensify this policy: designated areas covered, on average, some 20 ha, and their redevelopment did not include any revision of traffic plans by State representatives. It is estimated that the budget allocated to the "quartiers tranquilles" initiative amounts to € 0,56 million/neighborhood, that is some €29.000/ha (Bureau, Glachant, 2010). Nevertheless, this policy initiative was considered particularly innovative for two reasons: first, by drawing a clear distinction between transit traffic and local traffic, it designated the reduction of car traffic as way to contribute to "place-making"; and second, it drew primarily on urban planning tools and methods in order to redevelop these areas including the reduction of road space, including traffic slowdowns, the expansion of sidewalks, raising pedestrian crossings above the road level, developing cycling lanes etc.

Last but not least, Mayor Tiberi took everyone by surprise with a proposed urban tramway to be developed "in partnership with RATP and SNCF"[127]. A relative late mover on urban tramways both within the

[124] Rally for the Republic/Union for a Popular Movement/The Republicains (RPR/UMP/LR).

[125] In this case, Prime Minister Michel Rocard in close cooperation with the head of both RATP and SNCF.

[126] It then was It was eventually renamed "Paris respire" in 2003 in an attempt at streamlining these car-free initiatives and progressively extended from 7 to 15 areas.

[127] Mayor Tiberi, Press conference, July 23

country and the region, Paris sought to build on the efforts of other municipalities in the region, which had successfully lobbied the State, the region, and transport operators to construct two urban tramway lines. This project was especially fraught with tensions and challenges (Zittoun 2008; 2013) considering RATP and SNCF's historical reluctance to integrate urban tramways into their rail networks, and once overcome, their insistence on advancing separate technical solutions. Subsequently, the Tiberi administration proposed to extend the T2 line alongside the city's ring road (*Boulevard périphérique*), to partially remedy the lack of circular connections in the south of Paris. As done earlier with T2, SNCF recommended reusing existing tracks on the pre-1930s suburban rail-based network (*Petite ceinture*) on the basis of land availability, distance-speed ratio, and estimated cost.[128] Alternatively, RATP and city planners in the APUR proposed a completely new tramway line that would achieve deeper integration with urban public spaces, help rehabilitate neighbourhoods on the city's fringes, and reduce traffic congestion and air and noise pollution alongside one of the busiest roads in south Paris.[129] Despite its higher projected cost, the latter would ultimately prevail in a 2000 decision to build a 9-km long tramway line (T3a) across three districts of southern Paris.[130] More immediately, the Tiberi administration stopped short of opening the public inquiry procedure for the urban tramway extension, as prominent members of the Conservative Party opposed it in fear of electoral reprisal from political constituents.

All of the policies were developed on a small-scale basis and were slow to bear fruit, particularly in time for the next regional election in 1998 and municipal election in 2001. One factor was the Conservative Party's hesitancy to antagonize its traditional base. Another was the need to explore alternative funding sources as a large share of funding dedicated to transport in the region was already allocated to large-scale infrastructure projects. Partly due to divisions within the Conservative Party in Paris, Jean Tiberi lost the election to the Socialist candidate Bernard Delanoé, a former city councillor (since 1977) who campaigned on issues of social cohesion, green space, and public transport. Nonetheless, the Tiberi-era policies in combination with the changes taking place in the inner-suburbs laid the groundwork for more systematic efforts to promote sustainable urban mobility in a changed political and institutional context. They also contributed to the growing role of urban planners and urban planning policy tools and methods in transport policy developments in close cooperation with the changes underway at national level in the environmental and the urban regeneration policy domains. In Paris, APUR was particularly instrumental in providing the city of Paris with alternative expertise while in the case of the region, this was done by IAURIF and regional representatives from the environmental ministry.

During the second sequence in transport policy developments, decentralization reforms in combination with the strengthening of environmental policies increased the ability of local authorities to challenge the national transport policy framework by strategically tapping into alternative funding sources. A number of local grassroots initiatives opposed infrastructure-led transport policies and highlighted the need to address mobility issues in the region by developing local transport policy initiatives. Those conflicts were not spread homogenously in the region, but closely related to political divisions (Kuhlman, 2007) on the one hand, and to socio-economic resources – thus they were higher in Paris and in western inner-suburbs (Pham, Kirat 2008). Nevertheless, these initiatives developed outside the regional transport policy community eventually contributed to the emergence of an integrated urban transportation agenda in a new political context. This is further discussed in the next section, with a specific focus on major transport policy initiatives and the concrete way through which they were promoted across levels of government by the Left-Green majority.

4.3 Developing sustainable transport policies: political drivers and enhanced policy capacities (since 1997)

The emergence of an integrated approach to urban transportation is closely related to the growing use, in local transport projects, of street design initiatives and anti-pollution and -noise measures. It is observed in the context of profound political and institutional change across levels of government: the election of a Left-Green majority - including the Socialists, Greens, and Communists - at national level (Jospin Government, 1997-2002), and that of a similar political coalition at both the regional level (1998) and in Paris (2001).

[128] A 28 km/hour distance-speed ratio and a capacity of 17,000 passengers per hour. Estimated cost amounted to €270 million.

[129] Lower distance-speed ratio (15 to 20 km/hour) and capacity (10,500/12,500 passengers per hour). Estimated cost amounted to €320 million due to land acquisitions, additional stops and the transformation of existing road network.

[130] Concomitantly, SNCF was allowed to develop a new urban tramway line (T4) in the Seine Saint Denis Département in the north of Paris between Bobigny and Aulnay-sous-Bois, which opened in 2006.

The changed political context at national level indirectly supports the development of alternative transport solutions through major changes in procedures and regulations outside the transport sector (e.g., environment, planning, urban regeneration). Their impact on transport policy objectives and developments in the capital-city region were not immediate due to the resistance of state elites and organizations, or to their respective clienteles. Following a series of struggles, merging form of urban and regional governance further gained expression in a new generation of planning and contractual agreements. Some major differences can also be observed between the city of Paris and the region in both the rhythm and scope of transport policy changes.

4.3.1 Paris takes the lead: the city as the Left-Green majority's living lab for urban sustainable mobility.

With the 2001 election in Paris, the new Socialist Mayor, Bertrand Delanoé, assumed leadership over a ruling majority including various parties of the left but most importantly the Greens. This new coalition singled out transport as an instrumental issue to gain political visibility and assert leadership in urban governance. That the coalition won three consecutive elections and has governed Paris for 15 years has enabled the systematic development of transport innovations over time.[131] The new majority did, however, lack formal authority to draft a Mobility Plan until the 2004 Act (see Annex 2). In this context, it articulated a myriad of policy initiatives into a long-term agenda for change in the transport sector. In addition to political changes, previous decentralization reforms eventually bared fruit in the capital-city region too, in close relationship with the new majority's ability to strategically use every institutional venue in order to assert local authorities' powers throughout the policy process.

Transportation under the Left-Green alliance

While controversies over transport offered an opportunity for leftist parties to build an alliance and define a common political agenda, the issue varied in role and significance across parties. The Parisian Socialist Party long prioritized housing and urban renewal, with transport serving a more instrumental function. Over time, it accumulated policy knowledge and political resources to support an ambitious plan of social housing and urban renewal in working class and disadvantaged neighbourhoods along with expansion and regeneration of urban public spaces more generally. The party's interest in transport policies was initially limited to the urban tramway project as a major urban regeneration tool and means for forming an alliance with the Greens. Still their enthusiasm for transport issues exceeds that of the Communist Party, which has displayed a more ambiguous, if not openly hostile, position stemming from their close alignment with worker unions in the transport industry. Despite some inter-party agreement in supporting the urban tramway project, the Communists have opposed taking away road space from car traffic and bus lanes in order to promote cycling and enhance public spaces.

Contrastingly, the Greens have held transport as their top policy issue since their first municipal campaign in 1989. In Paris, the party draws its base from social movements, pro-cycling organizations, and neighbourhood-based organizations. Among prominent Green Party members, Denis Baupin has been central to the creation of an informal network of transport and urban planning professionals and experts, engineers, and civil servants across local, national, and EU levels of government and public, private and voluntary sectors committed to alternative approaches, which he helped build in the course of his extended political career.[132] Baupin embodies a pragmatist approach to environmental protection and strategic use of transport and energy issues to strengthen the party's position at the municipal level. Through their growing political popularity and impressive electoral results, the Parisian Greens have negotiated coalition agreements with the Socialist and Communist Party to prioritize transport for municipal policy intervention (Pichon 2012). Not only has transport gained a large share of the municipal budget, Green Party members have received Deputy Mayor appointments - Denis Baupin for transport and Yves Contassot for environmental affairs.

In this context, the Delanoé administration set the foundations for an integrated approach to urban transport by tapping into public concerns about noise as well as national funds for urban regeneration programs to reduce car use through the introduction of traffic-calming measures and the development of pedestrian zones.

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[131] Delanoé was elected twice (2001-2014) and his Deputy Anne Hidalgo was elected Mayor in 2014.

[132] He worked as advisor to the ecologist group in European parliament, elected municipal councilor in Paris (1995-2001) and political advisor to Environment Minister Voynet (1997-2000),

"Give Paris back to its inhabitants": small-scale innovations in sustainable urban mobility

With Paris lacking formal authority to develop a Mobility Plan until several years into the Delanoé administration, the Left-Green coalition initiated a piecemeal approach of transforming urban public space as a way to reduce road space available for automobile traffic (Deroubaix and Leheis, 2011).[133] This was partly done by expanding on Tiberi-era policies such as temporary car-free zones and urban tramway planning. In 2002, the Delanoé administration extended the traffic ban on the Pompidou expressway alongside the Seine River through the entire summer and complemented it with small-scale, interim programs such as artificial beaches and seasonal leisure activities under the name "Paris Plage". The effort partly bridged the divide between the anti-car approach of the Green Deputy Mayor for Transport, Denis Baupin, and the social justice and liveability priorities of the Socialist Mayor Delanoé. Simultaneously testing and reinforcing the robustness of the political coalition, the initiative was not framed as a transport initiative but rather a component of the Delanoé administration's efforts to "give Paris back to its inhabitants," and more specifically to lower income groups. The Conservative Party, adjacent municipalities, and pro-car interest groups criticized Paris Plage because it considerably reduced car access to the riverbank. At the same time, the events gained higher attendance each summer and contributed to the city's worldwide reputation as a liveable city.[134]

Urban tramway expansion was another Tiberi-era transport initiative that the Delanoé administration transformed into a major flagship project. Picking up the project where the Tiberi administration left off, they initiated the public enquiry procedure (2003) while mitigating counter mobilizations through a series of *ad hoc* participatory mechanisms. Jointly leading the planning process, the Socialist and Green Parties strategically reframed the tramway project as an urban regeneration issue. This helped them form a new alliance with city planners in the APUR, whose enthusiasm for alternative transport policy and willingness to incorporate the urban tramway project into a larger urban renewal programme contrasted with the largely pro-car approach of the city's Traffic Department. Apart from effectively enlarging the scope of proponents and stakeholders, the decision also enabled the Left-Green coalition to access funding and tools for urban policy and planning across levels of government. In particular, the Transport Deputy Minister Baupin and the Greens used participatory devices and public debate procedures to heighten project visibility and mitigate opposition from local shop-owners, the Conservative Party, and adjacent municipalities.

While strengthening the transport-urban planning linkage in partnership with APUR, the Left-Green majority additionally sought to build cooperation with RATP, in part to integrate the latter's transport expertise in expanding public transport networks. In parallel to negotiations over the 2000-2003 network operating contract, RATP underwent a second wave of internal managerial reform[135]. Concomitantly acknowledging the growing role of local authorities in the funding and organization of transport, RATP opened local agencies across the region, including one in Paris in 2001, with high levels of autonomy to oversee daily management of the bus network and undertake bus and urban tramway expansions with local governments. Such internal restructuring on the part of RATP created a new incentive structure within the civil service bureaucracy that drew a new generation of highly skilled state elites to urban transportation projects.[136] In Paris, the local RATP agency brought together engineers sympathetic to the Left-Green sustainable urban mobility approach,[137] as well as unionized senior members of staff with previous experience in developing urban tramways in the region. Consequently, Baupin's cabinet and the Parisian RATP agency cooperated on small-scale public transport measures such as night bus services and a

[133] These contrast with solutions adopted in other CREATE cities: congestion pricing and other economic tools (London) parking management (Vienna), and emissions control schemes (Berlin).

[134] Interviews with Mobility Agency, May 2015 and City of Paris, Department for Transport, February 2016. See the report produced in 2015 by the Regional Chamber of Accounts on the Paris Plage initiative, https://www.ccomptes.fr/Publications/Publications/La-gestion-de-l-operation-Paris-Plages-Paris

[135] It began under CEO Bailly (1994-2002) and intensified after the arrival of CEO Idrac (2002-2006).

[136] This process culminated after 2010 with SNCF creating its own subsidiary Keolis and proclaiming itself an urban mobility service provider.

[137] In some cases, these pioneers were members of the Green Party themselves and had served as technical advisers to Dominique Voynet (Green Environmental Minister between 1997 and 2001) (Interviews with RATP representatives, May and June 2015).

bus rapid transit line until a more comprehensive transport plan could be developed. Once launched, the programs continued under the purview of city technicians and bureaucrats.

While accessing policy resources and tools associated with urban planning, the Parisian Greens also tapped into public concerns about quality of life and pollution. Prioritizing noise rather than the highly contentious issue of car use, the City built on existing measures by the City Administration for Environmental Affairs to reduce noise pollution by creating tools for locating, measuring, and monitoring noise as well as raising public awareness.[138] In contrast to the Préfecture's existing focus on nightlife as a major source of noise pollution, the Green Party Deputy Mayor of Environmental Affairs, Yves Contassot, problematized car traffic with the help of supporting data and evidence (Zittoun 2007). He further leveraged national funds made available by new legislation on urban regeneration to promote a comprehensive strategy against noise that included traffic calming measures and pedestrian zones. Traffic calming measures included policy initiatives aimed at allocating more space to alternative transport modes, such as right-of-way bus lanes, cycling paths[139] and walking. The Deputy Mayor selected the 20-hectare Montorgueil area in the 2nd district of Paris, a bastion of the Parisian Greens (represented by a Green District Mayor) with low rates of car ownership, as an entry point for prioritizing alternative street uses.[140] The scheme was introduced as part of the Les Halles urban regeneration project (see above), which proposed to increase this area's recreational function in a way that would appeal to residents, commuters, and tourists. In the face of vocal opposition from 10 to 15 groups representing citizen's initiatives and grassroots movements - some formed in protest to the regeneration of Les Halles more generally - the Green District Mayor Boutault set up a consultative committee. The process of troubleshooting with a large variety of stakeholders helped refine the concept of "pedestrian neighbourhoods," a hallmark of the city's ensuing "green area policy" and approach to reducing car traffic while encouraging alternative street uses.[141]

Pictures 3a&b: The "pedestrian neighbourhoods" initiative.

The Montorgueil area

Entrance gate to the Montorgueil area

Source: Mairie du 2ème arrondissement

As the Paris Plage initiative, urban tramway planning, and anti-noise measures laid the groundwork for what would become known as the Parisian approach to sustainable transport, the city's completion of its first Mobility Plan in 2007 signalled a breakthrough in consolidating a comprehensive urban transport strategy. For the first time, this planning document provided formal grounds for the development of a comprehensive urban transportation agenda in Paris.

Towards a comprehensive urban transportation agenda in Paris

In order to fully explore the opportunities opened by the 2004 Act, the Delanoé administration established a team in the Traffic Department - under the leadership of newly-recruited François Prochasson[142] and working in close cooperation with the cabinet of Deputy Mayor of Transportation, Denis Baupin - to draft the

[138] For example, noise maps, measuring stations and an anti-noise observatory.

[139] Some 10% increase of cycling lanes was observed between Mayor Delanoé's first term, from 256 km in 2001 to 439 km in 2008.

[140] See minutes from meetings, available on the district's website: http://www.mairie02.paris.fr

[141] For example, daily deliveries, short-term parking for residents only, street design and the development of on-street shops.

[142] Trained as an engineer and a geographer, Prochasson specialized into urban mobility and transport planning during his PhD.

Mobility Plan (Ollivier-Trigalo, 2007). Between 2005 and 2007, the team built alliances and partnerships across levels of government as well as inside and outside the city administration with urban planners and local communities. All the while, the Left-Green coalition grappled with mounting tensions arising from the Greens' preference for more radical solutions in transportation. With support from Community Party allies, Mayor Delanoé ultimately made his preference for an urban regeneration strategy prevail, primarily drawing upon urban planning and street design, with transport serving more as a means rather than an end.

The Paris Mobility Plan (formally adopted in 2007) introduced two ambitious goals: (1) reduce the share of individual car use by 40 per cent by 2030, and (2) achieve a 20 per cent increase in public transport capacity by 2030. In proposing to reduce car use by prioritizing transportation alternatives such as public transport, cycling, and walking rather than through anti-car policies (i.e. congestion charging—London, low emission zone—Berlin), it continued the stance of previous administrations.[143] The primary difference was that the Left-Green majority had access to a larger array of policies, resources, and tools accumulated through its various small-scale experiments and innovations since 2001 and was progressively and systematically introducing them across the city. This planning document provided the legal basis for further scaling up street redesign and traffic calming measures, expanding the bus network capacity, and implementing flagship projects like the Velib bike-sharing system and urban tramway expansion.

The combined results of incremental changes and flagship projects – which are successively introduced below – have been nothing short of radical and transformative, but have also come at the cost of inter-partisan disagreement and rift.

- *Street design initiatives:*

Street design initiatives were particularly instrumental in this process. To begin with, some initiatives, which dated back to the Chirac (1977-1995) and Tiberi (1995-2001) administrations and had been used in order to eliminate roadside parking spaces, were now upgraded to take cars off the roads altogether. Between 2003 and 2011, free on-street parking practically disappeared and 80 per cent of the total amount of parking facilities is located off-street (see Graph 4). Moreover, street design initiatives were also instrumental in order to improve bus network capacity and efficiency. Following an experiment led over the Summer 2001, the city expanded the length of right-of-way bus lanes up to 300 km, through the development of 40 km/year of additional fully segregated bus lanes. Working with RATP, and APUR, the city introduced night services (Noctilien, since 2005)[144] and rapid transit lines (Mobilien, since 2009).[145] It also built a large network of right-of-way bus lanes, starting with urban expressways facing the highest levels of traffic congestion and noise pollution (as determined by the Contassot administration's anti-noise monitoring tools). In spite of the work done on the bus network, no major change was brought to its layout and it still shows shows very limited differences with what was developed during the 1950s[146].

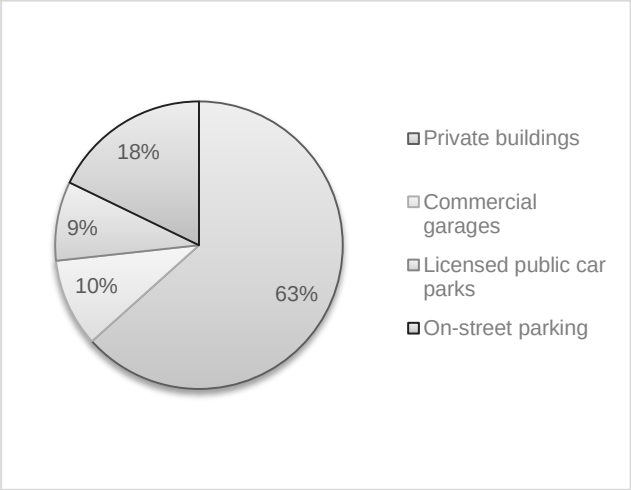
[143] Interview with senior official at Agency mobility, Paris, May 2015 and at the Traffic Department, January, 2016.

[144] A number of events were organized by the City of Paris in order to discuss specific urban issues at night, such as a large public consultation in 2010 (Etats généraux de la Nuit) (Armengaud, 2010).

[145] For example, line 91 that connects circularly the Montparnasse station with Place d'Italie.

[146] Following the election of Mayor Hidalgo and the arrival of Elisabeth Borne as RATP's CEO, a large public consultation was introduced in 2016 in order to support a profound reorganization of the bus network.

Graph 4. Parking facilities in the city of Paris, as of end 2014.



Source: Based on the information provided in Ville de Paris, *Bilan des déplacements à Paris*, 2015

- *The "Quartiers verts" initiative:*

The flagship initiative "Quartiers verts" is also particularly representative of the way through which the Delanoé administration drew on past experiences while altogether intensifying and expanding it as part of more comprehensive, systematic and long-term urban renaissance strategy that combined transport, environmental and urban planning resources. The "Quartiers verts" initiatives developed under Delanoé's administration (see Map 8) were altogether larger – 36 areas in total that covered 35 ha on average - and drew upon a larger amount of resources - €1,8 million/neighbourhood that is some €55.000/ha (Bureau, Glachant, 2010, op.cit.). Harnessing national level policy resources,[147] it strategically combined pedestrianisation initiatives with the greening of public roads and the introduction speed limits. The "Quartiers verts" areas were systematically integrated into local traffic plans in order to divert traffic towards main axes, as well as into city-wide plans to expand cycling lanes, right-of-way bus lanes, and measures encouraging walking[148]. By 2014, both policy initiatives – Quartiers tranquilles and Quartiers verts – accounted for 18 per cent of the city's territory and a third of Paris' roads (some 560 km) saw reductions in speed limit to 30 km/h, while the Boulevard périphérique saw a drop from 80 to 70 km/h.[149]

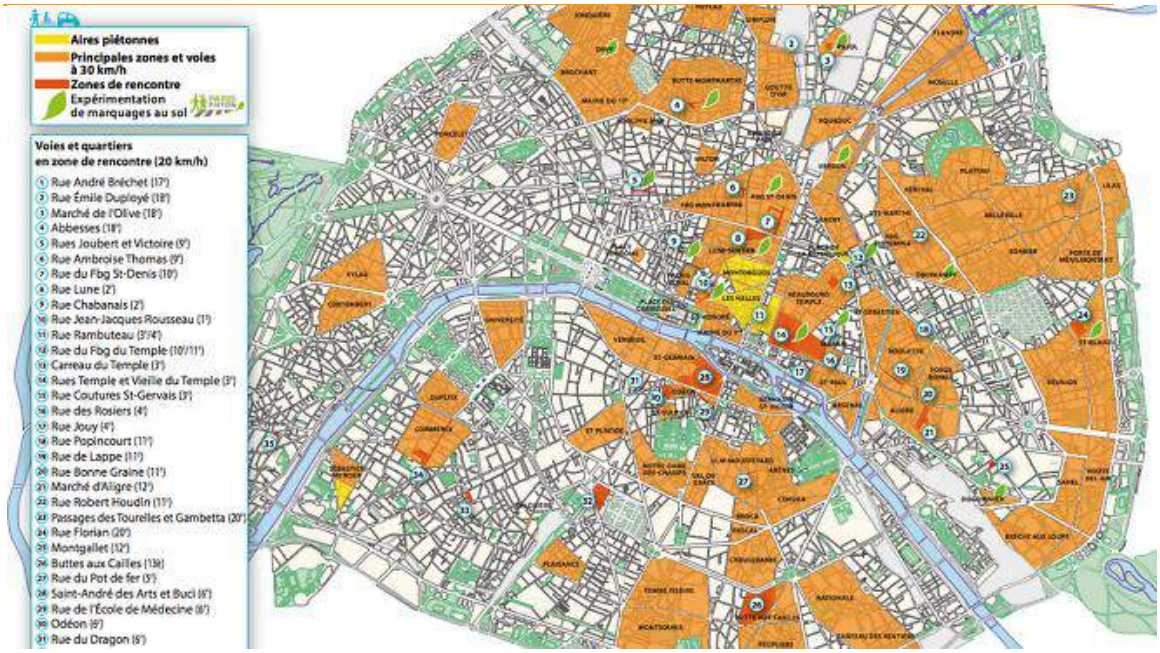
Such incremental approaches to reducing car use - Street design and Quartiers verts initiatives - combined with major flagship initiatives promoting cycling and extending urban tramways.

[147] Changes in the Highway Code, including 30km/h and 20km/h zones and the 2008 national decree in favor of pedestrian priority zones.

[148] In addition to the changes already brought on by Tiberi's administration as part of the Quartiers tranquilles policy, specific measures included the development bicycle parking, the refurbishment of street lighting and furniture, parking management for residents, etc.

[149] Interview with transport planner at IAU, March 2015.

Map 8. "*Quartier verts"* and "*quartiers tranquilles"* areas as of 2013



NB: Yellow = Pedestrian areas; Orange = Main areas and street with 30km/h speed limit; Dark orange = Meeting areas with a 20 km/h speed limit). Source: https://worldstreets.wordpress.com/2014/05/21/paris-to-limit-speeds-to-30-kmhr-over-entire-city/

- *The development of cycling and the Velib bike-sharing system:*

Early on, the Greens - particularly Deputy Mayor Denis Baupin, as chairman of both the City Cycling Club and the Cycling Promotion Committee - promoted cycling as an urban transport alternative with the support of pro-cycling organizations. Learning from cities such as Copenhagen and Amsterdam, the Greens proposed public funding of dedicated cycling infrastructure across the city,[150] which drew even greater public controversy than pedestrianisation measures and was criticized by the political opposition as ideologically driven policy. Attempting to mitigate conflict by taking over project leadership, Mayor Delanoé and the Socialist Party instead sought to engage the public and raise awareness through highly visible initiatives such as Paris Plage. They achieved this through the Vélib project, a bike-sharing system created through a private-public partnership with JC Decaux, a family-owned and French-based advertising company.

Inspired by existing schemes in La Rochelle and Lyon but implemented at significantly greater scale in terms of the number of bicycles per inhabitants and geographical coverage (APUR 2006), the Parisian Vélib system was introduced in 2007 and operates through an advertising concession granted to JC Decaux in exchange for start-up and operation. Financed by a monopoly on advertising revenues, the scheme sparked a political discourse on integrated mobility and gratuity (Huré 2012), and helped promote Paris on the world map - in contrast to London—as an innovative, livable and competitive environment (Mboumoua 2015). Its advanced - and regularly updated—technology has further broadened use among non-residents, tourists and regional commuters (Boullier 2014).[151] As of 2016, Velib' consists of some 23.000 bikes, 1800 docking stations that spread out across the city of Paris (every 300 m) and 30 adjacent municipalities. It also constitutes the most visible component of the city's cycling strategy and a major driver for the rapidly expanding urban cycling network.[152] Between 1999 and 2012, cycle routes grew over fourfold in Paris from 129 km to 545 km.[153] While Mayor Delanoé

[150] Interview with senior official at the Traffic Department, op.cit.

[151] This is a major difference with the choice made in other cities, in which the bicycle sharing system is limited to city residents or to public transport users.

[152] This is notwithstanding later criticisms against the system's costs and efficiency. These debates eventually led to the city of Paris' recent decision not to renew JC Decaux's concession for another 15 years

[153] See the Traffic Department's annual reports.

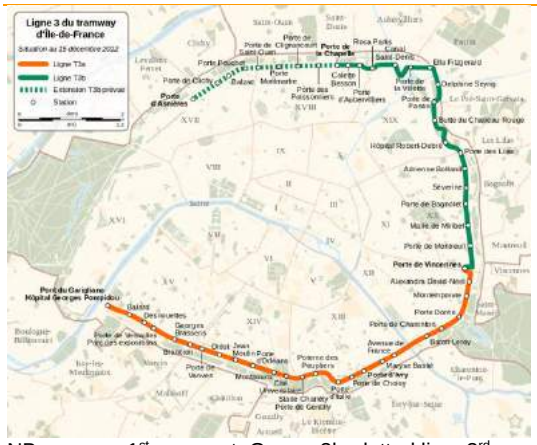
and his cabinet carefully monitored the public-private initiative through implementation and continued expansion, the financing arrangement remained a sore point for the Greens.[154]

- *The development of a Parisian urban tramway system:*

The City of Paris also invested some €680 million into its tramway policy between 2005 and 2015 (see Map 9), and more specifically, in the development of Line 3 as well as improvements on Line 2. The municipality also took responsibility for 60% of the total costs (€193 million) for the line 3 extension (T3b project)[155]. The extension of the T3 urban tramway line did, however, reinforce inter-partisan tensions around urban transport transformations. With the opening of the T3 line, Transportation Deputy Minister Baupin approached the RATP, APUR and related regional municipalities to discuss the line's extension towards the east and up to Porte de la Chapelle in the north of Paris, framing the tramway extension as an urban regeneration project. To gain regional support, he additionally highlighted potential benefits for disadvantaged neighbourhoods in the urban fringes as well as the opportunity to develop public transport services with and between adjacent municipalities. To pre-empt controversy in the aftermath of public backlash to the Green Party's cycling proposal, Baupin managed the project behind closed doors while selectively engaging target groups such as resident committees and shop-owners on an as-needed basis (Lefébure, 2007). In a scathing response, Socialist and Communist mayors from the northern districts of Paris and the Seine Saint Denis département publicly questioned Baupin's - and the Parisian Green's - commitment to reducing socio-spatial inequalities and challenged the project's rationale and design. Deeming the latter too technocratic and neglecting input from neighbourhood-level stakeholders, they called for a public debate, which followed in the course of six months in 2006.

Taking place in Paris and adjacent municipalities, the debates revealed a widespread distrust of what was purported to be an ideologically-driven transport strategy and centralized, technocratic form of policy-making. They further shifted focus from the project's technical characteristics to social disparities and governance in the capital-city region, along with questions of who would benefit from the project and how to manage urban policies within and outside Paris. Together with city bureaucrats and politicians, institutional and political actors, civil society, and professional organizations (e.g., taxi drivers) actively participated in the debate.[156] By contrast, Mayor Delanoé strategically chose to limit his direct involvement in the process and strategically positioned himself as a mediator between Baupin and opponents to the project. While the tramway extension project was formally adopted in 2009 and opened in 2012, it froze future urban tramway projects[157] and confounded Left-Green relations.

Map 9. Successive extensions of the tramway line 3 (as of 2012)



NB: orange: 1st segment, Green: 3b, dotted line: 3rd segment, underway since 2014.
Source: Ville de Paris, 2013.

[154] Opinion polls were regularly commissioned in order to feed political discourses, see for example TNS SOFRES (2008): http://www.tns-sofres.com/publications/barometre-de-satisfaction-du-velib-2008

[155] It benefited from a €130 million loan from the European Investment Bank.

[156] As observed in other CNDP debates, participation from residents and the wider public remained low (Lefébure, 2007, 170).

[157] Apart from the second extension of the T3 line towards Porte d'Asnières, which is currently underway.

After the Green party's poor results in the 2008 elections, a new Socialist Deputy Mayor, Annick Lepetit, presided over transport while Baupin became Deputy Mayor for Sustainable Development, Environmental Affairs, and Climate Change. Despite the Greens' critical role in prioritizing transportation measures within the city and developing the Parisian approach to sustainable transport, inter-partisan dynamics within the Left-Green majority - complete with conflicts and cooperation - posed thorny challenges (Pichon, 2012). Most decisions entailed lengthy political negotiations on a case-by-case basis. As the Socialist Party gained popularity and electoral strength during Delanoé's second term, transport increasingly competed with other policy priorities such as housing and had to face reduced budget allocations (Foing 2012). In this context, Mayor Delanoé and the Socialist Party increasingly relied on other policy resources and alliances in order to advance transport initiatives. From 2012, they reinvigorated efforts around pedestrianisation and car traffic reduction, for instance closing of the urban highway flanking both the left and right banks of the Seine.

Capacity building and policy resource accumulation

While undertaking various transport policies and programs, the Delanoé administration also reinforced its comprehensive urban transport agenda by restructuring the city bureaucracy in ways that promoted local accumulation of policy resources and renegotiated power relations with state elites, enterprises and local authorities in the region. Between 2001 and 2015, the City of Paris emerged as a strong political organization with increasing economic resources and political capacity to negotiate with the State and private companies in order to develop transport policy initiatives. During this time period, its budget increased from 5.8 to 10.2 billion euros while at the same time, the State contribution decreased from 17 per cent to 10 per cent (see Table 4b above).

- *The development of public-private joint initiatives:*

In this context, the City lessened its reliance on the central government while launching new mobility initiatives that are co-produced with large urban service firms, such as JCDecaux (Vélib) and Bolloré (Autolib), and managed as part of public-private partnerships. In spite of the Greens' reluctance to develop such funding mechanisms, this choice was justified due to the administration's resistances against the development of new mobility initiatives (Tironi 2015). Building on the Vélib's success (Mboumoua, 2016), the city introduced an electric car sharing system, i.e., Autolib, in 2011 in partnership with the Bolloré Group, a French-based company specializing in transport, logistics and advertising among others. Autolib was used as an opportunity to promote its electric car system, Blue Car, whereas the city of Paris wished to expand its transport policy offer through the use of new technologies. Unlike the Vélib system, Autolib was introduced metropolitan-wide under the authority of an administrative body consisting of representatives from 46 municipalities privy to the system's development. Another difference with the bike-sharing system lies in the funding of the Autolib system, which receives direct support from involved municipalities through public subsidies during the total duration of the contract (2011-2023). Considered the most visible component of the city's efforts to promote electric cars, the network comprised 180 charging points placed every 500m by the end of 2016. It maintains a fleet of 4000 vehicles which are used by some 125.000 registered subscribers.

Beyond these two flagship examples, public-private partnerships and competitive tendering procedures have considerably increased the city's capacity to bypass administrative and political resistances towards new mobility initiatives.

In further seeking alternative funding sources, the city also participated in bids for European funding and international networks of cities as well as research and development partnerships with universities and state-owned enterprises such as RATP or ENEDIS (Power grid operator). Resulting experiments provided the city with a unique opportunity to explore new dimensions of urban transport on a short-term basis and at low cost while simultaneously drawing on findings to improve citywide policies and programs.[158]

While allowing a rapid increase the scope of mobility policies, the introduction of public-private partnerships also initiated a shift in the city's role from service provider to that of a regulatory authority.

- *Developing new policy capacities:*

[158] Current efforts now lie with urban logistics, electromobility, and the management of big data.

This evolution also led to developing new policy capacities in transport and to increase its autonomy vis-à-vis state representatives and, to a lesser extent, regional actors. The city strengthened its information and knowledge by increasing the number of indicators used to both monitor and assess policy implementation[159]. The mayor also spearheaded administrative changes such as reshuffling funding priorities in favour of transport and urban renewal, reorganizing administrative resources under the supervision of the Traffic Department, and creating the Mobility Agency (2011) with a concentration on research and innovation activities. This was also achieved by organizing tendering procedures to encourage competition with state elites and enterprises under the City's oversight. The recent decision made in April 2017 to suspend JC Decaux's *de facto* monopoly over street design by handing over the management of the Vélib system to one of its competitors confirmed the city's wish – and capacity – to retain the upper hand on the structuring of these new markets[160]. Similarly, the use of competitive tendering procedures in the allocation of concessions for operating Parisian urban tramway lines has allowed the city to maintain pressure on both RATP and SNCF[161]. Finally, the city drew extensively on consultation processes in order to ensure support from the districts' administrations and elected representatives during implementation stage. In addition to the large amount of resources mobilized at planning stage for the urban tramway or the pedestrianisation policies, similar efforts were less successful during further attempts to expand the Quartiers tranquilles / Quartiers verts policy towards the western districts, which are traditionally considered bastions of the Conservative Party and where the development of mobility policies faces strong resistances from car users.

The decade-long process of planning and policy implementation - beginning with Paris Plage, urban tramway planning, and anti-noise urban redesign and regeneration measures; formalized and scaled up through the city's first Mobility Plan; and culminating in projects like the Velib bike share system, urban tramway expansion, and the Autolib electric car sharing system - carried long-term consequences for urban transport and mobility agenda setting in Paris. The city not only cultivated its own unique approach to sustainable urban mobility but further expanded its capacity for developing autonomous policy alternatives independent of support from transport authorities and operators. The approach itself actively sought to reduce car use by enhancing transport alternatives and reclaiming available road space from cars to broader uses while also using transport as an important means to undertake large-scale urban renewal programs in areas located at the margins of the capital city.

This latter aspect of highlighting the *urban* dimension of transport and mobility differentiated the Left-Green policy offer from that of the Conservative Party, but also, from those of the Socialist and Green Parties at the regional and national level. Widely considered a major political success contributing the re-election of the left in Paris in 2008 and 2014, it became a source for inspiration to other cities worldwide. Still, solely focusing on the city's initiatives in transport neglects the critical role of inter-governmental relationships in change strategies. It also neglects the huge amount of resources made available at regional level for urban sustainable transport initiatives, which the city of Paris was able to mobilize in support of its own schemes.

4.3.2 Building capacity for sustainable urban transport policies in the region

Outside of Paris, the Left-Green majority likewise assumed leadership over regional governance from 1998 - three years before they took Paris. With Jean-Paul Huchon (Socialist Party) at the helm, the coalition won three consecutive elections (1998-2015) during the course of which it developed transport innovations at the regional level, both with cooperation and competition among municipalities, the city of Paris, and the state.

Similarly to the situation observed in Paris, a combination of institutional and political factors fostered a shift in transport policy developments. Undoubtedly, the introduction of the 2004 Act on Local Responsibilities eventually granted municipal and regional governments in the capital-city region with some significant autonomy in transport planning and policy-making. Nevertheless, such opportunities did not suffice on their own. While undertaking the various transport policies and programs, the region reinforced its comprehensive urban transport agenda by restructuring its bureaucracy in ways that promoted local accumulation of policy resources and

[159] For a systematic overview, see the city's annual "Bilan des déplacements à Paris".

[160] It should be noted that this decision is unprecedented in the French context (Huré, 2012).

[161] Interview RATP, Paris agency, March 2015.

renegotiated power relations with state elites and enterprises. There again it relied upon the example set by the City of Paris while at the same time introducing some innovative measures of its own, with some transformative impact on transport policy developments and results.

When compared to the situation observed in Paris and some municipalities in the inner-suburbs closest to the Paris ring-road, the changes observed at regional level were slower and less visible due to the specific combination of institutional, political and socio-economical factors. Also, as the outer-suburbs were still rapidly developing, state elites and local authorities highlighted the need to further expand the road network in parallel to public transport and sustainable mobility initiatives. This section accounts for such levels of spatial differentiation in the development and distribution of sustainable transport policies across the Ile-de-France region.

The region's efforts in expanding the sustainable transportation agenda

The elaboration of the first Regional Mobility Plan (PDUIF, 2000) provided the region with an opportunity to define its own sustainable mobility policies with support from suburban municipalities. Drawing on the myriad of initiatives that had been introduced at municipal and departmental levels as well as its 1996 Soft Mobility Plan, the Regional Council joined forces with IAU Ile-de-France[162] to promote transport alternatives and urban regeneration against state representatives and transport organizations. With the primary aim of reducing individual car use by promoting alternative modes of transport, the Regional Mobility Plan further complemented the latest Region-State Contract (2000-2006), which prioritized the funding of public transport infrastructure over roads.[163] It also provided a useful framework for hitherto car-oriented regional municipalities, including the city of Paris, to elaborate their own Mobility Plans with sustainable urban transport components and seek regional funding support.

In addition to changes in transport planning capacities, the Regional Council also added much-needed implementation capacity by taking over the STP in 2000 – which was renamed STIF – and by benefiting from a reform of network operating contracts. In spite of continued inter-institutional rivalry, the Left-Green majority's leadership over the region and Paris eased coordination of policy goal setting and implementation across levels of government and at the regional scale. First, STIF brought added capacity to negotiate new policy goals with transport operators and local authorities and streamlining policy offers, across the region (Orfeuil, Wiel, 2012). Bilateral short-term network operation contracts with transport operators (RATP, SNCF and bus companies) were introduced and added to the quality of transport service delivery and internal management during the 2012-2015 programming period. Second, STIF emerged as a preferred venue for inter-municipal negotiations and technical discussions on operationalizing public transport policies and spending allocations across the region. It successfully oversaw negotiations about increasing tax rates for *versement transport* across the region within the limits set by national law (see Table 6 in section 2). This was achieved by confirming the principle of differentiated rates in the region – Paris, the inner and the outer suburbs, and since 2016 and the creation of the Grand Paris metropolitan area, the introduction of a fourth zone (see Table 9 above). Apart from discussions with local authorities, STIF also negotiated high levels of VT rates in the region with economic actors and business groups in the region, whose interests are represented through the Chambers of commerce in the region, as well as in the Regional Social, Economic and Environmental Council[164].

Together, these added resources allowed the regional council to increase its staff and budget size as well as defining its own transport policies for the first time with support from regional municipalities. STIF strengthened the overall public transport capacity and efficiency in the region, with a particular emphasis on the bus network that had long been neglected. As of 2001, it launched preliminary work on the Mobilien network, which identified some 150 bus lines operating at the regional level that could be prioritized as high service bus routes. STIF brought together representatives from local authorities and transport companies (RATP, Optile) during a large consultation phase (2005) and a decision was reached in 2006 to allocate € 70 million to this project during the 2006-2010 contract period with a specific focus on developing services in the outer suburbs

[162] Sine 1983 authority over this regional planning agency was transferred to the Regional Council.

[163] In the 4th plan, this included projects to extend existing metro and urban tramway lines, the development of circular lines, the promotion of intermodality and accessibility across major interchanges. The 5th plan extends the duration of implementation for existing projects, introduces 5 new extension projects and provides funding for feasibility studies about new transport projects.

[164] Conseil économique, Social et Environnemental

area[165]. The general aim was to streamline existing bus services throughout the region while at the same time enhancing its homogeneity in terms of both quantity and quality. These improvements included bus priority systems, higher, more regular frequencies, extended time slots, and in some cases, the development of right-of-way lanes. The regional mobility plan also acknowledged the need to develop differentiated transport policy approaches across the region, with a distinction between core urban areas (incl. the city of Paris)[166], and rapidly developing urban areas in the outer suburbs[167]. In both cases, some attempts were made to increase the integration between land-use and transport planning.

Another regional policy initiative is the Noctilien bus network, introduced as of 2005, which was progressively introduced in order to provide a minimum level of night services and compensate for the absence of rapid transit and rail-based transport services at night[168]. Aiming at "bringing back home workers and the youth", it quickly expanded from the City of Paris (2005) towards the rest of the region (2009) and now amounts to some 47 lines throughout the region[169] that are operated by both RATP (32 lines) and SNCF (16 lines). In addition to the changes brought on the bus network, STIF also made significant efforts to provide region-wide travel information, change the tariff policy, and install new ticketing systems.[170]

City of Paris and transport companies: altering the terms of the relationship.

Within this institutional framework, the city of Paris as well as both RATP and SNCF found new positions. In ambitiously undertaking a sustainable urban mobility agenda primarily catering to its own residents rather than the State or the region, the city of Paris unwittingly alienated suburban municipalities. In addition to problematizing the profound inequalities in the capital-city region, the latter criticized the lack of stakeholder engagement as in the case of the urban tramway project. The public controversy over the T3 extension, partly inflamed by backlash from suburban elected officials, revealed for the city the critical need to enlist, or at least engage, suburban municipalities in undertaking transformative transport initiatives. Consequently, Mayor Delanoé charged Pierre Mansat, a member of the Communist Party whom he appointed as Deputy Mayor of Territorial Cooperation, to facilitate cooperation between the city of Paris and suburban municipalities - through the Conférence Métropolitaine (2006) and Paris Métropole Initiative (2009).[171] By strengthening the role of STIF as a legitimate arena for fostering political compromises over public transport planning, the City of Paris sought to increase its own autonomy in developing new transport policy measures and initiatives. Indeed, support from suburban municipalities was critical in dismantling urban motorways in the city centre, reducing road space available for cars, and tapping into regional funding in order to expand public transport capacity within its own territory. In exchange, the city of Paris supported suburban municipalities during negotiations over spending allocations within STIF, over the State's contribution to transport initiatives in the region and more importantly, during the conflict over the Grand Paris initiative.

In the case of RATP and SNCF, the 2000 reform opened a decade-long period of institutional struggles between the regional transport authority and these large transport companies. In this context, the changed approach advocated by the city of Paris, together with the reshuffling of transport funding mechanisms to the

[165] A total of 150 bus lines were identified in 2000. In 2006, € 15 million were spent on this project (€ 8 million by RATP, €7 million by Optile), and it was agreed that half of the total amount (€35 million) would be spent in the outer suburbs, 18 in the inner suburbs, and 17 in Paris.

[166] For example, the reallocation of road space to public transport, cycling and walking, the reduction of speed in residential neighbourhoods and the development of dedicated lanes for buses and cycling

[167] For example, promoting urban densification strategies around train stations, improving local public transport networks and promoting modal shift.

[168] It replaced the Noctambus network, which ensured accessibility to and from the Chatelet station for workers living outside Paris.

[169] According to RATP data, 70% of Noctilien bus services are concentrated during weekends.

[170] Including the Navigo Pass – a contactless smartcard that can be used on all public transport systems in the region, including the Vélib system – and Imagine R card for students, the Ticket t - a single trip ticket common to all transport companies.

[171] This was first achieved as part of the Conférence métropolitaine (2006) and as of 2009, as part of Paris Métropole Initiative.

benefit of STIF, progressively led to profound management reforms within RATP[172]. Following a decade of strikes and struggles with central government, and in the context of the rising Parisian urban transportation agenda, RATP underwent a series of internal reforms during the 2000s aiming at strengthening its worldwide reputation while at the same time establishing new grounds for discussions with local authorities in the capital-city region. Successive negotiations with STIF on performance-based operating contracts confirmed shifting power relations and led RATP to develop a larger number of transport services as part of its newly-defined role as "urban mobility service provider". The development of the urban tramway system and the changes brought to the bus network also contributed to shifting internal power relations and offered the company's management additional capacity to negotiate with unions. To be sure, specific measures such as night services on the metro and the bus network still faced strong opposition from drivers on both networks, and specific agreements were negotiated in order to introduce the Noctilien network. But since the late 2000s, RATP's interests shifted towards medium-sized cities in the inner-suburbs, which now justifies an increasingly differentiated portfolio of services in order to retain its position in the City of Paris and develop new activities outside Paris and worldwide. This is achieved through small-scale partnerships with other transport providers in the region (e.g., Autolib) or by seeking for European funding (e.g., INTERREG, Horizon 2020, etc.) in order to explore new technologies and develop new services in close relationship with local authorities in the capital-city region.

All in all, results were particularly impressive in the field of urban transport due to increased coordination with local authorities (municipalities, départements), and to some extent, due to additional funding opportunities as part of the national urban transportation agenda (see below). Between 2006 and 2014, six new urban tramway lines opened - only two located in Paris - in addition to the construction of four metro line extensions (see Tables 9a and 9b below). In exchange for more autonomy, the city of Paris also agreed to develop new mobility services at its own cost as in the case of the Vélib network, but then extended the system to 30 municipalities outside Paris from 2009 beyond the scope of the concession with JC Decaux. In turn, Autolib planning spanned 46 regional municipalities from the start and now includes 97 municipalities.

Table 8a. Urban tramway developments in the Paris Ile-de-France Region (1992-2014)

Line	**1st opening**	**Mainly location**	**Current routes**
T1	1992	Inner-suburbs, north-east (Seine Saint Denis)	Asnières-Gennevilliers-Les Courtilles - Noisy-le-Sec
T2	1997	Inner-Suburbs, south-east (Val-de Marne)	Pont de Bezons - Porte de Versailles
T3 (in two arcs, T3a & T3b)	2006	Paris	Pont du Garigliano - Porte d'Ivry Porte d'Ivry - Porte de la Chapelle
T5	2013	Inner-suburbs, north-east (Seine Saint Denis)	Marché de Saint-Denis - Garges Sarcelles
T6	2014	Inner-Suburbs, south-east (Yvelines, Hauts-de-Seine)	Vélizy-Villacoublay (Robert Wagner) - Châtillon-Montrouge
T7	2013	Inner-Suburbs, south (Essone)	Villejuif Louis Aragon - Athis-Mons Porte de l'Essonne
T8	2014	Inner-suburbs, north-east (Seine Saint Denis)	Epinay-Orgemont - Villetaneuse Université - Saint-Denis Porte de Paris
Total RATP as of early 2017	7 lines, 187 stations, 105 km, 830.000 passengers/day		
T4	2006	Inner-suburb north-east (Seine Saint Denis)	Bondy – Aulnay-sous-Bois
Total SNCF as of early 2017	1 line, 11 stations, 7,9 km.		

Table 8b. Metro line extensions within Paris and into the suburbs (1998-2014)

Extension	**Metro line**	Route
1998	line 13 (north)	from Basilique de Saint-Denis to Saint-Denis - Université
1998	Météor or line 14 (east)	from Madeleine to Bibliothèque François-Mitterrand

[172] The SNCF's position remains more ambiguous and altogether conflictual as shown during recent negotiations over the 2012-2015 and the 2016-2020 operating contracts. It is only over the recent period, due to the opportunities opened by the Greater Paris initiative and in context of growing criticism at State-level against the company's preference for high-speed, that SNCF management showed some renewed interest for urban transportation. Interview STIF, May 2015 and Interviews member of parliament 1 (Conservative Party) and 2 (Socialist Party), June 2015.

2003	Météor or line 14 (west)	from Madeleine to Saint-Lazare
2004	Météor or line 14 (east)	from Bibliothèque François-Mitterrand to Olympiades
2008	line 13 (north)	from Gabriel Péri to Asnières - Gennevilliers - Les Courtilles
2011	line 8 (east)	from Créteil-Préfecture to Pointe du Lac
2012	line 12 (north)	from Porte de la Chapelle to Front Populaire
2013	line 4 (south)	from Porte d'Orléans to Mairie de Montrouge

That said, the Regional Council continued to lack effective steering capacity until the late 2000s. Only some relatively small and diffuse policy initiatives primarily aiming at enhancing public transport systems' accessibility, attractiveness, and reliability, were introduced. As the Regional Council gained policy resources and implementation capacity, it not only pushed back against state imposition of spatial and transport planning agendas but also mediated contentious dynamics between the city of Paris and other Ile-de-France municipalities. Continued struggles over the State allowance to the STIF budget only provided the regional council with a limited budget and autonomy, much less than that of Paris City Council. Most regional initiatives in transport experienced considerable delays or were abandoned due to resistances from RATP and SNCF management or employees. This lack of cooperation is particularly visible in the case of regional systems (RER, regional trains) with state elites' reluctance to acknowledge STIF's authority and continued RATP-SNCF rivalry. The network's age, especially on lines A and B, as well as unresolved compatibility issues between transport companies, contributed to repeated delays, network failures and to its lack of reliability. In those cases, in which increased coordination required some changes in the management of staff and career developments, such as the creation of joint traffic control centers, resistance against proposed improvements were particularly vivid and often abandoned because of the fear of strikes. Last but not least, 11 public transport infrastructure projects that were included in the 2000-2006 region-state Contract were delayed due to late payment or indefinite postponements of amounts owed by the state. This justified their integration in the next programming period (2007-2013).

Concluding remarks

Notwithstanding such limitations, the Regional Council took the opportunity of newly gained political resources and institutional powers in order to increase its leadership over transport planning and policy-making in the region. As prominent members of the Green Party transitioned from Paris city hall to the regional assembly following the 2004 regional elections, some of the transport solutions that had been experimented with in Paris were promoted at the regional level.[173] Moreover, the elaboration of a new generation of planning documents and contractual agreements with concerted aims of promoting sustainable transport offered the region a timely window of opportunity to intensify and expand its transport agenda forward.[174]

4.3.3 Weak institutionalization of the region's leadership over transport governance.

The elaboration of the Regional Spatial Planning Document (SDRIF 2007, 2013) marked the first time the Regional Council exercised the authority to formulate its own strategic planning objectives and lead the design process with support from IAU Ile-de-France. Unlike the situation observed in the previous period during which the regional scale was considered a preferred policy venue for seeking policy resources in support of projects designed elsewhere, the regional authority sought to effectively structure transport policy objectives and resources around its own policy priorities. In doing so, the Region openly challenged other levels of government, including the State, and met strong resistances from a number of stakeholders – subregional levels of government, transport companies and large economic groups – as observed during successive struggles over the Grand Paris Express project. This confirmed the region's weak position as well as the enduring role of political

[173] Acting Vice President of Transport for the Regional Council, Pierre Serne, Green Party member and former advisor to the Paris Deputy Mayor of Transport Denis Baupin - led discussions around the new SDRIF and Mobility Plan (PDUIF 2008). Baupin himself was elected as an MP in 2012, and paid less attention altogether to transport and mobility issues as he became vice president of the French Parliament.

[174] Road competencies also evolved following the 2004 decentralization reform. All national roads that are not part of the national motorway network were transferred to the départements.

and institutional competition as the main driver for transport policy developments in the French capital-city. More fundamentally, it contributed to further crystallising the positions held by to competing approaches to transport policy futures.

Transport as tool for compact spatial planning or for strengthening economic competitiveness?

The proposed 2008 SDRIF contrasted from earlier versions in advocating a shift towards more compact spatial planning, incremental urban investments, and a more autonomous future for the capital city-region that prioritized the interests of its local inhabitants rather than that of the State[175]. It further paid extensive attention to urban transport (and less attention to roads) as part of its emphasis on sustainable transport policies and increased liveability and quality of life. In parallel, the Region and STIF launched the revision of the Regional Mobility Plan in 2008, in order to achieve a significant reduction of individual car use by 2020, in part by committing to a 20 per cent increase in public transport and 10 per cent increase in walking and cycling modal shares (proposed PDUIF 2008). In place of a radial network towards the City of Paris, it aimed, on the one hand, at developing direct and rapid connections between large urban and economic centres in the periphery, and on the other hand, at forging new interconnections between existing networks and the new circular axes.

In contrast to the capacity-oriented and infrastructure-led approach of former regional transport planning documents and contractual agreements, this regional transport agenda aimed to improve public transport service quality, in part by allocating funding to maintain, modernize and optimize existing networks (mobilization plan), and by focussing on the development of missing links (Arc express) (see Map 9). Another point of differentiation was the greater attention given to increasing policy resources such as funding and tools to operationalize goals and objectives; the region suggested a 10-year €19 billion investment programme co-funded by the region, the state, départments, and municipalities – including the budget already committed in the 2007-2013 state-region contract. Within STIF, new performance-based operation agreements with the region's main transport operators helped expand transport initiatives along the principles laid down in the proposed 2008 PDUIF. For instance, STIF introduced a type of bus rapid transit network in 2009 - the T-Zen bus system - in order to increase connections within the inner and the outer suburb areas[176]. In the case of regional rail-based networks, such as regional trains and the ageing RER system, STIF sought to negotiate its own transportation agenda with central government on the one hand and with RATP and SNCF on the other hand.

- *Growing opposition to the region's proposed reform agenda:*

The proposed plans, i.e., SDRIF and PDUIF, draw resistance from state elites and organizations, as well as from those local authorities that would not benefit from it. Throughout the elaboration of the SDRIF project, political debates were characterized by unusual levels of violence.

Together with RATP and SNCF, state elites repeatedly highlighted the region's lack of knowledge and expertise in transport. In its attempt to bypass resource-seeking strategies and impose its own transportation agenda, the Region also faced growing political opposition from elected representatives. Opposition was particularly vivid in Conservative strongholds in the region, where pro-car policies were promoted as a preferred solution against traffic congestion. For instance, the location of future transport infrastructures, which were also designed as priority areas for the development of housing and other economic activities, met with strong local reactions: while some claimed their rights to become a "sticker on the map", others rejected the constraints attached to the development of new transport infrastructures in terms of housing development. Many of them tried to avoid the introduction of urban planning restrictions within their own constituency, which were justified in the name of nature conservation and agricultural land preservations.

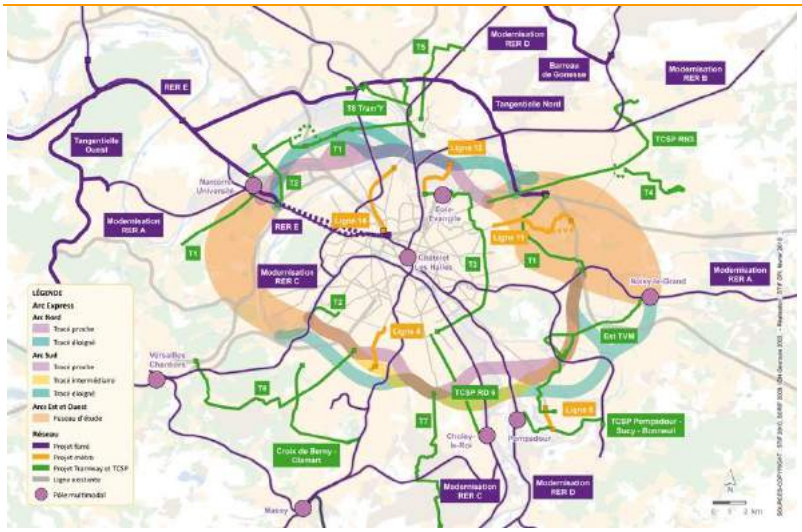
Notwithstanding their opposition to the regional scheme, local elected representatives recognized the Region's efforts in promoting a more collaborative approach and mobilizing unprecedented resources in terms of

[175] See also section 2 in order to put transport issues in a broader perspective.

[176] As of today, 2 lines have been created and 5 more are planned by 2020. Since 2014, it is operated by Transdev, a private company operating the since 2014.

both communication and expertise in order to include local authorities and the wider public in the spatial planning process.

Map 9. The region's mobilization and Arc express plan (as of 2010).



Source: STIF

In this context, President Sarkozy's Grand Paris Express initiative pushed regional transport issues on the national political agenda. Sarkozy's vision for transport infrastructure developments differed from that of the region in a number ways. Drawing from his experience as local elected representative in the Hauts-de-Seine department, he promoted alternative project design and funding mechanisms such as public-private partnership or land value capture that would foster new synergies with large French construction and real-estate companies, such as Bouygues or Vinci [177]. All three documents – the proposed 2008 SDRIF, the proposed 2008 PDUIF and funding attached to the 2007-2013 state-region contract – were put on hold.

- *The Sarkozy-Blanc Grand Paris express initiative:*

Nominating former RATP CEO Blanc[178] as Secretary of State to the Grand Paris project (2008-2010), and drawing on the support from large economic actors and state elites, he advocated infrastructure-led and mass transit solutions in order to complete and expand unfinished investments. This included the development of a circular rail line connecting all existing metro lines with one another[179] as well as major existing and planned development sites in the inner and outer suburbs (e.g., business districts, airports and science and technology clusters). Focusing on new infrastructure developments and inspired by his former work on the Météor project, Blanc recommended developing a 140-km underground metro line in the shape of a double loop located at a distance of some 10 km from the Boulevard périphérique.

[177] N. Sarkozy was trained as a lawyer and built his entire political career under the protection of his mentor, C. Pasqua, and in the Conservative Party. Among other things, he held several mandates as mayor of Neuilly-sur-Seine, elected representative in the Hauts-de-Seine departmental assembly and was later nominated budget minister in the Balladur Government (1993-1995). In his Declaration on his strategy for sustainable development (Roissy-en-France, 26/06/2007), he declared "We'll find large projects and we will mobilize national synergies in support of these major projects. This appears to me as a more ambitious and important reason to debate than endless discussions about whether or not our compatriots who benefit from social aid should also benefit from free public transport" (op.cit., TbA). Available at: http://discours.vie-publique.fr/notices/077002121.html

[178] Since his mandate as RATP CEO, Blanc had become a member of the centrist party UDI and held several elected mandates in the Yvelines department as member of Parliament, first between 2002 and 2008, and between 2010 and 2012.

[179] With a clear reference to the old dream of a "Métrosphérique project". Such a circular rail line had existed in the 19th century under the name of the "Grande ceinture". It was located between 5 to 20 km from the existing Parisian ring road (boulevard périphérique) and was used for passenger and freight traffic. Plans to rebuild a circular rail line were regularly discussed but never implemented, and most transport infrastructures and networks followed a radial pattern in order to increase accessibility to the Villes nouvelles.

In addition, Sarkozy insisted upon developing the Charles de Gaulle Airport Express line, a project that had been on the agenda since the mid 1990s but repeatedly failed due to continued and strong opposition from the north-eastern inner-suburbs who favoured the upgrading of the existing RER B line. The total cost of the Grand Paris Express project was estimated at € 14 billion that is, twice the amount invested every 10 years for transport policies and infrastructures in the capital-city region. Blanc also recommended that all proposed state investments, including those already committed as part of the 2007-2013 state-region contract, should be suspended or abandoned unless the region found alternative funding sources. All discussions with the region were interrupted.

Additional criticism against the Grand Paris Express initiative highlighted the project's flaws. Insofar as it was considered a "RATP project", several alternative projects were developed, first by the SNCF who proposed a rail alternative enabling shorter travel time between La Défense and Charles de Gaulle airport, and second by architects and urban planners who favoured a combination of over ground transport solutions (e.g., metro lines, urban tramways and a bus rapid transit) in order to intensify urban regeneration in the inner-suburbs[180]. A number of prominent members from the Conservative and the Centrist parties in the region expressed some doubts regarding the costs of the Sarkozy-Blanc initiative and the project design process. Close ties between State elites and the industry were increasingly criticized as a case of "silent corporatism" and often compared to the "Météor-Eole debacle" which had been conducive to a major governance failure.

As the classic RATP-SNCF rivalry gained increased visibility, many feared that central government would, once again, fail to choose and once again prove its inability to prioritize the capital-city region interests.

All against Sarkozy: an original mode of transport governance in the capital-city region.

President Sarkozy's Grand Paris initiative was indeed considered a clear denial of recently gained local and regional autonomy. In their wish to defend their hard-gained powers, local authorities' first reaction was to develop to resource-maximising strategies in order to gain support from both the region and the State in support of their own plans. The regional council itself proceeded with the SDRIF's formal approval: it was unanimously adopted by the regional council (December 2008) and the STIF council (December 2009), but central government refused to transfer the plan to the Council of State for final approval. In the absence of central government's support, regional and local authorities, STIF and RATP focused on implementing the 2008 Regional Mobility Plan. In the context of the 2008 municipal and cantonal elections, local authorities in the Ile-de-France region published their own position papers on regional transport initiatives and took the opportunity of the public enquiry procedure on the proposed 2008 SDRIF to push forward their own preferences regarding strategic planning in the region.

- *Municipal- and departemental-led sustainable transport initiative in the inner-suburbs:*

Municipalities in the inner-suburbs were able to strategically tap into new pieces of national legislation in the environmental sector and this accelerated the diffusion of sustainable mobility and transport policies in the region. While national urban transportation policy objectives had previously targeted large metropolitan areas, successive Grenelle laws increased national funding for alternative transport solutions in medium-sized cities and in distressed areas within major metropolises – a readjustment that proved particularly beneficial for the inner-suburban area in the capital-city region. Similarly to the situation observed in the 1970s, the largest share of national funding promoted standardized alternative transportation systems such as right-of-way bus, metro systems and tramway projects, and only a limited amount of funding support was made available for urban mobility experiments, such as car and bike renting systems, congestion charges, and electric cars. The State strictly monitored implementation through successive competitive calls for projects (respectively in 2008 and 2011), to which both industry interests and specific types of municipalities (i.e. medium-sized cities, deprived neighbourhoods, and interurban mobility) could apply.

Under the joint pressure of local authorities, environmental NGOs and RATP, the capital-city region was granted a specific budget for transport initiatives and a total of €8 billion were spent for transportation projects between 2010 and 2015 (see Table 9). A number of local authorities were able to seize this opportunity in order to

[180] Among other ideas: A skytrain project (Christian de Potzamparc), transport as driver for polycentrism (Bernardo Secchi and Paola Vigano) or towards "a city among the greenest, the most compact and the highest quality of the built environment worldwide" (Winy Maas), Paris as a port city with the development of maritime transport alongside the Seine valley (Antoine Grumbach). For an overview, see: http://www.ateliergrandparis.fr

develop public transport or sustainable mobility initiatives and in doing so, contributed to implementing, in partnership with STIF and transport companies, some of the measures that had originally been included in the regional sustainable transportation agenda.

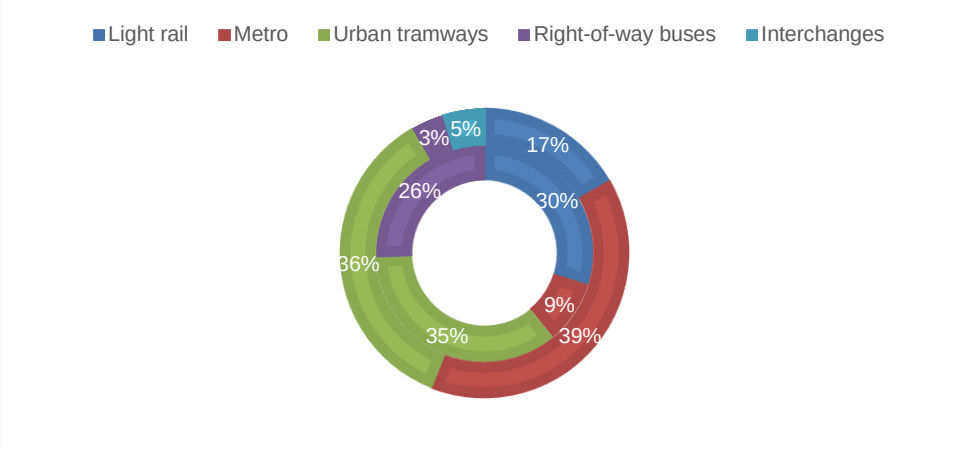
Inner suburbs particularly benefited from the expansion of metro lines and right-of-way bus lanes across the Boulevard Périphérique, as well as extended urban tramways, bus networks and interchange stations in the periphery (see Graph 5). Department authorities in particular emphasized possible synergies between the region's project with their own mobility plans in order to obtain support from STIF. As part of their newly-gained powers over road networks, they successfully negotiated cycling infrastructure investment as part of successive Regional Mobility Plans, in part, spurring development of "cycling gateways" connecting various cycling networks and reaching a total of 2500 km as of 2012.[181] Similarly to the city of Paris, départements also explored additional funding sources at regional, national or EU level in order to develop their own transport initiatives such as cycling networks and inter-municipal bus systems, and in support of municipally-led transport initiatives. In a number of cases, and even though they lacked formal powers in transport – apart from maintaining the road network - they drew on their own budget in order to develop local transport services.

Table 9. Urban transport projects funded under the Grenelle Laws in the capital-city region.

Infrastructure projects	Number of projects selected	Length	Total costs
Tram-train	4 projects	60,7km	€1,4 billion
Metro	8 projects (extensions)	19,1 km	€ 3,3 billion
Tramway (rail & tires)	8 projects (incl.1 extension)	72,1 km	€ 3 billion
Right-of-way bus	4 projects	52 km	€ 0,3 billion
Interchange stations	7 projects		€ 0,4 billion

Source: compiled by Halpern, GART 2009 & Groupe de travail et comité Grenelle « Transports urbains ».

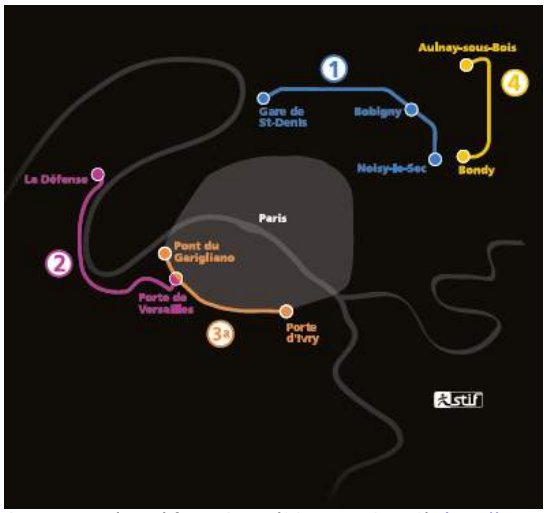
Graph 5. Urban transportation projects funded as part of the Grenelle funding programmes: costs vs. length compared



Source: compiled by Halpern, drawing from GART 2009 & Groupe de travail et comité Grenelle « Transports urbains ».

Map 9. The regional urban tramway system in 2010 and 2014

[181] This represents a 60% level of achievement of what was originally planned in the first regional Mobility Plan.



Source: retrieved from STIF (2014, p.12 &13): http://www.stif.org/IMG/pdf/STIF_DP_Tramway_2014.pdf

- *The role of parliamentarians in accelerating the emergence of a compromise:*

In addition to municipally- and départements-led resource seeking initiatives, prominent MPs from the Conservative Party sought to open a new, unprecedented transport policy-making arena within national Parliament in order to negotiate a legitimate alternative to President Sarkozy's initiative. In the context of the 5th Republic, political debates and decision-making processes about large-scale infrastructure projects and transport governance in the capital-city region had been strictly contained within the executive power.

Seizing the opportunity of a government commission to produce a report on the funding of the Grand Paris Express project, Gilles Carrez – trained as a top civil servant, an elected MP from the Ile-de-France region[182] and a prominent member of the Conservative majority – encouraged the creation of a larger working group on transport governance in the capital-city region. This was first achieved informally and this unanimously recognized expert of State finances and budget was able to strategically use his personal political and administrative network. While deliberately choosing to exclude RATP and SNCF, he included representatives from several central and local state administrations, as well as members of parliament from across the political spectrum and mainly elected in the region.

The opening of a transport policy-making arena within national Parliament accelerated the emergence of an original form of regional governance in the capital-city region. The Carrez report (2009) suggested a compromise between the Region's plan – securing funding for operating, maintaining and upgrading existing systems – and a State-led large infrastructure project. Recommending the development of an integrated approach that combined local- and region-wide systems, it also rejected the idea of land value capture and private-led initiatives in favour of classic transport funding arrangements, i.e. increase revenues from VT and users, and use state-region contracts as a preferred institutional venue for hierarchizing investment priorities over time[183]. In order to avoid complaints from local authorities outside the capital-city area, it suggested creating a new business tax on offices, whose proceeds would be paid in full to the SGP, as well as increasing VT rates. Together, these funding mechanisms ensured higher levels of self-financing in the region. This political compromise was instrumental in preventing resistance from the rest of the country against later discussions about transport in the capital-city region[184].

[182] Gilles Carrez begun his political career as an elected representative from the Conservative party in the Conseil general du Val-de-Marne (département 94) in 1985, and became mayor of Perreux-sur-Marne, a municipality of some 33.000 inhabitants in the south east of the Ile-de-France region in 1992. Perreux-sur-Marne is located on the eastern branch of the RER A line, on a section operated by the SNCF and that particularly suffers from the SNCF-RATP rivalry in operating the line. This local mandate is jointly held with that of Member of Parliament since 1993. Since 2002, he acted as this assembly's general rapporteur of the budget.

[183] See Section 2 about the current state of discussions about public transport funding in the French context.

[184] According to one of our interviewee, this was mainly justified due to the costs of such projects: "no one wished to open a debate about the costs of a transport project in the capital region, which would inevitably lead to a discussion regarding the distribution of public funding and investments in the country as a whole" (MP, 21/05/2015).

Nevertheless, as part of its recommendation about the governance of transport in the capita-city region, the Carrez report also confirms and reproduces the State administrative elites' distrust against the Region and the STIF[185]. First it recommends creating a new state-owned transport company, i.e., the future Société du Grand Paris, responsible for designing and implementing the Grand Paris initiative and to be placed under the STIF authority. Second it recommends putting an end to RATP-SNCF rivalry in the region as well as for research and development activities. Third, the Carrez report laid the ground for the changes that were eventually brought to the Blanc proposal during parliamentary debates over the 2010 Grand Paris Law.

Discussions about this piece of legislation confirmed the role of the national Parliament as a preferred venue for negotiating the future of public transport in the capital-city region, and this was confirmed during later discussions.

- *Towards an original form of regional governance in transport:*

With support from Ile-de-France region MPs and across political parties, a strong alternative to the Sarkozy Grand Paris strategy was developed in close relationship with the emergence of an original mode of governance in the capital-city region[186]. The diffusion of the sustainable urban transport model that had emerged in Paris and inner-suburban municipalities was confirmed in a formal agreement that was signed in 2011, by which a €33 billion funding envelope was made available until 2025. In addition to the development of a new, circular automated metro line, (Grand Paris Express project), the State agreed to co-fund the 10-year regional transport investment programme proposed in the 2008 Regional Mobility Plan and successive state-region contracts (2007-2013, 2015-2020),[187] enabling network maintenance and upgrading as well as network extensions in Paris and the inner-suburbs.

This decision was confirmed after the return of a Socialist majority under President Hollande's administration (2012-2017). For the first time, sustainable policies goals and policies were institutionalized in regional planning documents (SDRIF 2030, PDUIF 2014, state-region contracts for the 2007-2013 and the 2014-2020 programming period). The 2014 PDUIF, for example, acknowledges the progress made in car use reduction in the City of Paris and the inner-suburbs and underlines the need to intensify the development of transport alternatives in the metropolitan area.

This political compromise was not, however, achieved to the benefit of a new leader, e.g., the region or the State, but due to the rallying of as a vast majority of local authorities and organizations – including the City of Paris - under a single banner "all against Sarkozy". On the one hand, it contributes to strengthening the ability of STIF and subnational authorities to develop alternative policy solutions by drawing on the resources accumulated following three decades of capacity building in transport. But on the other hand, it also confirmed enduring mistrust on the part of state elites against the region's leadership over transport planning and implementation. To be sure, STIF's role as transport authority extends to SGP whereas the newly founded company's large financial, technical and political resources ensure its relative autonomy in daily activities. By contrast, STIF focuses on those projects that contribute to strengthening the local public transport offer.

All in all, the compromise resulting from the controversy over the Grand Paris Express initiative offers to address increased transport demand in the region while at the same time, developing rapid transit rail connections outside Paris and between existing lines. Some 75 per cent of the new stations will serve existing lines, and the largest share of planned infrastructures is located in the inner-suburbs.

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[185] According to one of our interviewee, a transport expert: "The STIF is an ambiguous being, always at odds with the tradition of big, massive projects. By contrast, the SGP fits well within that tradition. It reproduces the old ambiguity related to the specific status of the capital region, a situation in which the state does not give up everything, where it wants to keep control of things. Things a very different in other regions, where the state has renounced everything that is connected with urban issues. But here, it is different". (TbA, 16/04/2015)

[186] Successive amendments brought to the original project are synthetized in Table 11.

[187] This was achieved through the effective payment of State's contribution to the 5th state-region contract and granting additional funding as part of the 6th state-region contract (2015-2020). This was confirmed after President Hollande was elected in 2012.

Table 10. The Grand Paris Express initiative: a summary of main amendments.

	Arc Express Project (Ile-de-France Region) – Dec. 2007	Grand Paris Express (Blanc project) – Dec. 2008	Carrez report alternative – Oct. 2009	The SGP's integrated project - May 2011	The Nouveau Grand Paris – March 2014
Main rationale	Relieve existing network and maintenance costs in order to 1) treat emergency situations (RER A, Metro line 13), 2) maintenance costs, 3) increase inter-suburban connections.	Increase accessibility to/from strategic development poles in the region	Ensure sustainable funding by including operation and maintenance costs	Accommodate both the region and the State by strengthening the local transport offer and at the same time increasing accessibility to/from large economic centers.	Revise the project in view of a changed economic and financial context, but maintain priority on upgrading and expanding the existing network.
Total duration of investment plan	10 years (2010-2020) but 2 stages	Unknown (2025-2030?)	15 years (2010-2025) for the 1st stage, 2nd stage until 2039.	15 years (2010-2025), with a progressive opening between 2017 and 2025.	Extend total project duration until 2030, with progressive opening.
Proposed infrastructure	Two circular lines (north and south), and several interconnections.	A 140 km underground metro line, at a distance of some 10 km from Paris, and in the shape of a large eight.	A circular rail bypass (Arc Express), the extension of metro line 14 and RER E, the modernization of the RER network.	57 stations, a 160 km network of automatic metro and a total capacity of 2 million passengers / day.	Unchanged, but additional funding given to upgrading and capacity expansion.
Estimated cost	Between € 8 and 10 billion (mostly through public funding, i.e. state-region planning contracts)	€ 14 billion	€ 43,2 billion (including some € 24 billion for new infrastructure).	€ 20,6 billion (new infrastructure only)	€ 30 billion (new infrastructure only)

Concluding remarks

The current division of tasks between SGP and STIF reflects evolving state-region relationship, that is between high transport politics - developing and managing rapid transit networks under the leadership of state-owned companies and state elite networks – as opposed to low transport politics – maintaining and expanding capacity on existing networks under the leadership of STIF and subnational levels of government. The Region's authority over transport governance was further undermined through recent decentralization reforms, which further contributed to strengthening subregional levels of government's autonomy, including that of the City of Paris. The creation of the Greater Paris metropolitan authority, together with a number of specialized agencies across policy areas, is also considered a threat to the Region's leadership in a number of policy areas.

In this context, the choices made regarding the governance and funding of the Grand Paris Express initiatives reproduce the old distinction between state-led capacity investment projects in rapid transit systems and "everyday transport policies" which mainly consist of mitigating the negative impacts of the automobile and the failures of ageing networks.

4.4 Future challenges in transport policy developments

As of today, the three levels of government compete and clash in most policy areas even as the regional mode of transport governance has burgeoned. This was further exacerbated following the re-election of a Left-Green majority in Paris, with the Socialist Party Anne Hidalgo being elected as Mayor (2014), and Conservative Party candidate, Valérie Pécresse, as President of the Regional Council (2015). In a context of growing competition between levels of government during recent negotiations over territorial reforms in Paris and the capital-city region, a number of controversies over transport policy decisions have confirmed the permanence of high levels of conflict between levels of government about transport policies and infrastructure. In some cases, it led to major infrastructure crisis and major resistances, in others, it has been a source of policy innovation.

4.4.1 Addressing the rail infrastructure crisis

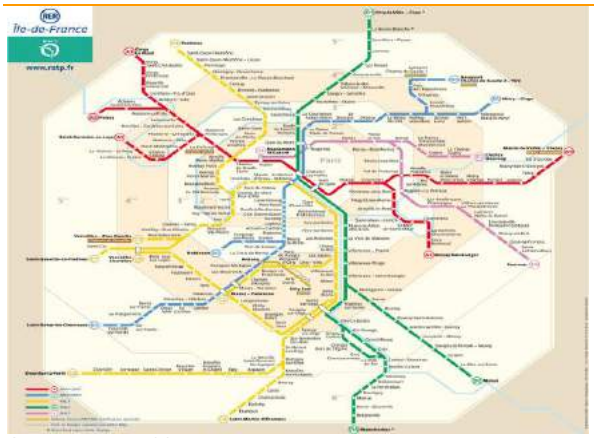
When asked to reflect about four decades of public transport governance in the capital-city region and whether or not it contributed to the reduction of car use, most interviewees often refer to the RER and the suburban regional train networks as both a success and a failure.

Over the recent period, these networks' lack of performance and difficulty to adjust to new demands and technologies is considered a major barrier for the development of Stage 3 policies region-wide. Repeated infrastructure crises highlighted the urgent need for massive investments in upgrading and modernizing these ageing networks. STIF and the Regional Council's increased investments and efforts did contribute to some improvements but were unanimously considered insufficient in view of the growing pressure it faced in a context of increasing transport demand in the region. Yet part of the solution also depends on increased coordination between SNCF and RATP, as well as between the region and the state in order to exert joint pressure. Insofar as it opened some room for manoeuvre to renegotiate implementation plans, the State's "divide and rule" strategy was considered an encouragement for lobbying strategies and a barrier against rule enforcement.

Building on the knowledge acquired during the preparation of the Carrez report and joint discussions about the 2010 Grand Paris Law, the Left-Green opposition successfully called for the opening of a parliamentary inquiry commission on the upgrading of the RER system. MP's exerted increased pressure on both companies to submit to STIF's requirements during negotiations over their respective 2012-2015 operating network contracts. Both companies were urged to find concrete ways to increase cooperation in the daily management of the RER network (Goldberg 2012), such as the opening of a joint traffic control centre on the RER A line for example. Since 2015, RATP initiated a comprehensive refurbishment programme on the RER A line together with SNCF and STIF, with seasonal closures of traffic on specific segments. Since then, a number of incidents related to the network's age highlighted massive investments needs on the RER B line. In the case of the regional train network, successive (and ongoing) inquiries related to the 2013 train crash at Brétigny-sur-Orge[188] repeatedly identified the network's insufficient maintenance as the main cause of the accident and highlighted the need to increase financial investment requirements, to revise the SNCF's network security policy as well as the overall governance of the railway sector at national level.

More generally, current debates over the state of the RER and the regional train networks provide a good example of the French State's difficulties to redefine its role and develop alternative forms of regulation and control in policy areas that are considered less of a priority than high profile projects[189]. It also highlights the need for a number of network owners across Europe to develop alternative sources of funding in order to support upgrading costs as well as information and communication tools in order to better account for the disruptive impact of modernising works over public transport services.

Map 7c. The RER network as of end 2015



Source: RATP 2015

[188] A passenger train crash, with 7 people killed and over 300 people injured.

[189] See press articles and blogposts published about the collapse of train services at Montparnasse station between July 30 and August 1, 2017.

4.4.2 Funding regional transport and sustainable transport initiatives

A second source of controversy relates to public transport funding and the decision made in 2015 by the Left-Green regional majority to adopt a monthly flat fare rate of 70€ with unlimited access to public transport region-wide. This represented a significant reduction from the previous price that is, €116,50 per month for unlimited access to all 5 zones. Introduced during the last year of the Huchon administration and a few months before the regional elections, this demand-oriented policy measure was justified in the name of social justice. The difference in the revenues would be covered with *ad hoc* interventions of the State and following the election of a Conservative regional majority, a new agreement was reached with the Prime Minister to maintain the new tariff system with a state financial coverage. According to the current agreement, the economic resources are going to be collected through an augmentation of gasoline taxes, of the *versement transport* (which upper limit is established by national law) and with an increasing of the flat tariff. Nevertheless, the political debate is still on the wave, highlighting the disconnect from operating costs[190]. Since December 2015, the Pecresse administration explores additional revenue sources in order to cover the costs of this policy measure, including a gradual increase of monthly ticket – 73 € in 2016, 75,20 € in 2017 – and additional increase of VT rates.

Beyond public transport, debates about the costs of sustainable transport initiatives also address the development of new transport services outside Paris. Until now, the development of regional sustainable transport policies has drawn from subregional- and private-led initiatives whereas regional-led initiatives have been scarce. These initiatives occurred partly at the expenses of the outer suburbs, where the quality and density of transport services are lower, and justified lower VT rates as well as the introduction of a single, region-wide tariff zone in 2015. Nevertheless, the profitability and replicability of initiatives and business models in a different socioeconomic and urban context than that of Paris has also been questioned such as in the case of Autolib, with municipalities outside Paris facing rising costs.

4.4.3 Continued efforts to overcome social resistances

Some issues have proven more difficult for both the city of Paris and the region to address, such as the development of night services or the regulation of vehicles on-demand. During the 2010 regional campaign and the 2014 municipal campaign, both Huchon and Hidalgo committed to substantially expand transport services at night – so far with limited success. In addition to Noctilien services, continued efforts from the city of Paris, organizations representing youth and the culture industry led to expanded evening and night services, on average until 0:30. Since 2014, the metro opens until 2 am during weekends (Fompeyrine, 2015). Under Mayor Hidalgo administration, the city of Paris drew on TFL's strategy in London in order to produce sufficient evidence in support of extending public transport services during night-time as a contribution to the city's attractiveness and economy. So far, it has failed to overcome resistances from RATP and SNCF, trade unions and users' associations (e.g., FNAUT) who argued that Noctilien and taxi services are sufficient enough to cope with transport demand at night. At the regional level and under the pressure from Vice-president Serne, STIF eventually obtained a commitment from RATP in 2014 that extended night time services would be ensured on the metro, the RER and the Noctilien networks on a number of special occasions (e.g., UEFA soccer games, New Year's Eve, etc.). A prominent regional politician also a member of the STIF board also admitted that night services were considered "less pressing issues in daily negotiations with RATP and SNCF over rush hours, punctuality, frequency"[191]. By contrast, additional efforts were made in order to increase safety, especially for women. But in a context in which the development of public transport services has been closely related to home-work travels and remains dependent on business tax and employers' contributions, there are little incentives to adjust to changing mobility patterns. This opened some opportunities for new mobility services to strengthen their positions within the regional transport system.

Following the recent development of app-based technologies[192], ridesourcing services expanded rapidly and highlighted the scope for new mobility services during weekends and between 2 am and 5.30 am, at a time

[190] See similar debates in Vienna, following the Red-Green majority's decision to introduce the €1 per day season ticket. (D4.2 Vienna report).

[191] Interview with regional elected representative from the Green Party, 06/12/2017.

[192] These paragraphs draw on research input provided by Gabriela Neves da Lima, during her internship at Sciences Po, CEE.

when the metro shuts down (e.g., collective taxi services) (Fompeyrine, 2015). Their development put issues related to the regulation of taxi services back onto the political agenda. As stipulated in the Transport Code[193], the main difference between taxis and companies offering ridesourcing services lies in the former's license to park-and-wait on designated areas allocated on road space and their right to use road space otherwise reserved for bus services. Since 2011, Uber acts as a major player in the capital-city region: only 60 drivers were registered in 2011, and in 2016, there were over 5000 drivers registered in the capital-city region[194]. Its main competitor, Lyft, underwent a similar growth. In total, it is estimated that some 7.200 transport companies offer ridesourcing services in France and in Paris alone, a number of start-ups and other actors (e.g., Heetch, ouiHop, LeCab, Allocab, Snapcar, Chauffeur Privé, Cinq-S and Marcel) were created[195].

Following strong and violent protest from taxi drivers, carsharing services (UberPop) were banned and until now, a number of litigation cases were opened in order to reduce the range of ridesourcing companies. Attempts to measure the phenomenon in view of a decrease of 4 per cent in Parisian car circulation remain limited[196]. Since the phenomenon is recent, it is not encompassed in the last Enquête Globale Transport (EGT) of 2010. It may however, be included in the next one, which will be published in 2020, by using the numbers of daily trips of taxis in Paris, one can estimate the relatively small demand of private hired vehicles. Taxi rides represent around 80,000 of the 15 million automobile trips, which in turn represent less than one third of the daily trips in Paris (estimated at 40 million) (EGT, 2010). As observed in other cities worldwide, the development of such mobility services challenges attempts to reduce car use, especially at night and in those areas outside Paris lacking public transport services at night or where taxi and Noctilien services are underdeveloped.

4.4.4 Dismantling urban expressways in the city of Paris

Rising air pollution episodes provided an opportunity for Mayor Hidalgo to announce her wish to further reducing car use and motorized travel modes during the early days of the 2014 municipal campaign[197]. On the one hand, it primarily consists of expanding and intensifying her predecessor's policies such as doubling the total length of bike lanes[198], expanding the 30 km-hour speed policy, further extending the circular tram line (see above, Map 9) and banning non-electric vehicles from a limited number of streets. The reduction of road space allocated to car traffic was extended to highly prestigious squares (e.g., Place de la République[199]). But on the other hand, the City's approach is altogether more ambitious and more competitive, and now seeks to draw new sources of legitimacy from public consultation devices and international place-making as a way to challenge other levels of government.

Mayor Hidalgo used every opportunity of promoting Paris on the international scene as a Green, liveable and innovative city. Acting as host during the COP21 (December 2015), in her new role as chair of the C40 network (2016) or in leading the Paris bid for the 2024 Olympic and Paralympic games, she repeatedly used transport as a major tool for in order to strengthen the city's – and her – international profile while at the same time intensifying pressure upon the State and the Region in order to gain more autonomy during discussions about decentralization reforms. In this context, she increasingly challenged Prime Minister Valls' policy in close cooperation with the Parisian Greens and their new leader, Christophe Nadjowski, her Deputy Mayor in charge of transport, traffic, roads and public space.

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[193] Code des transports, article L3121-1

[194] The services being currently offered in the city are uberPool, uberX, uberBerline and UberVan.

[195] Heetch and ouiHop define themselves as local participatory modes of transportation and follow a non-profit logic. The former dedicates its services to the periphery of Paris, youngsters (in their twenties) and nightly hours. The latter offers short distance rides according to incidental trips. Other above-mentioned services follow a more institutionalized and business-like model, yet benefit from numerical evolutions for booking and payment actions without adopting the Uber price surging model.

[196] Interview IAU, June 2016

[197] See Mayor Hidalgo's manifesto during the municipal campaign: https://issuu.com/oserparis/docs/oserparislelivrenumerique

[198] Cycling plan 2015-2020 which relies upon €150 million in order to develop 200 km of bike lanes, and plan a network of Cycle Superhighways.

[199] 70% of road space was formally dedicated to automobile traffic, and since 2014, 60% is dedicated to pedestrians. Similar works are planned in 7 other squares.

The newly elected administration also benefited from the long-awaited transposal at domestic level of EU regulations on air pollution in order to increase pressure on car users. Taking into account the numerous failures encountered in the past when attempting to introduce a congestion charge in French cities, Mayor Hidalgo and her team chose to exert increased pressure on specific types of vehicles by drawing on EU urban access regulations. A few weeks ahead of the formal adoption of the national Law on Energy transition (2015) which includes some provisions about transport, she introduced a temporary traffic ban[200] on all motorized vehicles (coaches, trucks and buses) produced before 2001 which became permanent and enforceable in September 2015, following the formal adoption of the law. A few month later (July 2016), the city of Paris was the first in France to become a "traffic restricted area": all individual motorized vehicles produced before 1997 were partly banned from the city centre, and all vehicles were encouraged to follow the "Crit'Air" national regulation, which classifies motorized vehicles according to their level of pollution and became mandatory in January 2017[201].

Similarly to the strategy developed under the Delanoé administration in order to undermine opposition in the region, the city of Paris introduced a series of financial incentives in order to complete those provided at national level[202] for individuals and professionals from Paris and the entire region in order to promote the use of cleaner vehicles, modal shift (public transport, bike-sharing) and collective investments (e.g., bicycle parking, electric vehicles charging stations). Last but not least, the city of Paris also introduced an ultra-low emission zone initiative in a selected number of areas and expanded its 30 km-hour restriction policy to the entire city.

Institutional conflicts culminated following the city of Paris' announcement to permanently ban cars from the Seine expressway as part of the Plan on air quality. It was announced during the COP21, in a context of intense political negotiations over the creation of the Greater Paris Metropolitan authority and a few weeks away from the Left-Green coalition's political defeat in the 2015 regional elections. Mayor Hidalgo's strategy to regain access to the Seine river includes a number of measures representative of a Stage 3 city: dismantling of an urban expressway, pedestrianizing this 3.3 kilometres-long area, developing recreational and Green spaces, and supporting the development of an electric tram.

This decision met with critics from all fronts, including those opposing this measure's impact on air pollution levels[203]. In the absence of regional-wide and comprehensive expertise about the negative impact of car use on health and the environment, the ban on the Seine expressway sparked unprecedented debates about impact assessment, the role of data and the selection of indicators. International transport experts, such as Phil Goodwin[204], were regularly invited in the media in order to discuss whether or not "traffic evaporation" was a measurable phenomenon and the measure's expected impact on traffic congestion in the city and at regional level. The newly elected regional Conservative majority took the lead of the opposition to the project, including motorists, shop-owners and daily commuters from the entire region. As the RER network faced a growing number of break-downs and failures (see below), the decision was criticized as lacking consideration for the overall performance of the regional public transport system and increased car dependency for a number of passengers commuting from the entire region. The upgrading of the RER network and the opening of new rapid-transit lines as part of the Grand Paris Express initiatives were not expected to happen before 2019 and a number of experts highlighted worsening traffic conditions in the region. Similarly to the criticism faced by Baupin a decade earlier, Mayor Hidalgo and Deputy Mayor Christoph Nadjowski were accused of being ideologically-driven and unilaterally prioritising the city's interests – and their own political career.

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[200] Valid 7/7 between 8am and 8pm.

[201] Also introduced as part of the 2015 Law on Energy Transition, "Zone de circulation restreinte". In Paris, state representatives issued a list of limitations (e.g., disabled people, moving trucks, etc.). The Crit'Air classifying tool was also introduced at national level in order to distinguish green (100% electric), purple (gasoline, post 2011), yellow (gasoline 2006-2010, diesel post 2011) and orange (gasoline 1997-2005, diesel 2006-2010 – estimated at 43% of the total number of private vehicles in circulation).

[202] National policy measures include: €7 billion for public transport and individual subsidies for replacing diesel vehicles with hybrid or electric vehicles.

[203] On a number of occasions, it was argued that other pollution sources exerted a far bigger impact on air quality than motorized vehicles.

[204] Emeritus Professor at UCL

In spite of the negative recommendation issued by the public inquiry commission, Mayor Hidalgo pushed the project further[205] with the state representative (*Préfet de police*) imposing a 6-month trial until March 2017 in order to better understand the measure's impact on the distribution of car traffic, noise pollution and air pollution. This also justified the setting of a temporary monitoring committee about car traffic in Paris under the Prefet's authority[206] in order to bring together existing resources in data collection and analysis from across levels of government and develop new ones. In reaction to the opening of this unprecedented discussion arena, the region installed its own committee and sought to develop its own policy solutions.

Although the closing of the urban expressway is now confirmed, ongoing discussions regarding the city of Paris' proposed schemes to actively reduce car traffic in the city and develop additional urban sustainable mobility policies[207] confirm the salience of transport issues in inter-institutional and political conflicts in the capital-city region. Reflecting on the strategy adopted in the core metropolitan area over the past three decades and in view of the State's proposed Greater Paris Express, the city of Paris now advocates systematising and intensifying a more radical approach to the use of road space by developing sustainable transport alternatives.

By contrast to the choice made in Paris, the sustainable urban transport approach shows some signs of receding in at the regional level since the election of the Pécresse administration in 2015, with an increase in public transport tariffs and new road investments. This confirms the need to consider Stage 3 policies as a dynamic process and the return to Stage 1 policies as a possible outcome.

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[205] Decision from the Paris Council, 26 September 2016

[206] Drawing on regional expertise (including from IAU), Pécresse established a regional monitoring committee whose main task was to produce monthly report and develop alternative solutions.

[207] This concerns more specifically the reorganization of car traffic in the Rue de Rivoli, another major east-west axis, through the development of cycling expressways and right-of-way bus lanes.

5 Conclusion: Conflict as a driver towards sustainable urban mobility?

The analysis done in CREATE highlights the critical role played by political and institutional conflicts in a context of exacerbated fragmentation and the extent to which a large variety of actors, namely different levels of government, technical agencies, political parties, elite groups and professional networks, compete in order to shape transport governance and the distribution of transport policy resources. This was achieved through incessant institutional reforms, major conflicts and competition strategies, and the development of highly visible policy initiatives and projects.

First, this report demonstrates that transport governance and policy processes in the Ile-de-France region underwent significant changes over the last four decades, thus suggesting it might have contributed to the significant reduction of car use that was observed in WP3. It also shows the relevance of the CREATE three stages approach for understanding the shift away from car-oriented policies in the Paris Ile-de-France region.

Second, the report also provides some explanation for policy change by looking at different drivers for change and analysing how and why they explain transport policy developments over time. It argues that the main driver for change in the Ile-de-France region lies in political and institutional competition between levels of government. By contrast to other cities under study in WP4, where consensus-seeking strategies account for policy change over time, competition emerges as the main driver for change in the case of the Paris Ile-de-France Region: competition between levels of government, between political parties, between transport companies and between social and economic groups. Together, this accounts for the continuous coexistence of two highly differentiated models of urban and spatial planning in the capital-city region: on the one hand a liveable, sustainable and compact model in which the automobile is included in a larger regional transport system, and on the other hand, a regional growth model in which the automobile plays a critical role in order to ensure daily accessibility for commuters to the core metropolitan area.

As a result, transport policy developments in Paris and the Ile-de-France region reveal an interesting paradox: over the past three decades, high level of institutional and political conflicts have accelerated – instead of prevented – the shift towards urban sustainable mobility. Demographic and urbanization dynamics were instrumental in triggering various forms of collective – or unilateral – action across the region. In terms of transport policy developments, the evolution of transport policy objectives, resource and tools sheds light on both the "What's" (substance) and the "How's" (governance) of transport policy change. On the one hand, it shows how a sustainable approach to transport planning and policy-making progressively emerged at the margins of the transport policy sector, through the diffusion of alternative representations and policy solutions, and by drawing on small-scale innovations. This incremental process is closely related to decentralization reforms and the struggle of local authorities in the capital-city region for increased institutional and organizational autonomy. It also confirms the critical role played by new social and political forces over time, such as the Greens, in strategically tapping into urban renewal and environmental policy resources and tools such as street design initiatives. But on the other hand, the evolution of transport policy objectives, resource and tools also highlight how state elites and networks are able to successively resist bottom-up pressures and maintain, in a number of cases, a state-led approach to transport planning in the capital-city region that prioritizes its role as the national powerhouse. These achievements took the form of large-scale, rapid-transit infrastructure networks such as the RER system, the motorway network and today, the Grand Paris express network – projects in which state-led organizations and elites played a critical role. Insofar as it favours a project-led approach to transport policy developments, this approach also led to "Great planning disasters" (Hall 1982) and accounts for today's infrastructure crisis. Indeed, no provisions were made for covering the costs related to network maintenance and modernization, nor has there been any incentive for transport companies and the industry to develop such skills.

Third, this case study has some significance for understanding the governance of capital-cities in Europe beyond the CREATE project. In this respect, the study of changes underway in transport helps understanding the struggle for increased autonomy and political power at subnational level against State-led governance in the French capital-city region. This driver for policy change is well known in the case of medium-size cities across Europe (Le Galès 2003), whereas capital-cities were often characterized as paradigmatic cases of ungovernable cities (Lefèvre 2009) or as latecomers (Estèbe, Le Galès, 2003)[208]. By contrast, the case of the Paris Ile-de-

[208] We benefited on this occasion from the work done as part of the "What is governed" research programme at Sciences Po, in which the governance of London, Paris, Sao Paulo and Mexico are systematically analyzed.

France region shows how political and institutional competition combined with the development of governance and policy capacities over time accounts for transport policy developments in the Ile-de-France region. Furthermore, analysing transport policy developments over time confirms the continued role of the State even though the nature of its power has considerably evolved in the context of successive decentralization reforms. This is particularly the case in those areas, such as rapid transit networks, in which policy resources were, and to a large extent still are, concentrated by state-led organizations. Yet this longitudinal qualitative policy analysis also confirms that state leadership was always contested and allowed some room for manoeuver for challengers such as local authorities, new political and social forces, or economic actors, to develop alternative approaches and policy solutions which, together, eventually led to the development of a robust urban sustainable transport model.

Last but not least, the report confirms that the shift away from the automobile city is far from being homogeneous from a social and spatial point of view. We expected to find some differences in transport governance and policies between the core city and the region as a whole, and we also expected policy change to follow a different rhythm and scope in the Ile-de-France region as opposed to those observed in the city of Paris[209]. In this regard as well, the results from WP4 are consistent with those presented in D3.2 and shows some profound differences between the core metropolitan area, which roughly corresponds to the limits of the Greater Paris Metropolitan area, and the outer suburbs, and within the metropolitan area, between municipalities. A shift away from the automobile city undoubtedly took place in the Paris Ile-de-France region, and the development of Stage 3 policies across the region is precisely documented together with the pivotal role of Green-left political actors on the one hand, and continued capacity-building at the municipal level on the other hand. There again, the struggle for increased autonomy and political power at subnational level against State-led governance provides some explanation for remaining spatial disparities in terms of transport policy developments and behaviours.

[209] See D4.1 report.

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6.2 Interviews

Paris Ile-de-France Workshop, January 29th, 2016

Organizers

- Charlotte Halpern (Sciences Po, CEE)
- Alessandro Maggioni (Sciences Po, CEE)
- Dany Nguyen-Luong (IAU Ile-de-France, Mobility and Transport Department)
- Caroline Raes (IAU Ile-de-France, Mobility and Transport Department)

Participants

- Transport engineer former SNCF, Transilien
- Expert transport planning, IAU Ile-de-France
- Transport engineer, former Ile-de-France Directorate of Roads
- Expert transport planning 2, IAU Ile-de-France
- Expert transport statistics, IAU Ile-de-France
- Expert mobility planning, IAU Ile-de-France

CREATE Study visits

- Peer-learning activities: visit from the city of Skopje to IAU Ile-de-France, March 16-17, 2016
- Study visit 'From the city to the metropolis', Sciences Po, April 18-19, 2018

Face-to-face interviews

- Sustainable mobility Unit, Department of Roads and Traffic, city of Paris (January 2015)
- Regional elected representative (Green party) (December 2016)

Interviews done during Spring 2015 as part of the TUT-POL project:

- City of Paris, Mobility Agency (May 2015; June 2015)
- Conseil général du Val d'Oise, Department of transport (May 2015)
- Conseil général des Hauts-de-Seine, Department of transport (May 2015)
- IAU, Engineer, transport and mobility department (April 2015)
- IAU, Transport economist, transport and mobility department (April 2015)
- IAU, Planning Department (April 2015)
- Ile-de-France Region, Department of planning, regional planning and metropolitan strategies (May 2015)
- Ile-de-France Region, Department of Transport, Unit of regional planning (June 2015)
- Ile-de-France Regional and Interdepartmental State Administration for infrastructure and planning (DRIEA), Department of planning (May 2015)

- Ile-de-France Regional and Interdepartmental State Administration for infrastructure and planning (DRIEA), Grand Paris Unit (May 2015)
- Jean-Pierre Orfeuil, Transport expert (April 2015)
- Local elected representative, municipality in the Seine-et-Marne Department (May 2015)
- MP Seine-Saint-Denis Department, Socialist Party (May 2015)
- MP Val-de-Marne Department, Conservative Party (May 2015)
- RATP, Department of innovation (May 2015)
- RATP, Paris office (June 2015)
- STIF, Project manager in charge of relations with transport companies (May 2015)
- STIF, Project manager, Department for economic affairs and tariff development (May 2015)

6.3 Grey literature

6.3.1 Archives

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MS 1478 : RATP, rapports du préfet sur l'expérience des couloirs réservés.

MS 1483 : Mise en œuvre du stationnement payant

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Les Echos - Le Parisien - Le Figaro - Le Monde

6.3.3 Reports, policy and administrative documents, plans.

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OMNIL http://www.omnil.fr/

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Optile http://www.optile.com

Société du Grand Paris http://www.societedugrandparis.fr

STIF http://www.stif.org/

Ville de Paris http://www.paris.fr/

Atelier du Grand Paris : http://www.ateliergrandparis.fr

Official Law Bulletin http://www.legifrance.fr

La documentation Française: http://www.ladocumentationfrancaise.fr

French Open Data Platform : https://www.data.gouv.fr

Instut Nationale de la statistique et des études économiques : https://www.insee.fr

Région Ile-de-France : https://www.iledefrance.fr/

Ministère de l’environnement, de l’énergie et de la mer : http://www.developpement-durable.gouv.fr/

7 Glossary – List of main organizations

AdCF. Association des Communautés de France. Established in 1989 in order to represent inter-municipal organizations. In 2017, it represents over 900 inter-municipal organizations and metropolises, which together amount to some 80% of the total French population.

APUR. Atelier Parisien d'Urbanisme. Established in 1967 by the Paris Council, its mission is produce reports about, to analyse and to develop policy strategies concerning urban and social evolution.

IAURP. Institut d'Aménagement et d'Urbanisme de la Région Parisienne. Established in 1960 by the State to evaluate the assessments made by the PADOG and to support the SDAURP 1965 elaboration.

IAURIF. Institut d'Aménagement et d'Urbanisme de la Région Ile-de-France. Successor of the IAURP, it supports the decision.making process of the regional council through research activity and report production.

DIRIF. Direction de Routes Ile-de-France. Established in 2006 by the State. Its mission is to managed, maintain and operate the national road network not conceded to private operators.

DRIEA (Ile de France). Direction Régional et Interdépartemental de l'Équipement et de l'Aménagement de l'Ile-de-France. Established in 2010 under the Regional Prefect authority as a result of a merger between a number of other local State administrations among which : the Direction Régionale de l'Équipement d'Ile-de-France (DREIF) and the Direction des Routes d'Ile-de-France (DIRIF). It has a consultative role on several domains: urban development, transport, road network management and operation, risk prevention, budget management.

EPA: Etablissement Public d'Aménagement. It is an operational administrative structure under the direct control of the State usually adopted to implement urban and infrastructure development plans in behalf of the State itself or of another local authority.

Grande Couronne. Following the 1968 departmental reorganization, it includes four departments and is referred to the inner-suburbs: Seine-et-Marne (77), Yvelines (78), Essone (91), Val-d'Oise (95).

Petite Couronne. Following the 1968 departmental reorganization, it includes three departments and is referred to the outer-suburbs: Hauts-de-Seine (92), Seine Saint-Denis (93), Val-de-Marne (94).

OPTILE. Organisation Professionnelle des Transports d'Ile-de-France. It is a professional organisation which represents some 80 bus companies in the region during negotiations with the STIF about operating network contracts. It concerns primarily local or departmental connections within the inner and outer suburb areas.

RATP. Régie Autonome des Transports Parisiennes. Established in 1949 by the State. Public state-owned company operating a large share of public transport services in Paris and the suburbs, incl. the metro system, the largest share of Tramway lines, as well as a large share of the bus network, and parts of the RER network.

SNCF. Société National des Chemins de fer Français. Established in 1939 by the State. Public state-owned company operating the railway transport network concerning freight transport and individual mobility. It operates a largest share of rail-based systems in the region (incl. regional trains, RER lines), one tramway line, and some bus lines through Kéolis, its subsidiary company.

STP. Syndicat des Transports Parisiens. Established by the State in 1959. Public administrative body composed by the State (majoritarian), the city of Paris, the Seine, Seine-et-Oise and Seine-et-Marne departments (before the 1968 administrative reform when it has been reformed). It has the role of organising and developing the public transport in the Paris region.

STIF. Syndicat des Transports d'Ile-de-France. Successor of the STP that was reformed into STIF 2000.

8 Annexes

8.1 Annex 1. List of key spatial and urban planning documents for the capital-city region

The following table introduces a list of key spatial and urban planning documents that are refered to throughtout the report. It was compiled and adapted from various sources, among which the Ile-de-France region website: https://www.iledefrance.fr/fil-actus-region/histoire-amenagement-ile-france

	Date	Authority	Objectives	Main projects (incl. transport infrastructures)
Plan Prost, Spatial Plan for the Parisian Region	1932-1941	State	Further densify already urbanized areas, limit urban sprawl, develop services and networks in the suburbs	Motorways (A13, A12, A1, A6, A4), a 40-km ring around Paris (Périphérique), a 2nd ring further out in the suburbs (Francilienne)
PADOG (Spatial and organizational Plan for the Parisian Region)	1960-1965	State	Decentralize, further densify already urbanized areas, limit urban sprawl	Plan large housing estates Develop new urban centres outside Paris: La Défense, Vélizy-Villacoublay, Le Bourget-La Courneuve, Créteil, Fontenay-sous-Bois.
SDAURP (Strategic spatial and urban development plan for the Parisian Region	1965-1976	State (Paris District)	Enhance the role of the region as the national powerhouse, decentralize and polycentric model.	New towns: Cergy-Pontoise, Évry, Marne-la-Vallée, Sénart et Saint-Quentin-en-Yvelines Regional rail-based transport network (RER) Preserve the Green belt
SDRIF (Strategic planning document for the Ile-de-France region)	1994	State	Enhance the region's international and European attractiveness, reduce spatial inequalities and preserve rural and green areas.	Complete the motorway network Develop tangential connections in public transport (rail transport, metro)
SDRIF 2030	2008 (never adopted, revised 2013)	State and Region	Enhance the region's international and European attractiveness, reduce socio-spatial inequalities	Densify specific urbanized areas Invest in public transport networks Protect natural resources and green areas

8.2 Annex 2. Chronology of major decentralization reforms and key legislations about transport in the capital-city region.

The following table introduces a selective overview of major pieces of legislation that shaped transport governance and policy developments in the capital-city region. These pieces of law can be found in four main policy domains: decentralization reforms, transport, environmental protection and spatial planning.

It was established together with C. Raes from IAU, as part of the WP4 Cities' reports (Raes, 2016) and completed by A. Maggioni and C. Halpern from Sciences Po. It draws upon a large variety of sources, incl. Legifrance, which is a comprehensive database for all legal documents in France: https://www.legifrance.gouv.fr/

Date	Name of Legislation	Policy domain	Content
1961	Law n°61-845 August 2, 1961 on the organization of the Paris region	State reform / capital-city region	Creation of the Paris district. It confirms and extends the 1959 legislative order.
1964	Law n°64-707, july 10, 1964, on the reorganization of the Paris region	State reform / capital-city region	Reform of the administrative organization of the Parisian region, incl. the creation of 7 départements in addition to the city of Paris, and the transfer of administrative powers towards State representatives in the region and the city (deconcentration reform)
1975	Law n° 75-1331, december 31, 1975, portant réforme du régime administratif de la Ville de Paris	State reform / city of Paris	Reform of the administrative regime of the city of Paris. The city of Paris is recognized as a municipality in its own rights, incl. an elected mayor at the 1977 municipal elections. The council's double political function - a municipal and a départemental function – is confirmed.
1976	Law n° 76-394, may 6, 1976 on the creation and organization of the Ile-de-France region	State reform / capital-city region	Reform of the administrative regime of the region. The Parisian Region becomes the Ile-de-France region. A revised version of the SDAU is introduced.
1982	Law 82-213 for the rights and liberties of municipalities, departments and regions.	State reform / Decentralization	The so-called Deferre law initiates the decentralisation process, including the removal of preliminary administrative control over local authorities' decisions. Departmental and regional executive powers are transferred from state representatives (préfets) to the elected president of these authorities' respective presidents. The president of the Ile-de-France regional council is elected for the 1st time at the 1986 regional elections.
1982	Law 82-684, August 4, 1982 on the participation of employers to the financing of urban public transport	Transport	Public and private employers must reimburse 50% of their employees' season fares.
1982	The Domestic Transport Act (LOTI), n° 82-1153, December 30, 1982	Transport	It is considered a cornerstone in the development of transport policies. It recognizes the "right to travel under reasonable conditions of access, quality and price for every citizen and for the community as a whole". It organizes the decentralization of powers to municipalities and their groupings, with the exception of the Ile-de-France Region. The LOTI establishes Urban Transport Authorities (called Autorités Organisatrices des Transports Urbains, AOTUs) that are responsible for planning and coordinating public transport services in a designated "urban transport perimeter" (PTU). In addition, it introduces urban mobility plans (PDUs).
1982	Paris-Lyon-Marseille Law, n°82-1169, December 31, 1982	State reform / Decentralization	Administrative reform of Paris, Lyon and Marseille, including the creation of directly elected infra-municipal authorities (arrondissements).
1995	Law 95-115, February 4, 1995, introducing guidelines for spatial planning and development (LOADT)	Spatial planning	Powers to elaborate the Regional Planning Document (SDRIF) is delegated to the regional council in concert with the State
1996	Law n° 96-1236 on Air and the Rational Use of Energy (*Loi l'air et l'utilisation rationnelle de l'énergie* – LAURE), December 30, 1996	Environmental protection	It introduces a number of requirements in order to mitigate the negative impact of the automobile and with more than 100 000 inhabitants to produce PDUs that will contribute to: 1) reducing car traffic, 2) promoting the use of public transport, walking and cycling. Additional measures aiming at mitigating the impact of the automobile include the reorganization of parking, the development of right-of-way bus lanes in order to increase the reliability of public transport, improving the quality of information about transport for policy users, etc. The LAURE Law also introduces a collaborative approach to transport

			planning in extending the range of stakeholders to be included in the preparation of PDUs. In the case of the capital-city region, it introduces an obligation for the Region to adopt its own Mobility Plan (PDUIF) and to ensure its compatibility with Spatial planning documents (SDRIF).
2000	Decree, July 6th, 2000	Transport governance / capital-city region	It amends previous administrative acts related to the organization of passenger transport in the Paris Region and establishes the status of the Parisian Transport Syndicat (STP). The newly created Regional Transport Authority (STIF) has the power to establish pluri-annual network operating contracts with RATP and SNCF in order to enhance the quality of public transport service and the organization of public transport.
2000	Law 2000-1208 on Solidarity and urban renewal, December 13, 2000.	Urban regeneration	Authority over the regional transport agency (STP) is transferred to the region. STP is renamed STIF (see below). + Decree introducing
2004	Law 2004-809, august 13, 2004, on local freedoms and responsibilities	State reform / Decentralization	It marks another major step towards a decentralized organization for transport in the Ile-de-France region and the city of Paris. The State completely withdraws from the STIF's board and the Region takes over the chairmanship. The Act also provides STIF with new responsibilities: it becomes the region's transport authority for the entire region and takes over the elaboration of the Regional Mobility Plan (PDUIF). Powers over the road network are also redistributed: only the national road network (incl. expressways in the capital-city region) are transferred towards the departments.
2009 & 2010	Act n° 2009-967, August 5, 2009, on the implementation of the Grenelle de l'environnement (Grenelle 1) & Law n° 2010-788, July 12, 2010, on the national commitment for the environment (Grenelle 2)	Environmental protection	The "Grenelle Laws" aims at mainstreaming environmental protection issues across all policy domains and levels of government. With regards to transport, the new legislation stipulates that "the national government will take action to reduce pollution and nuisances caused by various types of transport". It also sets a 20% reduction target in CO2 emissions between 2005 and 2020. Both laws also emphasize the need to develop alternative transport infrastructures and systems (incl. bike- and car-sharing, electric vehicles, various types of public transport, etc.). Funding is also provided at national level for urban transport infrastructure projects through three calls. It also includes the right to experiment with new policy tools, such as economic instruments (tax on heavy goods vehicles, congestion charges), zoning in major cities (low emission zones). Most attempts to introduce such policy tools failed due to social and political resistances.
2010	Law 2010-597, June 3, 2010 on the Greater Paris	State reform / capital-city region	This major piece of law sets the framework for the modernization of the existing transport network and the development of a large transport system (Grand Paris Express). It introduces the Société du Grand Paris (SGP), a state-owned transport company that is responsible for building the transport network. New transport funding schemes are introduced upon this occasion (State subsidies and taxation of commercial space).
2014	Law 2014-58 January 27, 2014, on the modernization of territorial public action and the assertion of metropolitan authorities (MAPTAM)	State reform / capital-city region	This marks a 4th wave of decentralization reforms in France. It clarifies the division of exclusive and shared tasks between levels of government. It also introduces a new level of government in large cities, e.g. metropolitan authorities. With regards to transport, it extends the responsibilities of transport authorities to non-motorized transport (e.g. bike sharing services), car sharing and carpooling, as well as urban logistics with the exception of the capital-city region. It also introduces a reform of car parking in order for municipalities to use revenues from car parking as a tool for modal shift. In the case of STIF, it is designated as the authority responsible for decisions pertaining to infrastructure projects and rolling stock acquisition for the Grand Paris Express project.
2015	Law 2015-991 august 7th, 2015 on the new territorial organization of the Republic (NoTRE)	State reform / capital-city region	This law clarifies the status and provisions related to the Greater Paris Metropolitan Authority.

2016	CDG Express Law, 2016-1887, December 28, 2016	Transport / capital-city region	A rail connexion is developed between Paris and CDG airport by 2024
2017	Law 2017-257, February 28, 2017, on the Status of Paris and Metropolitan Planning	State reform / city of Paris	As of January 2019, the city of Paris will exert the powers of a municipality and a Département. Arrondissements 1 to 4 will be merged. As of January 2017, the city of Paris gains new competences, incl. in traffic control and parking management.

8.3 Annex 3. The regional transport authority STIF: major reforms and competences

The following table lists the main reforms and stages in the emergence of a regional transport authority. It was compiled by Halpern, drawing on a number of sources including grey literature from STIF and interviews.

	Change of name	**Governance**	**Transport companies**	**Main missions**	**Main revenues**
Before 1959	Comité des transports parisiens (1938) Office régional des transports parisiens (1949)	Majority of votes lies with State representatives	Creation of RATP and SNCF	Coordinate public transport offer in the capital-city region	
1959	Syndicat des transports parisiens (STP)	Responsibility is shared between the State, the city of Paris and 3 départements.	- 2 large public transport companies: RATP and SNCF, which together represent some 90% of the public transport offer. + some 90 private companies, operating bus services. - Relations are set as part of network operating contracts under the supervision of the State Council.	- Organise and modernize public transport in the capital-city region - Coordinate public investment in transport infrastructures and services - Provide expertise about the evolution of transport demand - Contribute to the elaboration of regional mobility plans.	- No financial autonomy - Parts of proceeds from parking fines - Public subsidies or compensatory allowance, as part of network operating contracts with a division of tasks between the State (to the SNCF) and local authorities (to the RATP).
1968 + 1971 (versement transport) + 1975 (carte orange)	1st reform	- All 8 départements are represented in the board -STP is now presided by the region's préfet. - (1971) Introduction of the *versement transport*: a local tax levied on the total gross salaries of all employees of companies of more than 9 employees, intended to raise capital for investment in local public transport infrastructure. NB: the 1976 regionalization reform did not increase the region's powers within STP nor over RATP and SNCF.		Introduction of one single pass (carte orange) in 1975, valid on all public transport networks in the capital-city region.	- Financial autonomy - transport revenues - In addition to above, STP manages the proceeds from the *versement transport*.
2000 (Decree)	STP becomes STIF	Responsibility transferred to the Region, with reduced powers and	Reform of network operating contracts, now set on a pluriannual basis and	Introduction (2001) of a contactless smart card (Pass Navigo) as a single mean of payment.	- see above - Continued struggle over the State allowance to the STIF budget.

		responsibilities from the State	providing some objectives in terms of service quantity and quality.		
Since 2005	STIF	- Complete withdrawal from the Statefrom the STIF's board. - Significant extension of powers, almost equivalent to that of other regional transport authorities in France.	RATP is recognized as a rail infrastructure owner.	- Organizes, coordinates and finances public transport - Develop infrastructure investments - revise regional mobility plans - define tax rates for the versement transport additional transport services: school transport, transport on demand, river transport. - Simplification of the tariff structure (from 8 to 6 zones in 2007; from 6 to 5 in 2011 and progressive introduction of a single tariff zone).	- 50% of total proceeds from road traffic fines, - versement transport - Public subsidies Major exceptions / issues of contention with the State: - some major capital investments, such as the Grand Paris Express, the high-speed rail-link to CDG airport (CDG express) are withdrawn from the STIF's authority - rail infrastructure ownership is transferred to RATP free of charges
2015		Reform of the versement transport, with the introduction of a new threshold (companies of more than 11 employees).		Introduction of a single tariff zone for public transport.	

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