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Project website **[www.create-mobility.eu](http://www.create-mobility.eu)**

## **D4.3. WP4 comparative analysis report**

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## 1 The CREATE project in brief

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

The CREATE project explores the Transport Policy Evolution Cycle. This model is a useful starting point for understanding how this evolution took place, and the lessons that we can learn for the future.

Within the CREATE project, the primary goal of Work Package 4 (WP4) is to explore the historical evolution of transport policies and processes – from ‘car-oriented’ to ‘planning for city life’ – in five European cities (Berlin, Copenhagen, London, Paris, Vienna). It seeks to understand the policies and context, which have resulted in policy transitions from road building to accommodate car growth in the 1960s, through to car restraint and promoting walking/cycling and liveable cities in the past 10 to 15 years. Paying attention to case-specific contextual factors, policy instruments and programmes and involved stakeholders, **this comparative analysis of transport governance and policies unveils the processes and the main drivers for change.**

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. It 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 documents and analyses transport supply data and policies influencing travel demand in each city. Both WP3 and WP4 focus on five Western-European capital-cities.

Developments underway in Amman, Adana, Skopje, Bucharest and Tallin have been examined as part of the work done by Dr. Clemence Cavoli (D4.4 and D4.5 reports). An overview of the ten CREATE partners is provided in Map 1 below.

### 1.2 About this document, D4.3 Comparative analysis report

This document, **D4.3 Comparative analysis report**, constitutes the third technical report produced as part of WP4 during Task 4, “**A comparative analysis of policy processes across the five stage-3 cities**”. It draws on the work done in Tasks 1, 2 and 3 as introduced in the 1<sup>st</sup> WP4 Technical report.

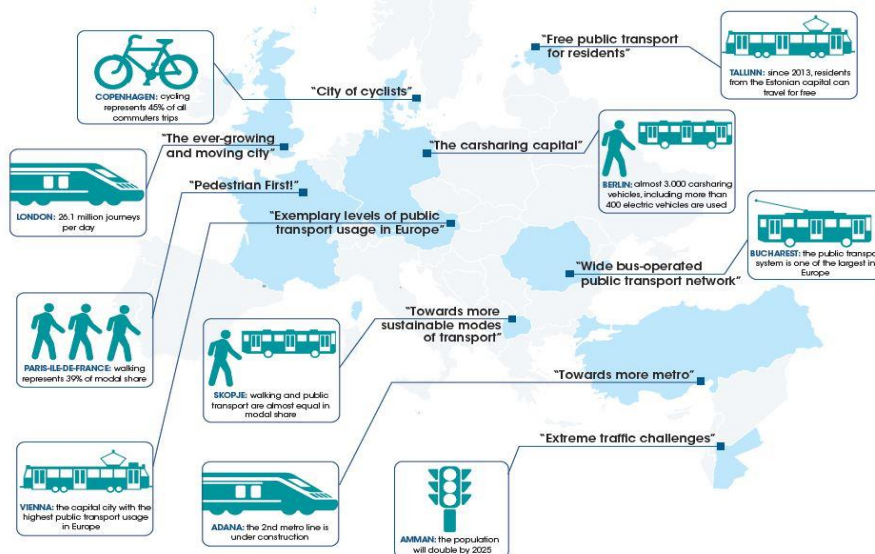
- Tasks 4.1 and 4.2, developed the common analytic framework, methodology and data collection strategy that is applied in WP4, provided a first assessment of the spatial and chronological perimeter it targets, and a brief mapping out of multi-level institutional and transport governance settings in the 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. (see D4.1 Technical report). In so far as this report remains internal to the CREATE project, some of its content was reproduced here when considered relevant.

- Task 4.3, a series of five qualitative and case study analysis of transport policy developments in all five cities (see D4.2 reports for Berlin, Copenhagen and its region, Greater London, Paris and Île-de-France region and Vienna). These reports investigate 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, these D4.2 case study reports contribute to understanding the shift away from car-oriented policies towards alternative transport policies in different city contexts. Only a summary is provided for each case study in this report. The D4.2 reports are available in full on the CREATE project's website.

Bringing together findings from each stage 3 cities, this **D4.3 Comparative analysis report** seeks to develop a comprehensive comparative analysis of policy developments relating to traffic congestion and car use over the past four decades. More precisely, it identifies those change factors that are specific to transport policies, and those that are related with the salience of transport issues in each city's wider socio-political context. Moreover, it contributes to the understanding of which factors facilitated the introduction of sustainable mobility policies and which have retarded or blocked their introduction in different political and institutional contexts. Finally, this D4.3 Comparative analysis report discusses the relevance of the stage 1-to-3 evolutionary approach for understanding policy change.

The D4.1 technical report remains internal to the CREATE project, mainly due to the fact that it introduced raw empirical material. The choice was made to include an updated version of the analytical framework and methodology section in this D4.3 report in order to provide a full understanding of the work achieved as part of WP4.

### Map 1. The CREATE partner cities



Source: ©CREATE project, 2015.

### 1.3 About the Sciences Po, CEE team

The work done as part of WP4 is coordinated by Dr. Charlotte Halpern. It very much results from a team effort. Across the timespan of the CREATE project, the following people have contributed to the completion of WP4:

- **Nicole Badstuber**, UCL, Research Assistant (case-study writer for the Vienna report)
- **Ann-Kathrin Bersch**, Research Assistant (contribution to the database and case-study writer for the Berlin report)
- **Alessandra Carollo**, Research Assistant (contribution to the database and case-study writer for the Copenhagen report)
- **Dr. Caralambo Focas**, Oxford University (case-study writer for the London report on behalf of TfL)
- **Angela Jimenez**, Research Assistant (contribution to the database)
- **Ruben Leria**, Statistician (contribution to the database)
- **Alessandro Maggioni**, Research Assistant (case-study writer for the Paris and Île-de-France report)



- **Gabriela Neves de Lima**, Intern in the CREATE project (working on new forms of mobility in the five Stage 3 cities)
- **Caterina Orlandi**, Research Assistant (media analysis and research diffusion)
- **Dr. Simon Persico**, Postdoctoral Researcher (in charge of developing the quali-quantitative database)
- **Melissa Vergara Botero**, Research Assistant (analysis of political debates about transport and mobility in London and Paris)

We have also received considerable support from the CEE Administration team:

- **Linda Amrani**, General secretary
- **Carine Gerard**, Contract officer
- **Katia Rio**, Communication and diffusion
- **Samia Saadi**, Logistics and events

Unless otherwise mentioned, she remains the sole author of this report. This report only reflects 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.

## 2 Introduction to the D4.3 Comparative analysis report

In theory, sustainable mobility marks a shift away from traditional traffic growth and mitigation policies towards a policy approach that puts greater emphasis on quality of life (see the CREATE proposal). Yet the literature also shows the large diversity of policy solutions and instruments that are effectively introduced by cities as part of their sustainable mobility policies. Similarly to other urban policies, sustainable mobility policies are often reactive, tactical and piecemeal (Cochrane, 2011; Le Galès, 2011). They combine somewhat uneasily new and innovative solutions with many elements of the former traditional technocentric and demand-led approach. Moreover, urban sustainable mobility policies are often unevenly distributed within the metropolitan territory, as they often tend to limit urban congestion and traffic in the core city centre as opposed to the rest of the metropolitan territory.

The work achieved under WP4 offers a unique opportunity to systematically explore the relationship between the reduction of car use in five European capital cities and long-term policy developments in transport. It provides a precise empirical assessment of *how* the shift from Stage 1 to Stage 3 was achieved: what do cities do as part of their urban sustainable mobility policy agenda? Why and how did they favour a given strategy? What were the main factors of change over time, and how was it introduced, e.g., gradually or overnight? This constitutes the bulk of the work achieved as part of WP4 in the five Stage 3 cities. **It allows identifying both the specificity of each city's trajectory over time as well as similarities across cities.**

By contrast with demand-led explanatory frameworks, **the work done in WP4 assumes that policy developments, and more precisely changes in transport policies and the way it combines with forms of urban governance, account for this result.** This phenomenon, how it was achieved and how it can be sustained over time, is of particular interest for other cities across Europe.

### 2.1 What are the main objectives of the qualitative comparative analysis?

1. **To empirically explore the main assumptions that underlay the “Transport Policy Evolution Cycle approach” in each of the cases under scrutiny in WP4.**

Drawing on the policy studies literature, we first assume that the relationship between the reduction in car use and transport policy processes may not be a straightforward one. Second, rather than a clear-cut policy transition, we assume policy developments to be messier, characterized by continued back and forth.

This is done by systematically examining the concrete ways through which transport policy issues are addressed over time that is, how they are framed, organized and made operational.

2. **To identify major similarities across time and across cities, while at the same time highlighting differences and accounting for them.**

Drawing on the urban governance literature, we assume that long-term policy developments in transport also raises issues related to forms of governance in cities – what is governed, by whom and how. In other words, urban governance matters and transport policy processes do not take place in a vacuum. Even more so than in the case of other cities, urban policies in capital cities are expected to be prone to blame avoidance strategies, grand gestures, and highly symbolic decisions.

This is done by developing a systematic case-by-case analysis of the five stage-3 cities. In doing so, we hope to identify major similarities across time and across cities, while at the same time highlighting differences and accounting for them.

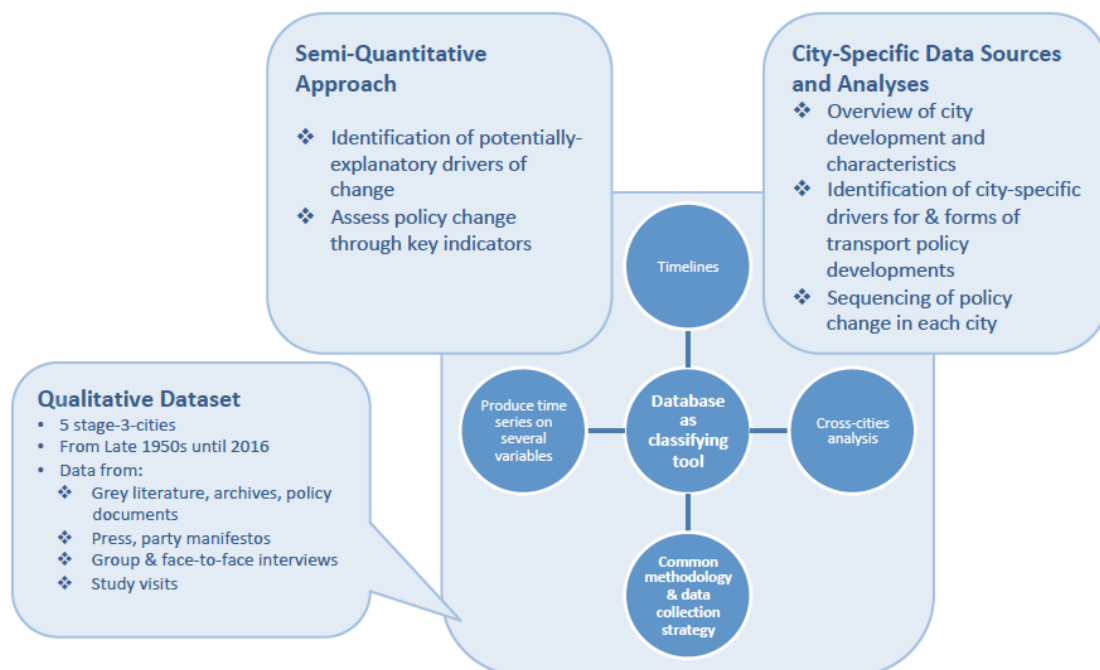
### 2.2 How does it complement the quantitative analysis achieved in WP3?

The consequences of government actions are contingent upon a large variety of factors, especially in large metropolitan areas such as the Stage 3 cities under scrutiny in CREATE. A process tracing method is applied in order to examine relationships between transport policies and the wider political, economic, social and cultural changes over time. As a method that is particularly well-suited for cases marked with multiple interaction effects, it is widely acknowledged by the comparative research as a way to explain policy outcomes when difficult to identify 2 or 3 independent variables (George, Bennett, 2005, 180). This is particularly true of policy processes

in large metropolitan areas (Le Galès, Vitale, 2013). In other words, this method contributes to the understanding of the shift from stage 1 to stage 3 by distinguishing between those change factors that are specific to transport policies, and those that are related with the salience of transport issues in each city's wider socio-political context (see also Pflieger et al., 2009).

Insofar as CREATE seeks to achieve a qualitative analysis of policy processes across five cases and over time, process-tracing allows combining within-case comparisons with small-n analysis as a way to identify intervening causal processes between policy outcomes (shift from stage 1 to stage 3) and independent variable (or variables). It complements the statistical analysis done as part of WP3 by providing different and complementary bases for identifying covariations. Insofar as both methods – process-tracing and statistical analysis – are rarely combined with one another in research projects, the work achieved as part of CREATE in both WP3 & 4 greatly enhances the understanding of processes of transport policy change across these 5 European capital-cities.

## 2.3 What are the research design and the methodology used in WP4?



Source: Own elaboration

## 2.1 Report outline

The report is organized in three sections. Section 3 presents a detailed overview of the data collection strategy in WP4, while sections 4 and 5 introduce major empirical findings, looking successively at cross-finding results and summary findings for each stage 3 city. Section 6 discusses the relevance of these empirical findings in relationship to the stage 1-to-3 evolution approach.

### 3 Data collection and analysis: introducing the WP4 dataset (C. Halpern, S. Persico)<sup>1</sup>

A first task in WP4 was to establish a common data collection strategy and to check for data availability and accessibility. Data is collected and analysed by the Sciences Po team with the help of partners in WP4 through a combination of desk analysis (available primary and secondary sources, cities questionnaires) and on site primary source investigation (workshops, interviews and in some cases, archives).

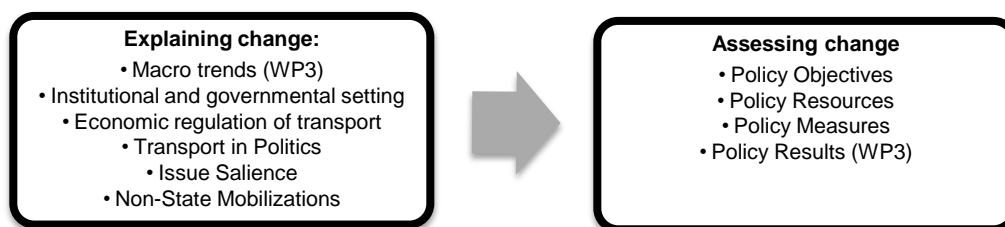
Our starting point can be summarized as follow: what have cities done as part of their urban sustainable mobility policy agenda, in terms of policy objectives and concrete measures? What resources are they able to draw upon and how are they effectively mobilized? Why and how did they favour a given strategy? What are the main internal and external factors of change conducive to change? Is there a specific dynamic of time and intensity in processes of change, such as gradual or sudden changes?

This section introduces a comprehensive overview of the WP4 dataset, discusses its uses and limits.

#### 3.1 Identifying factors of change and dimensions of policy change

First, drawing on the transport studies and the urban governance literature, as well as previous work done on transport governance (Halpern, 2013; Halpern and Le Galès, 2015), we established a distinction between those factors explicative of policy developments from changes in policy processes. This was developed in details in D4.1 report and is summarized in the figure below.

Figure1a. An overview of the WP4 analytical framework



Second, and in order to ensure an as-comprehensive-as-possible classification of data across the five cases and over time, we collected systematic and rigorous information about change in transport policies in the 5 stage-3 cities, namely Berlin, Copenhagen, London, Paris, and Vienna, on a period lasting from 1960 to 2017.

This was achieved in two different ways: developing a database gathering time-series on several variables, and collecting qualitative information through interviews and workshops. Both data collection strategies are introduced and discussed below.

#### 3.2 The WP4 database: a step-by-step process

As part of our attempt to collect systematic and rigorous information, we produced a database on transport and mobility policies in five selected cities over a 55-year period. This database is unique in its scope and nature. It opens fruitful avenues for future research as part of the comparative policy analysis agenda<sup>2</sup>.

<sup>1</sup> This section partly draws on D4.1 report and was updated in order to take into account changes brought up since May 2016.

The coding has followed a step-by-step process, which explains why we produced two – one qualitative and one quantitative – datasets. The data collection and the creation of datasets followed two main steps<sup>3</sup>.

### 3.2.1 The qualitative dataset

First, we have built a large qualitative dataset, which offers an exhaustive account of the comparative and longitudinal data collected by WP4. This qualitative dataset allows any researcher to find verified information regarding transport policy development in the 5 cities since 1960<sup>4</sup>.

The qualitative dataset present two main categories of variables (see above):

- The first one relates to « dependent variables » *assessing* changes
- The second one relates to « independent variables » *explaining* changes in transport and mobility policies, with 5 major categories

Many variables included in the qualitative dataset are informed in a thorough and qualitative way, detailing policy decisions, policy processes, and getting into details that are specific to the city studied. We tried to provide as much information as possible in order to help future researchers and us gather information regarding transport policy faster, and to allow future developments (in terms of coding). This explains why we also created a quantitative dataset, which is based on the same simplified data. The qualitative dataset thus includes 82 variables for which we have reliable information. Each row of the dataset relates to a variable\*city and each column provide values or categories of each variable for each covered year (1960-2015). The codebook describing all variables appears in appendix.

### 3.2.2 The quantitative dataset

Second, we drew information from the qualitative dataset in order to build a quantitative dataset, which can be used to assess and explain transport policy change in a statistical manner. This quantitative dataset allows any researcher to find quantified information regarding transport policy development in the 5 cities since 1960. Simon Persico has built the dataset, drawing most of the information it includes from the quantitative dataset as well as data collected by the WP3, when sufficient comparative and systematic information was available.

The quantitative dataset also present two main categories of variables (see above):

- The first one relates to « dependent variables » *assessing* changes
- The second one relates to « independent variables » *explaining* changes in transport and mobility policies, with 5 major categories

All in all, the quantitative dataset includes 61 variables. 53 variables are drawn from the qualitative dataset (those for which ID starts with DV or IV); 9 variables are indexes created from those row variables (those for which ID starts with IN). Each row of the dataset relates to a variable\*city and each column provide values or categories of each variable for each covered year (1960-2015). The codebook describing all variables appears in the annexes to this report.

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<sup>2</sup> See the work done on comparative policy analysis in the panels convened by Fontaine and Peters in the framework of the International Public Policy Association. A first presentation was given by C. Halpern at the 3rd ICPP Conference in Singapore (2017) and a paper is under preparation for the ICPP joint workshop sessions in Pittsburgh (2018) (Halpern, forthcoming).

<sup>3</sup> Following discussions with CREATE partners in June 2016, the data collection strategy was revised in order to increase the focus on those variables most relevant in D4.1, to erase those for which no or little data was accessible, and to avoid overlap with WP3 (See Annex). All in all, the scope of the dataset was reduced by some 30%. The database was completed between July and September 2016. Detailed codebooks are provided in annexes for both datasets.

<sup>4</sup> Simon Persico has supervised the data collection with the help of four research assistants: Ann-Kathrin Bersch for Berlin and Vienna, Alessandra Carollo for Copenhagen and Paris, along with Angela Jimenez for London. All coders were in close contact with city-teams, which allowed for a rather thorough collection of data.

### 3.2.3 Use of the dataset

The willingness to create two encompassing datasets including most dependent and independent variables for the whole period is based on **one main objective: implement a deductive and quantitative research approach in the study of local transport and mobility policies.**

This aims at overcoming two main shortcomings of existing research designs in the field. On the one hand, many works studying transport policy outcomes use existing quantitative data to assess transport economy (users' behaviour, transport prices, types of pricing...). These studies are extremely useful and rely on deductive encompassing data collection, but they tell us little regarding the mechanisms by which those outcomes come out. What policy outputs lead to such policy outcomes? This type of data thus needs to be complemented by data relating to the actual implemented policies, as well as to factors of change and stability.

On the other hand, most academic and administrative works studying transport policy outputs (How decisions are taken; What types of instruments are preferred? What configuration of actors and actors' mobilizations explain the evolution of transport policies?) rely on inductive case-oriented qualitative material collection. This is especially true in works studying local transport policy outputs. In such studies, exhaustive and deductive collection of data is the exception rather than the rule. Researchers shed light on specific factors; those factors might change from one study to another; there is no way to assess whether all potential explanatory variables have been searched for. We thus tried to apply a logic of exhaustive (if possible) data-collection.

### 3.2.4 Discussing the added value of the WP4 dataset

#### Advantages

Both datasets are longitudinal (covering the whole period of interest) and cross-sectional (covering 5 cities/regions). Those datasets can be used in many (useful) ways.

First of all, this data can be used for a thorough qualitative process tracing of policy making. Indeed, any researcher can find a lot of useful information regarding the policy process in our dataset. The information is systematically collected. When no information has been collected regarding one or the other variable, we explain why and we show what we have tried to get it.

Second, the dataset can be used in order to statistically describe and measure changes in transport and mobility policies in the five cities under study since 1960. We have been able to create and analyse synthetic indicators of policy outputs/outcomes, and to produce figures representing change on many dimensions of those policies. Using the dataset to describe reality is a first important step that we have to take (with more than 60 variables included in the quantitative dataset), which explain why many of the analyses produced in this report are descriptive.

Third, the quantitative dataset can also be used to produce explanatory analyses in order to better explain the link between the independent variables included (e.g., electoral competition and transport policy change) statistical analyses. As will be explained in more depth below, due to the nature of the dataset, which is based on 5 single city cases, those explanatory analyses can only remain quite simple (bivariate or small multivariate analyses).

Finally, if the design of the study is initially deductive (we thought of all variables of interest before contacting the cities and/or running preliminary interviews. Yet we have always left some room for change: in a sense, inductive research has found its room in our design, because the data collection has never been straightforward. Many of the variables were specified and explained with qualitative description. Moreover, new variables were taken into account when we realised that one type of information was lacking.

#### Limits and Disclaimers

The amount of data that we needed to gather was tremendous and tapped into many different sources (reports, statistics, press, interviews...). Our capacity to gather information relating to all variables and for the whole period was hence limited, although we could rely on the work of four data collectors and the great help from city teams. Despite these conditions, the data that cities were able to gather and transfer or that we managed to collect was very variable, depending on cities and period. Data relating to the period prior to 2000 is sparse.

Moreover, some cities have collected data for the regional level (and very little data regarding municipal policies), while other cities have made the exact opposite.

We therefore produced great efforts to make sure that all data were comparable through time and from one city to another. When we could have access to directly comparable data (e.g., for data related to budgetary variables), we tried to find a way to take those differences into account and produce a comparable indicator. As a result of these efforts, which implied simplifying the coding of some variables, the degree of precision with which variables are measured does not always reach the levels we intended. For example, many variables have become categorical instead of continuous, since no common metrics could be calculated.

Moreover, we have not always been able to collect the data we intended to. Despite the help of city teams, the information is just sometimes lacking. Some variables proved impossible to collect, such as the prominence of transport policy in local electoral manifestos and the position of parties and candidates on those issues, for one simple reason: we could not collect the manifestos (one exception being London, where we have found a relevant number of manifestos and have been able to write a London-specific report on interparty competition regarding transport policies). We also left out some variables that are still to be collected by the work package 3 and that could be added later in the dataset. Other variables could not be filled-in, for they implied extensive time or workforce to be calculated. For example, we could not perform the thorough coding of press articles in the five cities (in terms of framing, and in order to assess local and regional parties' positions on transport). All in all, these difficulties led us to leave-out 60 variables, which are listed in the *Qualitative dataset codebook* in appendix.

A final potential shortcoming of these datasets and their use relate to the number of variables, which is way higher than the number of cases under study. This means that multivariate statistical analyses have led to inconclusive (in terms of statistical significance) results. We tried to overcome this difficulty by creating super indicators and indexes summing-up relevant information, based on several variables, but this has not always proved sufficient to resolve an issue that most often happen in research regarding policy implementation (Goggin 1986): "too many variables with too few cases". Indeed although we have a theoretically high number of cases (5 cities\*55 years=275 cases), within cities values can hardly be considered as different values (a classical problem of endogeneity in time-series data).

### 3.2.5 Concluding remarks, using the data to understand transport policy change

This dataset was used in three different ways:

- Support the work done by case study writers in producing monographs about transport policy developments in each stage 3 city (D4.2. reports, see below)
- Produce a timeline of transport policy developments between 1960 and 2015 for each stage-3 cities
- Identify cross-findings results

## 3.3 Collecting qualitative information through interviews, workshops and site visits

The presentation of the WP4 database already offered an opportunity to touch upon issues regarding data availability. Moreover, this aspect of the work achieved as part of WP4 was extensively developed in the D4.1 report. We only provide some complementary information. In the following paragraphs additional insight about data collection, sources and the methodology are provided.

In order to gather some information about the pre-1990s period and, more generally, in order identify and complement primary and secondary sources, different types of sources were used:



Figure1b. An overview of the work done with cities



Source: © Orlandi, Technical note n°5.

### 3.3.1 WP4 Cities questionnaire

To begin with, partners in WP4 were asked to fill-in a “City questionnaire” by the end of January 2016. This questionnaire was meant as a first, general and descriptive overview of the timeline of transport development processes in each city. Drawing on the “Transport Policy Evolution Cycle Approach”, we suggested to consider 1968 as a common starting point. This document was also meant as a way to identify major policy measures, main stakeholders and to check for data availability<sup>5</sup>.

Table. An overview of answers to the WP4 cities’ questionnaires<sup>6</sup>

Berlin	Fliechtner M., Menge J., Berlin City report, <i>Past and present changes in urban transport governance and policies</i> , February 2016, 20p.
Copenhagen	Hansen A.R., Søgaard H., Elle S., Bækgaard L., <i>Copenhagen City report, Past and present changes in urban transport governance</i> , March 2016, 19p.
London	Focas C., <i>London City report, Past and present changes in urban transport governance and policies</i> , February 2016, 26p.
Paris Ile-de-France	Raes C., <i>Paris Ile-de-France City report, Past and present changes in urban transport governance and policies</i> , February 2016, 17p.
Vienna	Klemenschnitz R., <i>Vienna City report, Past and present changes in urban transport governance and policies</i> , February 2016, 6p.

<sup>5</sup> See annexes for a full version of the Cities questionnaire’s template.

<sup>6</sup> These reports are internal to WP4 and not for diffusion.



### 3.3.2 WP4 workshops: group interviews<sup>7</sup>

When possible, partners in WP4 helped co-organize group interviews or “WP4 workshops”. The main goal was to launch an informal group discussion with a small number of participants (between 6 and 10). They were structured as group interviews and meant as a creative way to gather data about historical transport policy processes in each city. Mainly exploratory in nature, and meant as a follow-up to the information gathered through desk analysis and the cities questionnaires, the workshops offered an opportunity to revise or strengthen our understanding of the dynamics at play in all five cities and to generate some more robust hypotheses on a case-by-case basis. Insofar as these workshops were organised within a short period of time, they also offered an opportunity to develop a first general comparative overview.

As an alternative to observation and face-to-face interviews, group interviews are a research technique that is widely used in social sciences. Following Frey and Fontana (1991, 183), it « takes advantage of group dynamics to produce new and additional data. In addition to the respondent-interviewer relationship, the evolving relations among group members can be a stimulus to elaboration and expression ». Group interviews can be organised in different ways (e.g., focus groups, pre-tests, etc.), according to the role and function they hold in a given research strategy (see also Tracy 2013).

In the case of the WP4, these half-a-day workshops **served an exploratory purpose**<sup>8</sup>. They were organised **in three out of five cities**, and in the two other cases (Berlin and Vienna), it was replaced by face-to-face interviews (see Table below). These workshops brought together several knowledgeable observers and stakeholders from the transport sector into a group discussion. Unlike other types of group interviews (e.g., focus groups), the discussion is facilitated in a light manner in order to serve this exploratory purpose. Interview questions are somewhat structured (see below), and a small number of purposive questions was asked in order to guide the general discussion and avoid overly general and trivial discussions. Since the main purpose of the WP4 workshops was to explore the pre-1990s period, questions were sent to participants prior to the workshop in order for them to prepare and bring some material they thought relevant for the research.

### 3.3.3 WP4 on-site visits, face-to-face and telephone interviews

Complementary to and/or instead of group discussions, on-site visits and face-to-face interviews were also conducted in all five cities and meant as a follow-up to the information gathered through desk analysis and the cities questionnaires. This offered an opportunity to meet with some key stakeholders that were not able to participate to the workshop or for the Sciences Po team to contact some stakeholders and academics whose names and organizations they had come across during desk.

These interviews constitute a third type of primary investigation source in WP4. The use of semi-structured interviews and of a qualitative research design was favoured<sup>9</sup>. Unlike fully structured interviews, this type of interviews allows systematically addressing a specific set of questions and themes during each interview, on the basis of an interview guide. It also ensures sufficient flexibility during the interview in order to adapt to the peculiarities of each local context. On a more trivial note, it helps adapting to the constraints of each interviewee (time, knowledge, language etc.) and to the amount of background information already gathered by the interviewer. A detailed presentation of the material gathered in each city is provided in D4.2 reports.

Table 1a. WP4 workshops

City	Workshop	On site visit and Interviews	Language	Members of Sciences Po team involved
Berlin	No workshop	Yes (Jan. 19-22; Fall 2016)	German	C. Halpern, A.K. Bersch
Paris IDF	Workshop on Jan. 29	Yes (Jan. 2016; Fall 2016)	French	C. Halpern, A. Maggioni, A. Carollo

<sup>7</sup> This task was coordinated by C. Halpern

<sup>8</sup> In all three cases, no public external to the workshops' organizers and participants was admitted. Group discussions were audio-recorded and participants were asked to sign an informed consent. When possible, the use of vernacular language was favoured during the workshop. Participants were promised confidentiality and were reminded that discussions were held under the Chatham House rule. This accounts for quotes from the workshops in D4.2 reports for being fully anonymised and not attributed to any specific participant.

<sup>9</sup> When possible, the discussion was audio-recorded. In most cases, the use of the interviewee's vernacular language was favoured both during the interview and, if applicable, its transcription.

Copenhagen	Workshop on Feb. 4	Yes (Feb. 2-5; Fall 2016)	English	C. Halpern, S. Persico, A. Carollo
London	Workshop on Feb. 12	Yes (Feb. 8-12)	English	C. Halpern, S. Persico
Vienna	No workshop	Yes (Feb. 15-17; March 16-18)	German	C. Halpern, N. Badstuber

### 3.3.4 Uses of the qualitative information collected through interviews, workshops and site-visits

First, we were able to confirm **the selection of area under study in WP4**. We tried to select the same areas than those chosen in WP3 but only to the extent that it referred to a formal level of institutional or functional governance<sup>10</sup>. This issue is particularly important in the case of Paris and Copenhagen, given the size of the city itself and the amount of daily commuting from within and outside the metropolitan area. We found some differences in transport governance and policies between the core city and the region as a whole, and we also found that transport policy evolutions follow a different rhythm and strength in the core city. In addition, we found that central-local relations play a critical role in shaping metropolization dynamics as well as forms of cooperation between the capital city, adjacent municipalities and regional authorities in all five cases. We expect this to have a strong impact on transport and mobility policies, the way they are designed and implemented throughout the metropolitan area.

Table 1b. The area under study in WP4: the five cases compared.

		Berlin	Copenhagen and its region	Greater London	Paris and Ile-de-France region	Vienna
<b>Population</b>						
	City	3.502.000	580.000 (City of Copenhagen)	8.600.000	2.265.866 (City of Paris)	1.794.770
	Metropolitan region	5.916.000 (Verkehrsverbund Berlin-Brandenburg)	1.990.036 (ex-Greater Copenhagen Authority (HUR))		7.000.000 (Métropole du Grand Paris, since January 2016)	
	Region	Not relevant (Gemeinsame Landesplanung Berlin Brandenburg)	Not relevant (Capital Region of Denmark - Region Hovedstaden)		11.800.000 (Ile-de-France region)	

Second, the qualitative information collected through interviews, workshops and site-visits helped us produce a first overview of transport policy development cycle processes in each city (D4.1 report), which was later systematized and completed with the support of the WP4 database. Timelines on transport policy evolutions in stage 3 cities were produced, drawing on the database and using the Autocad software. They provide a visual representation of transport policy developments between 1960 and 2015<sup>11</sup>. Their aim is to identify the overall tendencies in the process from pro-car policies to a much broader emphasis on liveability, to point out the main explicatory factors and turning points and to help understanding the relations between all these elements, in the form of co-variations. They represent the main ups and downs of those factors that may be explicative of transport policy evolutions between 1960 and 2015 as well as policy changes. The timelines include a large number of information in order to check: 1) The relevance of the 3 stages approach, 2) Identify covariations.

Third, the qualitative information collected through interviews, workshops and site-visits provided invaluable support for analysing 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 as part of D4.2 technical reports in order to identify major factors of change and provide a detailed analysis of transport policy developments. 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,

<sup>10</sup> For a detailed discussion for each city, see D4.2 reports

<sup>11</sup> This was done by A. Carollo.

organizational, social movements, politics etc.)<sup>12</sup>. For each of D4.2 technical report, the Sciences Po team produced a summary finding (see below), which content is available in a slightly different version on the project website as part the CREATE project's technical notes series (TN 6 to 9)<sup>13</sup>.

**Table 1c. List of case study writers for D4.2 reports**

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

<sup>12</sup> They are available on the CREATE project's website as part of the D4.2 reports series.

<sup>13</sup> C. Orlandi was in charge of this. We are thankful to Radu Gaspar and the EIP team for their support in editing the final version of the Technical notes.

## 4 Cross-city observations (C. Halpern, S. Persico, R. Leria)

In this section, we use the quantitative dataset in order to describe and explain transport and mobility policy change in the five selected cities. We start by presenting figures related to the evolution of main dependent variables (and related indexes) in order to describe policy change, before presenting graphs and figures related to independent variables, in order to assess factors of change.

### 4.1 Describing policy change

In this section, we present the main dependent variables, which allow describing and assessing transport and mobility policy change through time and across cities. We start with policy objectives, before turning to budgetary indicators and actual policy measures. The last section presents composite indicators for different policy stages.

#### 4.1.1 Policy Objectives

A first way to assess policy change over time is to focus on policy objectives. In the WP4 dataset, the “Policy Objectives” variables relate to the objectives that were found in major transport and spatial planning documents we consulted as part of this study<sup>14</sup>. We have listed seven policy objectives over time that is:

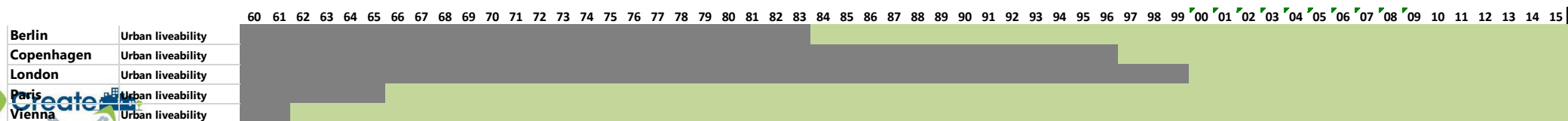
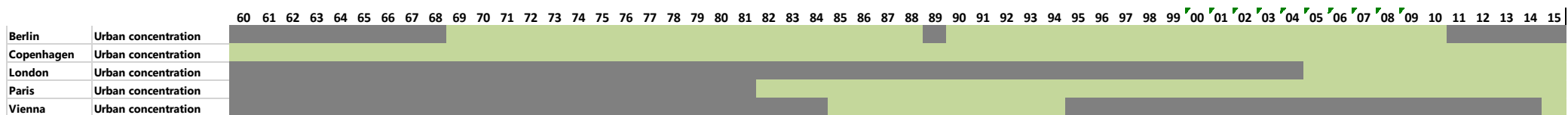
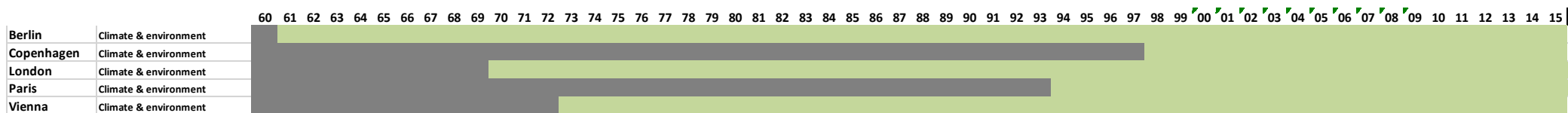
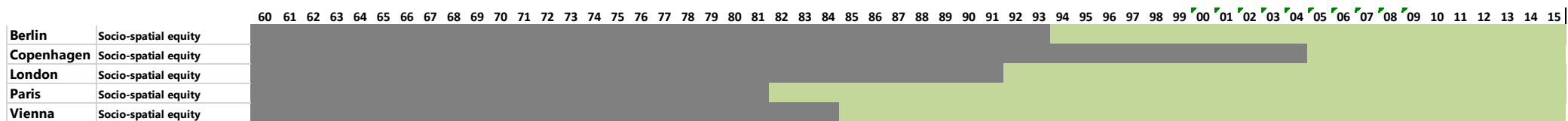
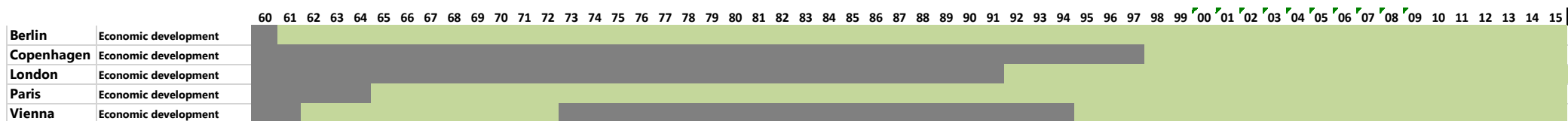
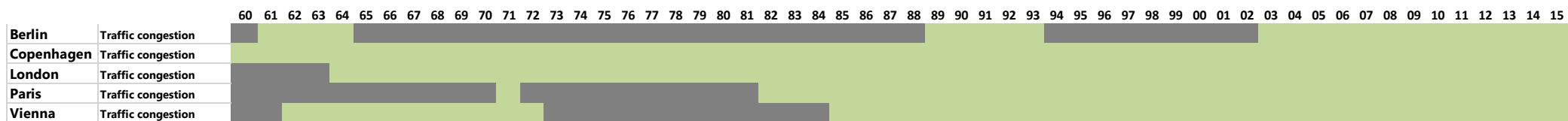
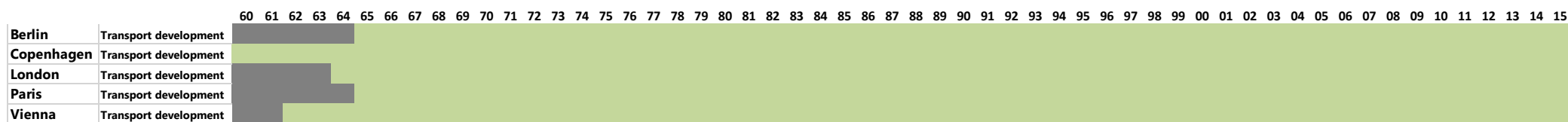
- Transport development (DV01 in the qualitative dataset; objtransdev in the quantitative dataset)
- Traffic congestion (DV02 in the qualitative dataset; objeconddev in the quantitative dataset)
- Economic development (DV03 in the qualitative dataset; objecongest in the quantitative dataset)
- Socio-spatial equity (DV04 in the qualitative dataset; objenvir in the quantitative dataset)
- Climate change and environment (DV05 in the qualitative dataset; objequity in the quantitative dataset)
- Urban concentration, densification (DV06 in the qualitative dataset; objeconcent in the quantitative dataset)
- Urban liveability and quality of life (DV07 in the qualitative dataset; objliveab in the quantitative dataset)

The seven main objectives have progressively appeared in the different cities’ planning documents over the 55-year period covered in this study. They have been successively introduced, thus creating the need for new mechanisms of coordination<sup>15</sup>. An overview of the evolution of transport policy objectives city by city.

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<sup>14</sup> The source used to assess the presence of these objectives appears in the qualitative dataset.

<sup>15</sup> For an overview in each city, see D4.2 reports.



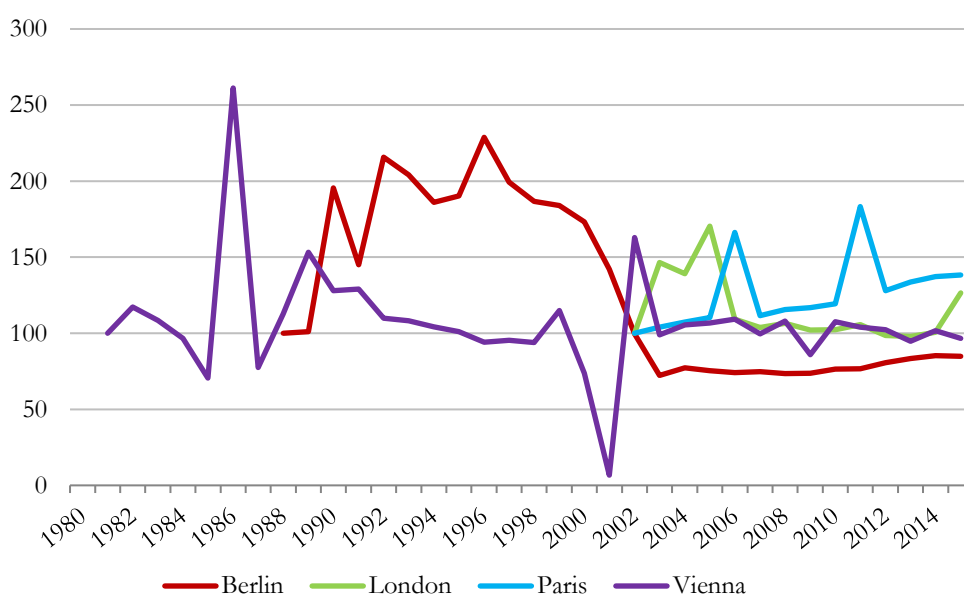


### 4.1.2 Budgets

Collecting information regarding the financial dimension of transport and mobility policies has proven to be quite challenging in all stage-3 cities. We initially included several variables to account for budgetary resources and spending. We even tried to assess the way budget was spent, by assessing levels of budget for different sectors (e.g., public transport vs. road...). Yet the complexity and the level of fragmentation of actors contributing to the planning and the spending of funding dedicated to transport policies and infrastructure remains very high<sup>16</sup>, as reflected below in the evolution of the number of transport operators and infrastructure owners across the five cities.

The data we managed to collect regarding transport budgets was very scarce and could not be easily compared from one year to another (due to unexplained breaks in collected series) and from one city to another (due to contrasted levels related to the nature of collected data rather than actual budgetary differences). We therefore decided to take into account figure about the overall planned transport budget. However, instead of comparing absolute budget levels, we calculated the evolution of this budget compared to the first collected data point. These figures should thus be considered with care, and an effort should be put in the future to gather reliable budgetary information related to transport policy, which is surprisingly lacking. Moreover, it has not been possible to establish a precise correlation between the budgets allocated to transport in the five cities analysed and the transport projects that were effectively developed.

Figure 2b. Overall transport budget (in % compared to first collected year)



While it is rather hard to see any clear pattern of change in Paris and London, Vienna's budgetary trajectory displays periods of peak (in 1986) and lows (in 2001), while Berlin displays a clear surge following reunification, before a stable decline from 1995 to 2003, followed by an impressive stability. No reliable data regarding budgetary spending or resources could be collected for Copenhagen.

### 4.1.3 Policy tools and measures

The "Policy tools and measures" variables relate to the specific ways through which policy objectives have been made material in each city. We have listed 18 policy tools and measures for which we hold consistent

<sup>16</sup> This is consistent with the work done by Vectos as part of WP5 on the funding and financing of transport policies across all ten CREATE cities.

data over time across the five stage-3 cities. We assessed their presence in each city over the 55-year period covered in WP4.

Similarly to what was observed in the case of policy objectives, it should be noted that new policy tools have regularly made their appearance in the five stage-3 cities, but once introduced, they have rarely disappeared. This highlights the robustness of devices aimed at linking specific policy objectives on the one hand with the allocation of resources between interest groups on the other hand.

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#### 2.1.3.1. Policy tools and measures

We first show how the 18 transport policy tools have progressively appeared in the different cities' transport and mobility policy tools. A first series of policy tools have contributed to making vehicles cleaner or to mitigate their environmental impact. They can thus be considered as pertaining to stage 2 policies.



- Taxation of conventional fuel (DV09 in the qualitative dataset; taxcon in the quantitative dataset)

[illegible]

- Incentives to use alternative fuel (sulphur free, biofuel, gas) (DV10 in the qualitative dataset; fuelincent in the quantitative dataset)

[illegible]

- Incentives to use electric cars (DV11 in the qualitative dataset; elecincnt in the quantitative dataset)

[illegible]

- Incentives to use low emission vehicles (DV12 in the qualitative dataset; lowem in the quantitative dataset)

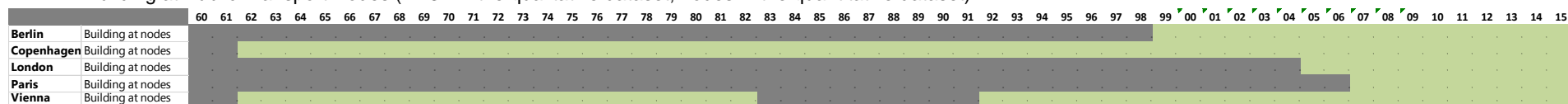
[illegible]

- Incentives to reduce noise pollution (DV17 in the qualitative dataset; noise in the quantitative dataset)

[illegible]

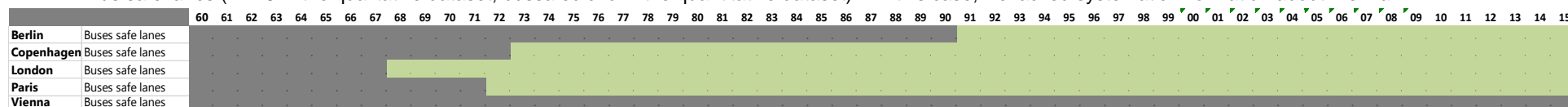


### Building at Public Transport Nodes (DV32 in the qualitative dataset; nodes in the quantitative dataset)

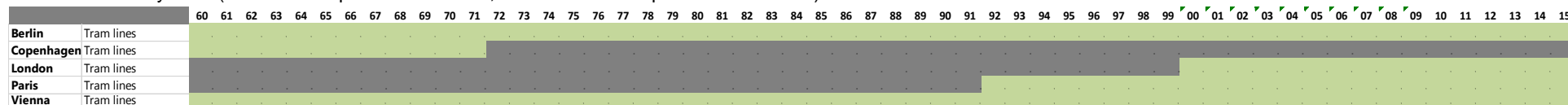


In addition to policy tools, specific policy measures have led to developing new transport modes and services. This is the case of public transport infrastructure, which are either aimed at investing in capacity extension or at increasing the reliability and speed of existing networks. The case of metro networks is of particular interest and confirms that all stage 3 cities benefited from extended public transport networks throughout the time period considered in this report, including when car use emerged as a dominant mode.

- Bus safe lanes (DV28 in the qualitative dataset; bussafedicho in the quantitative dataset) – in this case, we lacked systematic information about Vienna



- Tramway lines (DV29 in the qualitative dataset; tramdicho in the quantitative dataset)



- Metro lines (DV30-1 in the qualitative dataset; metrodicho in the quantitative dataset)

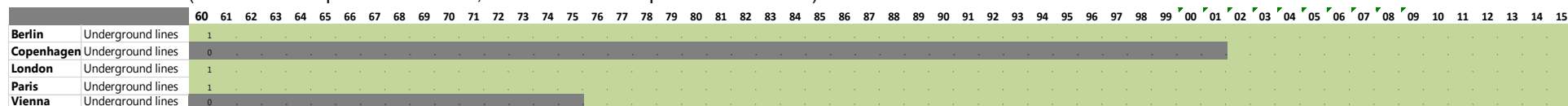
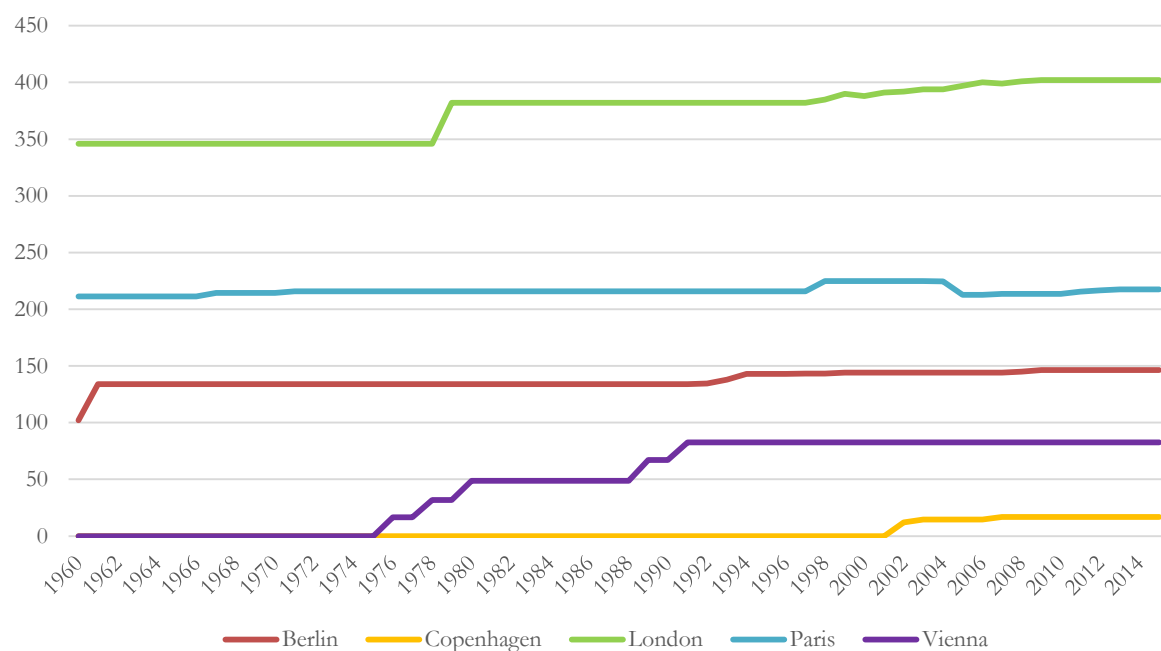
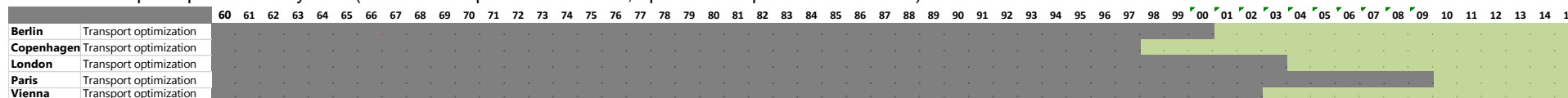


Figure 2b. Kilometres of metro lines (DV30 in the qualitative dataset and metro in the quantitative dataset)

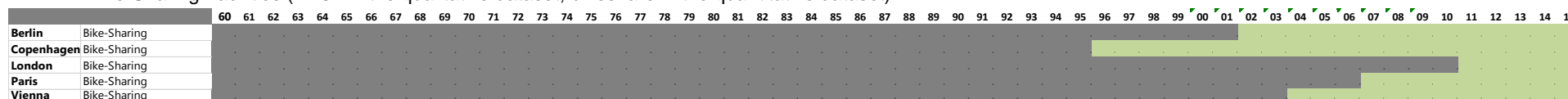


Last but not least, a series of policy measures relate to the introduction of technical devices in support of optimisation strategies or the development of new services. Over the recent period, they are closely related to smart city agendas and the platform economy.

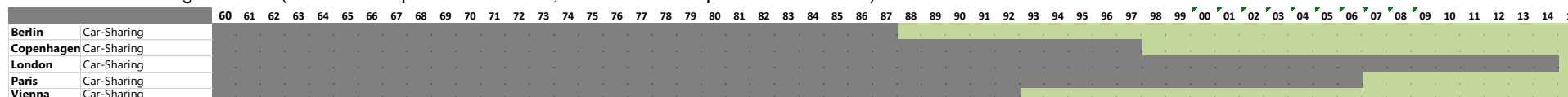
- Transport optimization system (DV27 in the qualitative dataset; optim in the quantitative dataset)



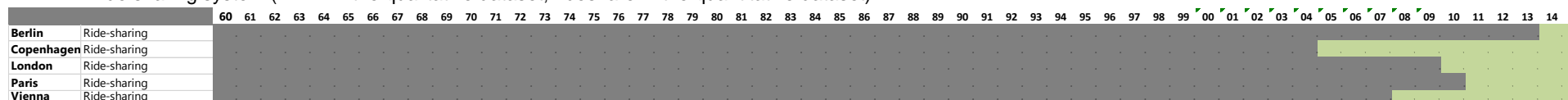
- Bike-Sharing Facilities (DV34 in the qualitative dataset; bikeshare in the quantitative dataset)



- Car-Sharing Facilities (DV23 in the qualitative dataset; carshare in the quantitative dataset)



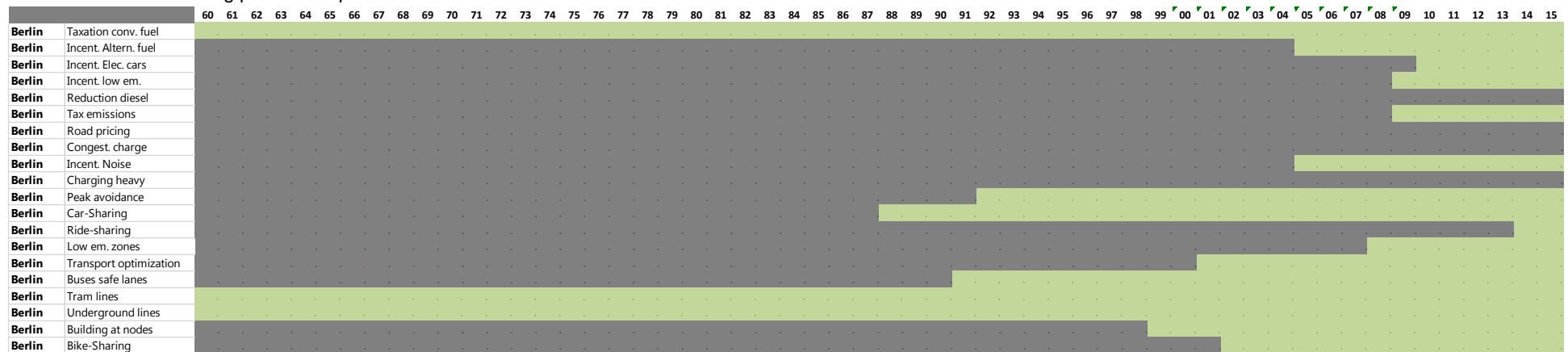
- Ride sharing system (DV24 in the qualitative dataset; rideshare in the quantitative dataset)



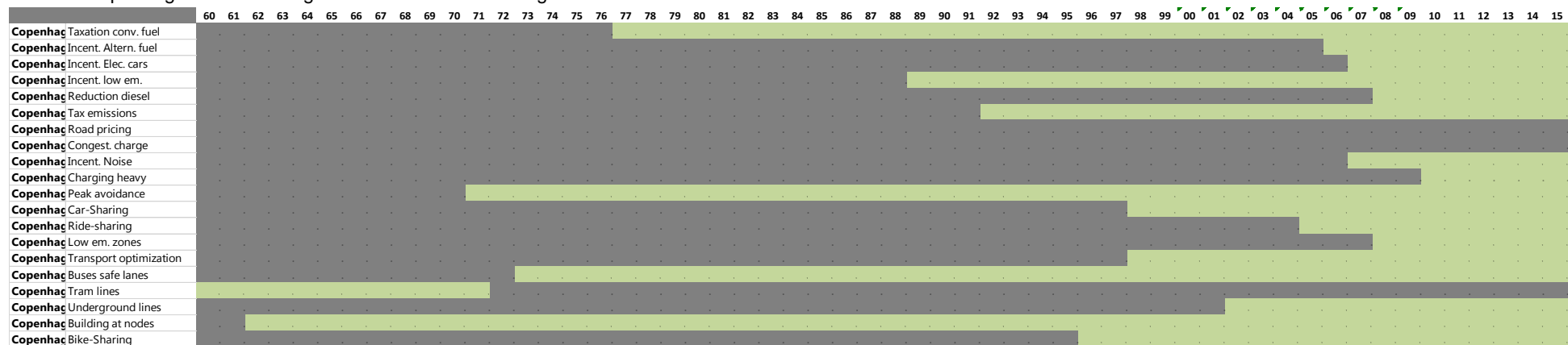
### 2.1.3.1. Policy tools and measures in each city

It is also possible to plot all measures by city to see how each city has implemented those measures at a different pace. Those figures highlight some findings from case study analysis regarding specific combinations of transport policy tools that contribute to characterizing each city's specific trajectory.

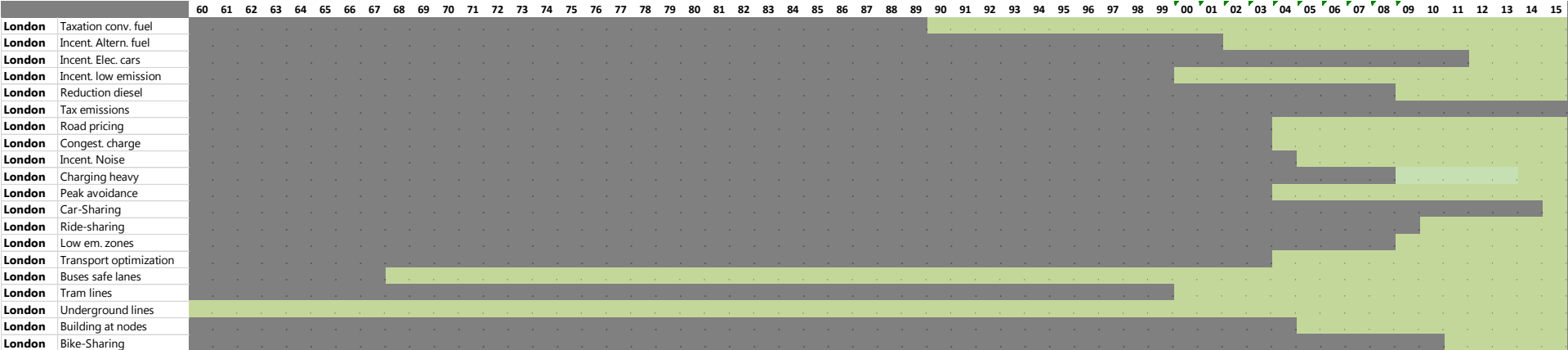
- Berlin: combining public transport with car fleet renewal initiatives



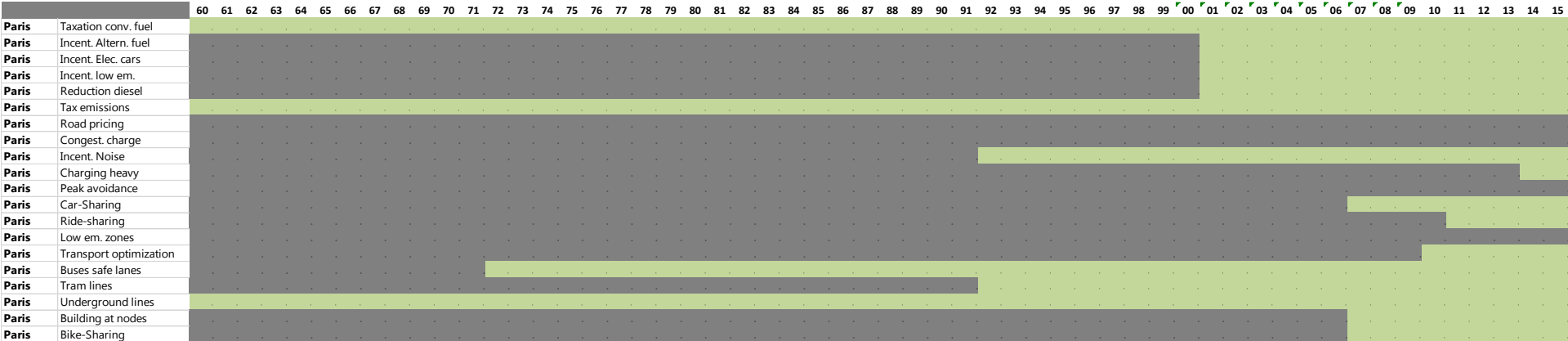
- Copenhagen: land use regulation combined with congestion reduction and car fleet renewal



- London: combining public transport with congestion reduction and car reduction initiatives.



- Paris Ile-de-France: public transport combined with car fleet renewal and traffic mitigation



- Vienna: public transport combined with congestion reduction, land-use regulation and traffic mitigation

[illegible]



#### 4.1.4 Mapping out policy changes according to the stage 1-to-3 evolution cycle.

We started by developing an index for each stage.

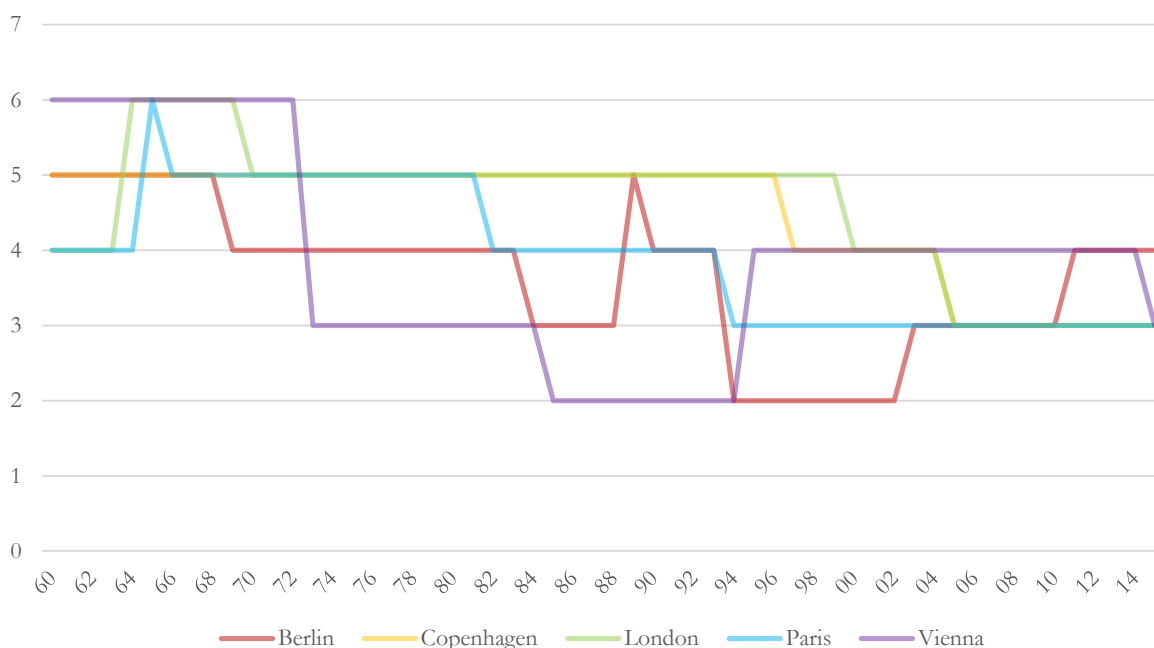
##### Stage 1 index

Building the stage 1 index has not proved really easy due to the difficulty of collecting data related to the early years of the studied period. Stage 1 measures are typically oriented towards cars, and, for example, it has proved hard to find data regarding the length of road. We therefore decided to focus on the presence and absence of specific objectives in planning documents. The variables composing this stage 1 index are the following:

- Presence of objectives: Transport development; Economic development / Competitiveness; Traffic congestion
- Absence of objectives: Climate change and environment; Socio-spatial equity; Urban concentration, densification

The presence (or absence) of these objectives is summed-up in order to build the index below. It appears clearly that all cities have derived from the Stage 1, even though the drop is not dramatic. Indeed, most of the typical stage-1 objectives (development and economic competitiveness) are still largely present in planning documents. This confirms the need to look beyond policy objectives when seeking to assess policy change. This is done by taking into account changes in the evolution of budgets, policy tools and measures.

Figure 3a. Stage 1 index “planning for cars”



##### Stage 2 Index

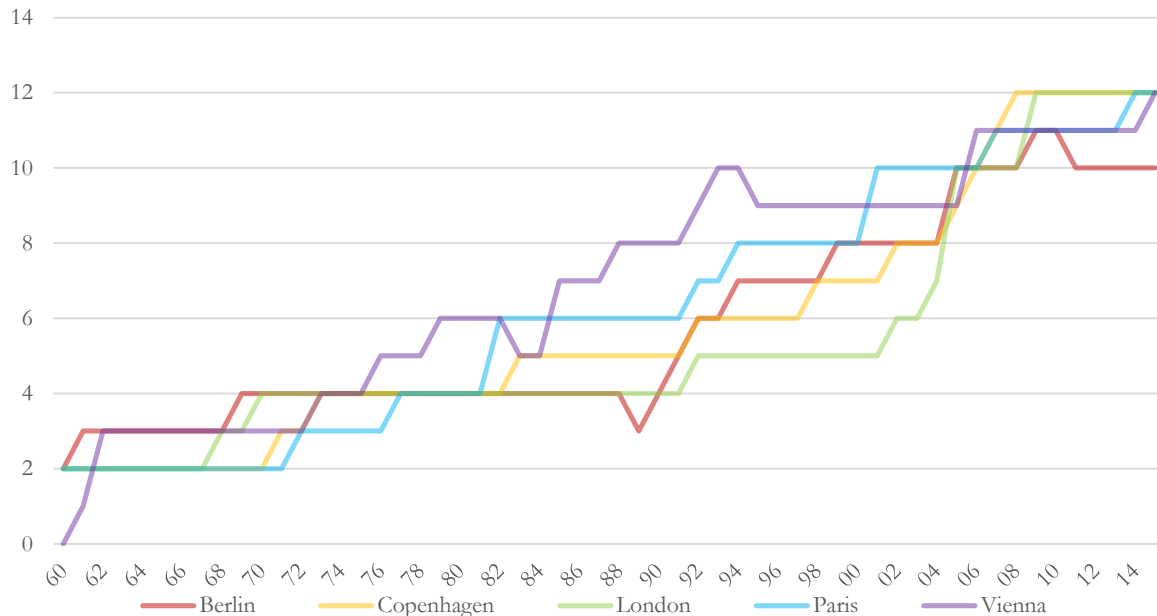
Composing the stage 2 index was easier since we could rely on some of the collected data as well as other objectives. The variables composing the Stage-2 index are the following:

- Presence of objectives: Climate change and environment; Socio-spatial equity; Urban concentration, densification
- Presence of tools & measures: Incentives to use alternative fuel (sulphur free, biofuel, gas); Reduction of diesel fuel; Tax on carbon emissions; Incentives to reduce noise pollution;

Charging system for urban transit (heavy vehicles); Development at public transport nodes; Peak congestion avoidance; Buses safe lanes; Railways; Underground lines

Each presence of these objectives and measures is summed-up in order to build the index. The graph below shows how all cities have moved up the index, even in the latest years of the studied period.

Figure 3b. Stage 2 index “Planning for people”



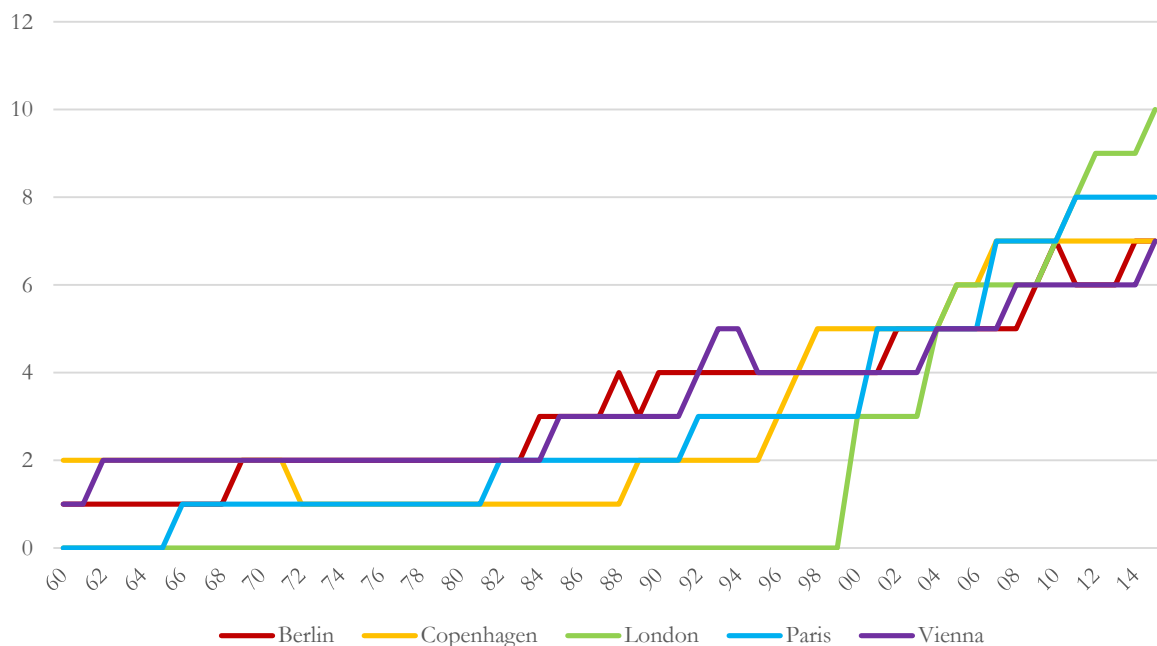
### Stage 3 Index

Composing the stage 3 index was even easier since all objectives and measures we wanted to integrate in this index could be easily retrieved in cities' archives. As the last step of the urban transport development cycles, Stage 3 relates to recent measures, which have been put in place in recent times. The variables composing the Stage-2 index are the following:

- Presence of objectives: Urban concentration, densification; Urban liveability and quality of life
- Presence of tools and measures: Incentives to use electric cars; Incentives to use low emission vehicles; Road pricing at the urban level (toll lanes, roads & bridges); Congestion charge; Bike-Sharing Facilities; Car-Sharing Facilities; Ride sharing system; Tram lines

The presence of each of these objectives, tools and measures is summed-up in order to build the index. The graph below shows how all cities have moved up the index, but most part of the rise has happened since the end of the 1990s. One must also notice the rapid change underwent in London: it did not enter stage 3 before 2000 and then moved up the index so as to become the city with the highest stage 3 score.

Figure 3c. Stage 3 index “Planning for places”



## 4.2 Describing potential factors of change

In this section, we introduce some cross-city comparative results about drivers of change in each stage-3 cities were and indexes, i.e., the ones which we think might have an impact on policy objectives and policy measures. We pay a close attention to institutional and governmental settings, then to the economic regulation of transport, before turning to electoral politics and to other variables such as interest groups and the media.

### 4.2.1 Institutional and governmental settings

A number of variables in the database helped us assess the institutional setting in which decisions were made.

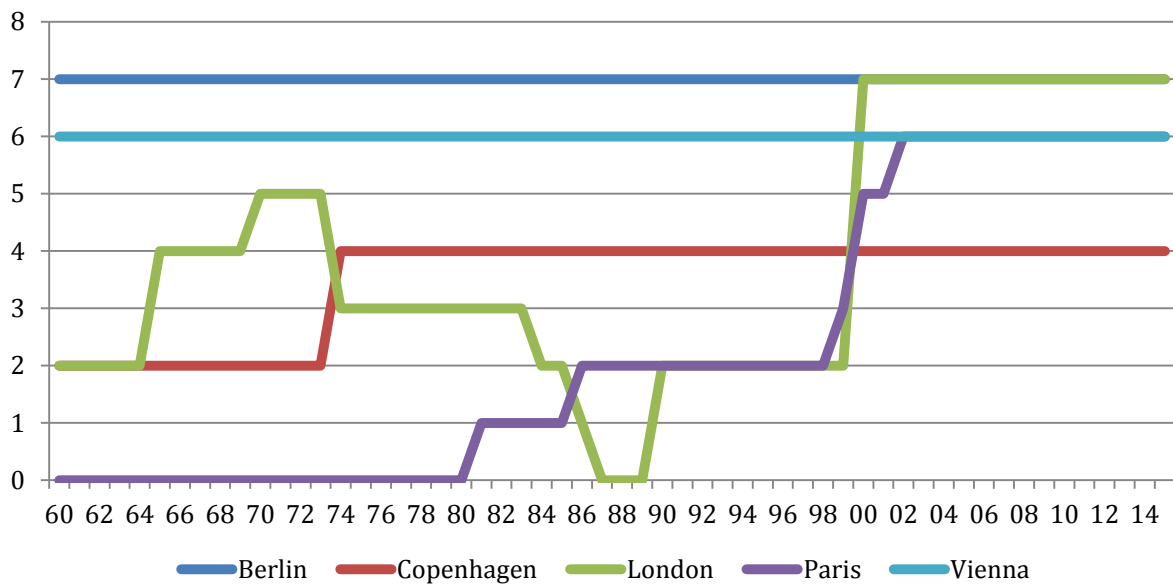
In order to analyse a common indicator summarizing this institutional setting, we created an Institutional Autonomy Index, based on the summation of seven variables : Nature of the political regime (Federal(2)/Decentralized (1)/Unitary(0)) ; Presence of a specific status for the capital city region (1) / Absence(0); Level of government in charge of transport policy design (Local & Regional (1)/National (0)); Level of government in charge of transport planning (Local & Regional (1)/National (0)); Level of government in charge of transport funding (Local & Regional (1)/National (0)); Autonomy in local finance (Yes(1)/No(0)); Integrated Agency (Yes(1)/No(0)).

In sum, the higher the institutional autonomy index, the more powerful the local government is vis-à-vis national government.

What appears clearly in the graph below is that all cities now benefit from a rather high institutional autonomy, although they started from very different standpoints. Berlin and Vienna have enjoyed a high degree of autonomy over the whole period as part of their respective federal systems. In the case of Berlin, for the period prior to the Reunification, we chose to focus on West-Berlin. London has first seen its autonomy decline under the Thatcher and Major governments before reaching very high levels after 2000.

Paris started from having absolutely no autonomy and now enjoys a great deal of leverage. Copenhagen has slightly increased its level of autonomy, but the Danish capital still remains dependent from the central government. These findings are consistent with the work produced as part of D4.2 reports.

Figure 4. Institutional Autonomy Index

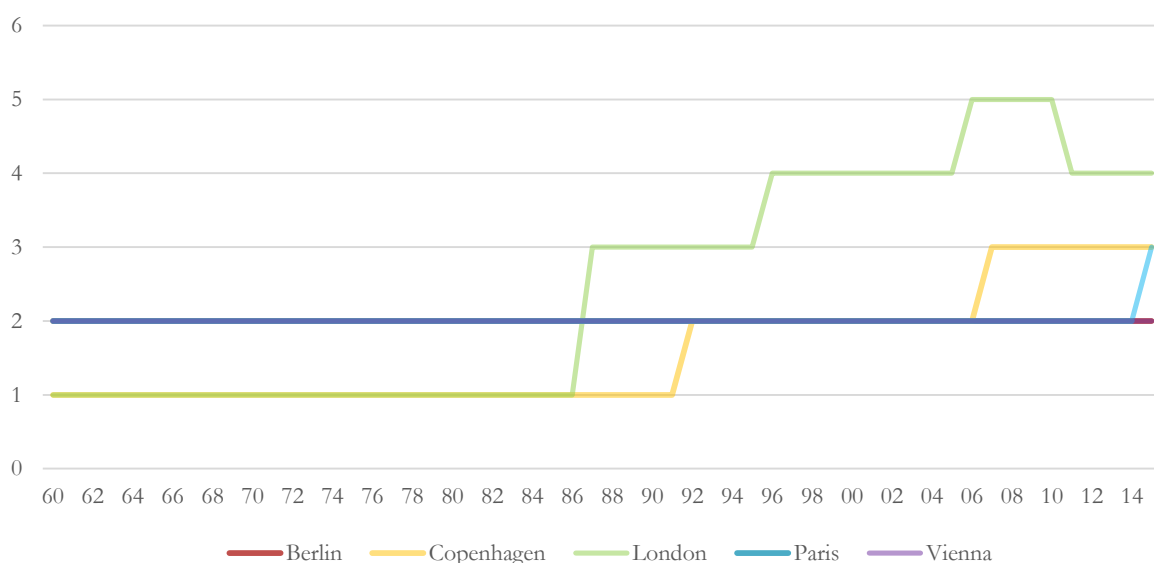


#### 4.2.2 The economic regulation of transport

To assess how transport is organized, we focus on two specific indicators, namely the number of transport infrastructure owners, and the number of transport company owners. This helps us evaluating how concentrated public transport is in each city. Unsurprisingly, the management of public transport infrastructure is highly concentrated, with most cities having 1 or 2 infrastructure owners, even though this number has slightly increased in the recent period.

London stands out as a city where the number of infrastructure owners has increased sharply following the privatization era under Margaret Thatcher.

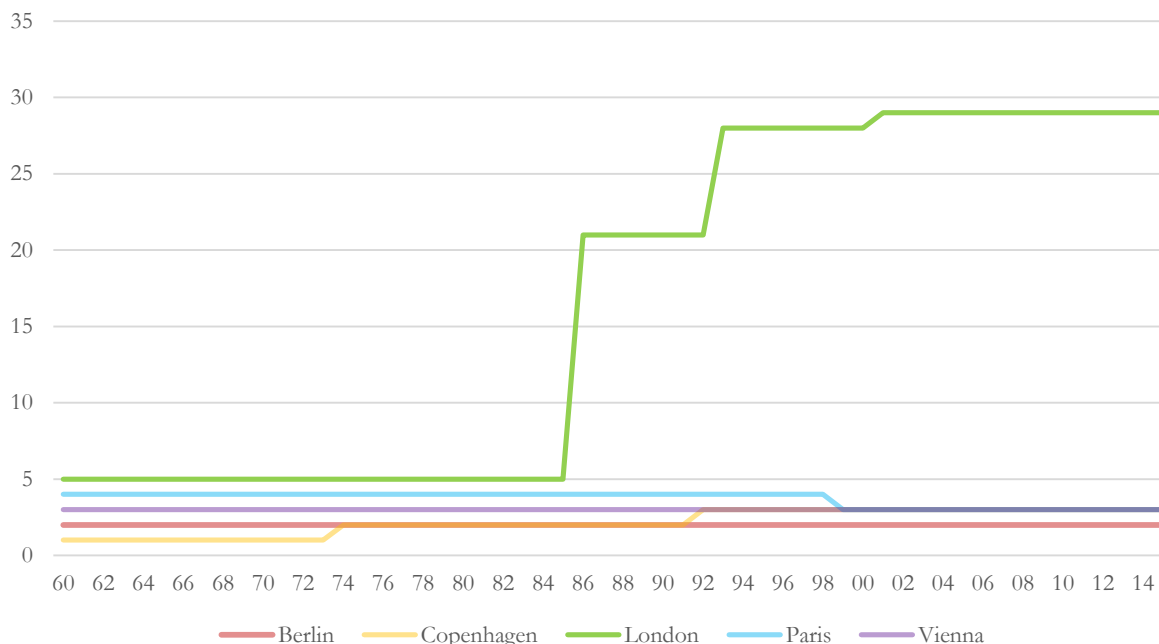
Figure 5a. Number of transport infrastructure owners



However, this increase in London remains marginal when compared to the increase in PT company owners, which is now almost 30 in London, while it started from a low 5 in the 1960s and 1970s. In other cities,

public transport has remained rather concentrated. All in all, the difference between London and the four other cities, as well as the radical transformation of the economic regulation of transport in the UK stand out, more than any other variations.

Figure 5b. Number of transport company owners

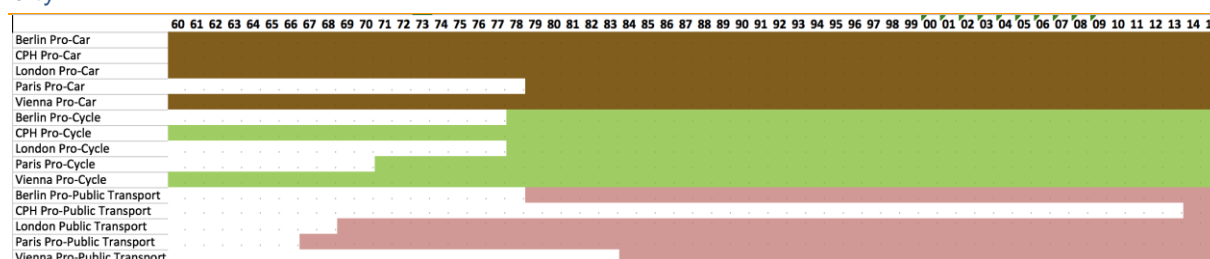


### 4.2.3 The role played by interest groups

The role played by the civil society in influencing decision-makers towards the transformation transport policy must also be studied carefully. When looking at the collected data, it appears that differences between cities are rather small. Almost all cities have had to deal with a pro-car interest group ever since the 1960s, but also with pro-cycle clubs and even pro public transport interest groups.

The respective role of these interest groups was analysed in order to account for transport policy developments in each stage-3 cities.

Figure 6. Presence of a pro-car, pro-cycle and pro-public transport interest group in each city.



### 4.2.4 Assessing the role of media salience in explaining transport policy evolutions (Caterina Orlandi and Simon Persico)

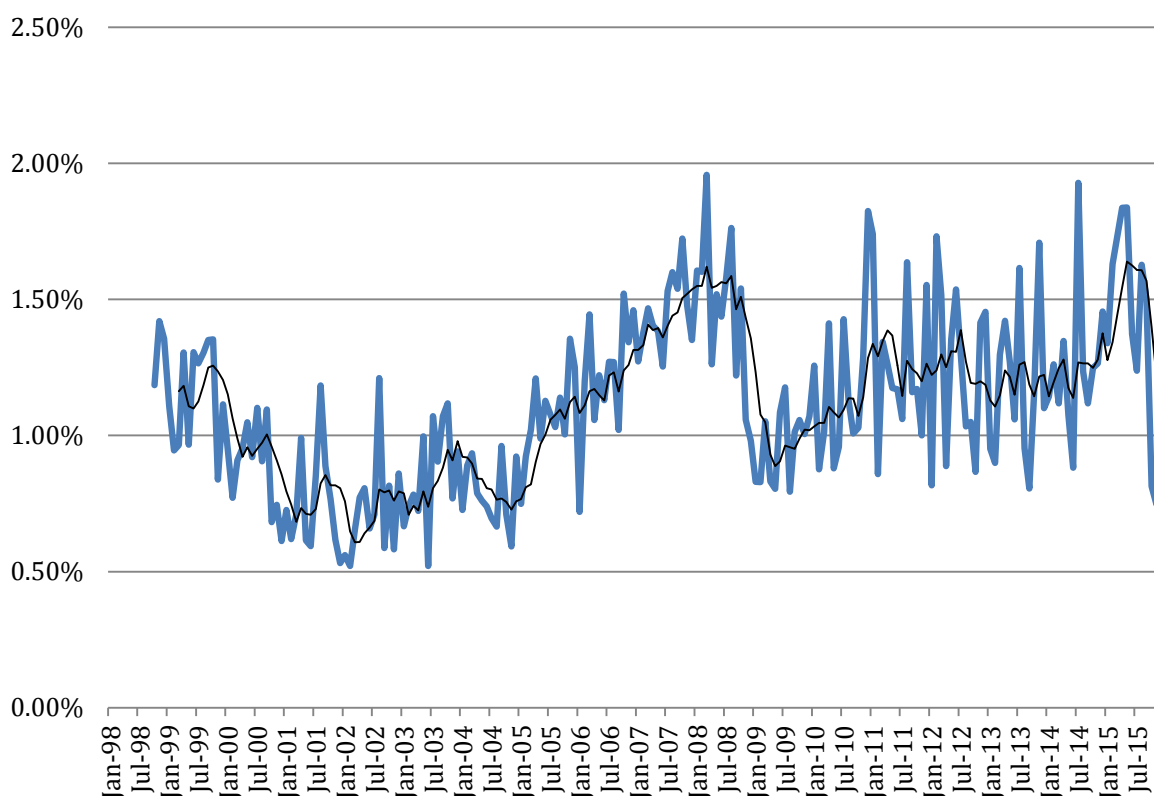
Following the suggestions made by partners in the CREATE project, we also sought to assess the relevance of transport and mobility issues in local newspapers as a way to understand their role in shaping transport policy developments in the five stage-3 cities.

Studying media salience of transport and mobility issues in the five cities under study has not been an easy task<sup>17</sup>. Following suggestions from experts and partners, we decided to focus on 5 different newspapers: the *Berliner Zeitung* (Berlin), *Politiken* (Copenhagen), The *London Evening Standard* (London), *Le Parisien* (Paris), *Der Standard* (Vienna). We also decided to use Factiva (as a mean of selecting similar query's outcomes), which allowed to calculate the number of articles dedicated to transport and mobility issues each month, and to evaluate the percentage of attention dedicated to this issue (after calculating the overall number of articles published by each newspaper each month). The periods covered in the press database span from 17 years (London) to 10 years (Paris). These differences are caused by contrasted digital archiving policies by the different newspapers<sup>18</sup>.

#### Findings about media salience: Berlin

The figure below features the Monthly salience of transport and mobility issues in the *Berliner Zeitung* (in % of total number articles) February 1998 – December 2015. The total number of articles in the *Berliner Zeitung* is rather stable and varies between 3,500 and 5,200 articles per month.

Figure 7a. Monthly salience of transport and mobility issues in the *Berliner Zeitung* (in % of total number articles) February 1998 – December 2015



Source : Berliner Zeitung  
Query (Factiva's keywords): Verkehr\* or Mobilität or "Bundesministerium für Verkehr"

#### Findings about media salience: Copenhagen

The figure below  
salience of transport and  
(in % of total number of

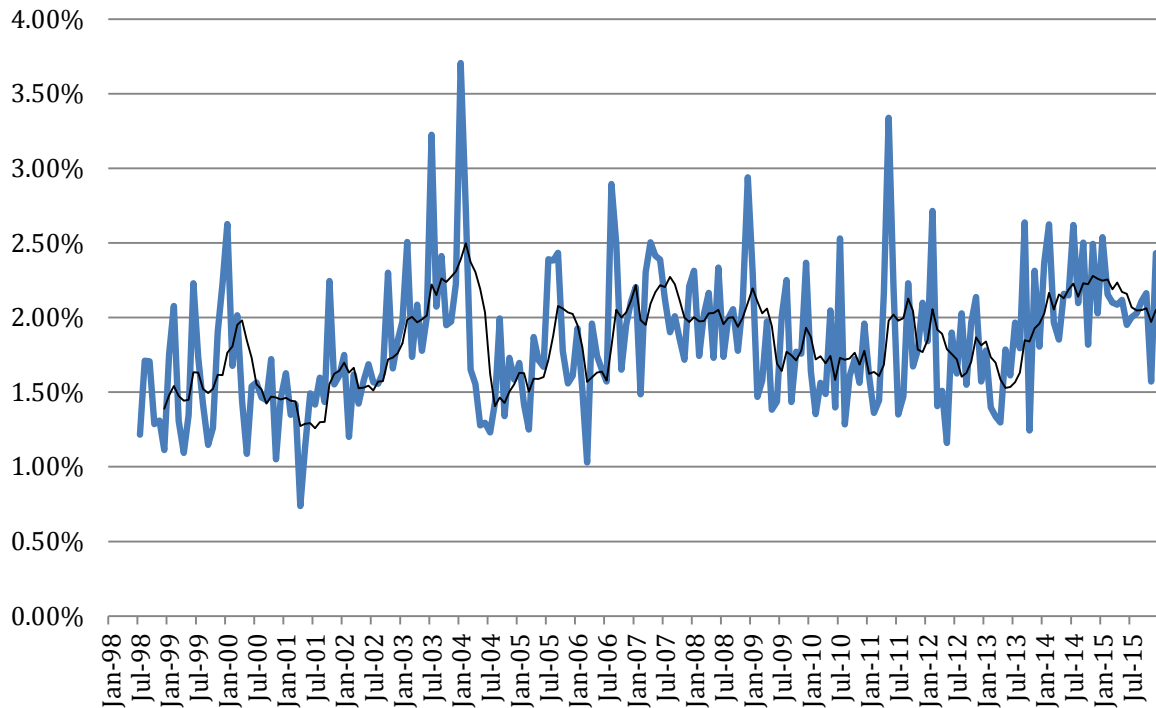
features the monthly  
mobility issues in *Politiken*  
articles), March 1998 –

<sup>17</sup> Done by Caterina Orlandi, under the supervision of S. Persico and C. Halpern

<sup>18</sup> We tried to access newspapers' archives through other means than Factiva (e.g., using Europress or newspaper's websites), but this raised strong issues of comparability and did not prove to expand the available period coverage significantly

December 2015. The total number of articles in *Politiken* varies between 2,800 and 6,100 articles per month. However, the variations in the salience of transport and mobility issues shown in this graph are not related to the variations in the overall size of the newspaper.

Figure 7b. Monthly salience of transport and mobility issues in *Politiken* (in % of total number of articles), March 1998 – December 2015.



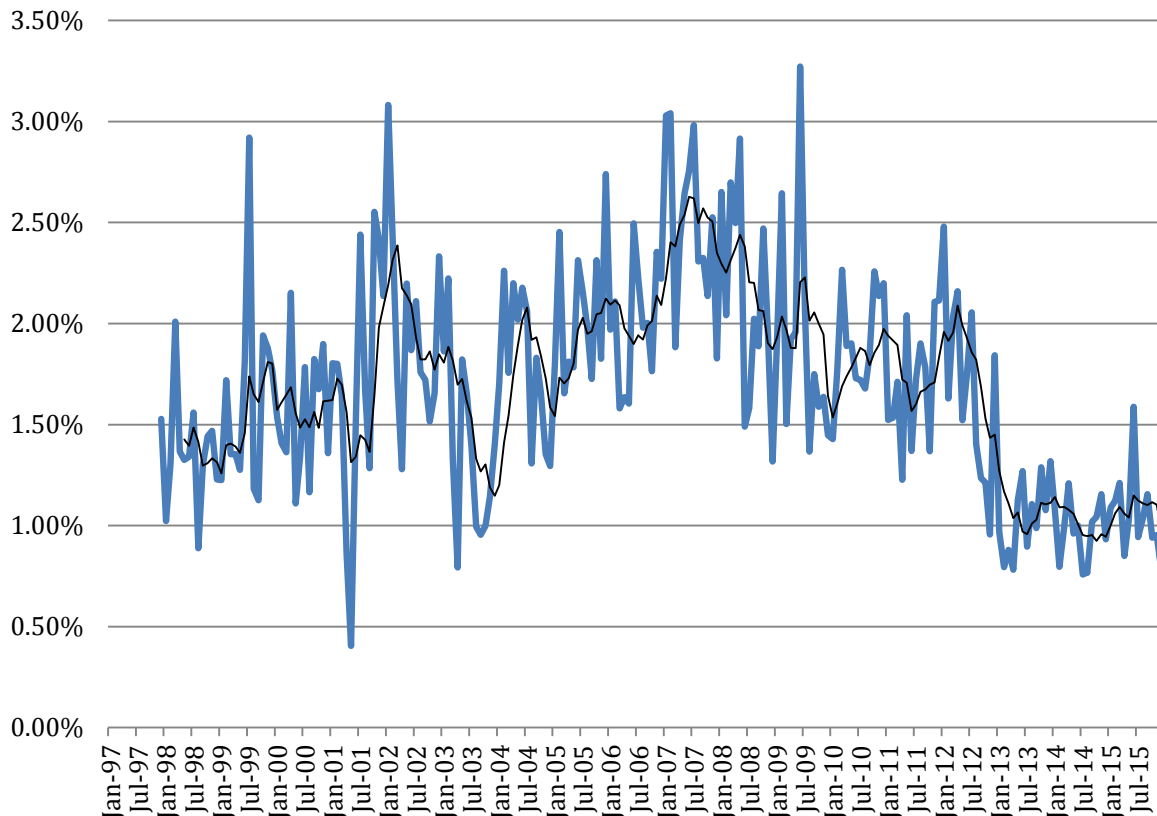
Source : *Politiken*

Query (Factiva's key-words) : Copenhagen transport or trafik or mobilitet or transportministeriet

### Findings about media salience: London

The figure below features the monthly salience of transport and mobility issues in the *London Evening Standard* (in % of total number of articles), October 1997 – December 2015. The total number of articles in the *London Evening Standard* is rather stable and varies between 1,900 and 3,300 articles per month.

Figure 7c. Monthly salience of transport and mobility issues in the *London Evening Standard* (in % of total number of articles), October 1997 – December 2015.



Source : *London Evening Standard*

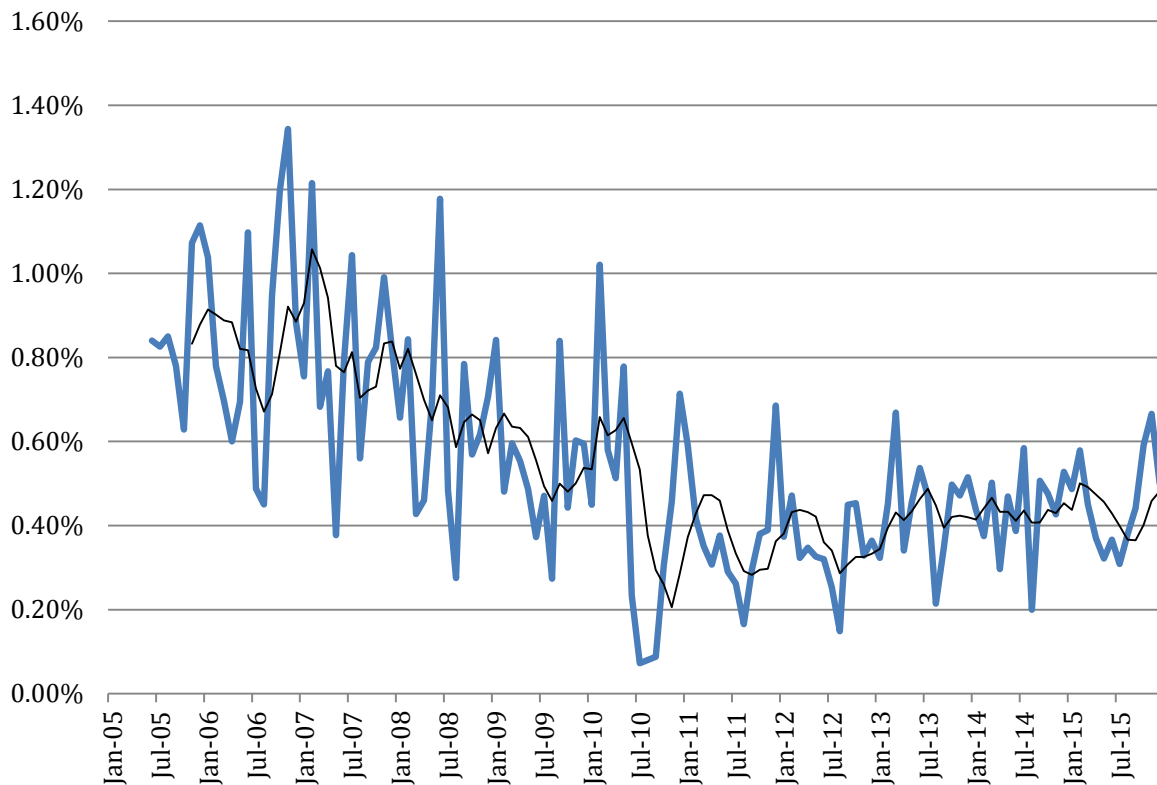
Query (Factiva's key-words) : transport or transportation or department of transport



#### Findings about media salience: Paris

The figure below features the monthly salience of transport and mobility issues in *Le Parisien* (in % of total number of articles), May 2005 – December 2015. The total number of articles in *Le Parisien* varies greatly between 3,800 and 12,600 articles per month. Part of the decline in the salience of transport and mobility issues can be explained by a tremendous rise of the size of the Parisian newspaper.

Figure 7d. Monthly salience of transport and mobility issues in *Le Parisien* (in % of total number of articles), May 2005 – December 2015



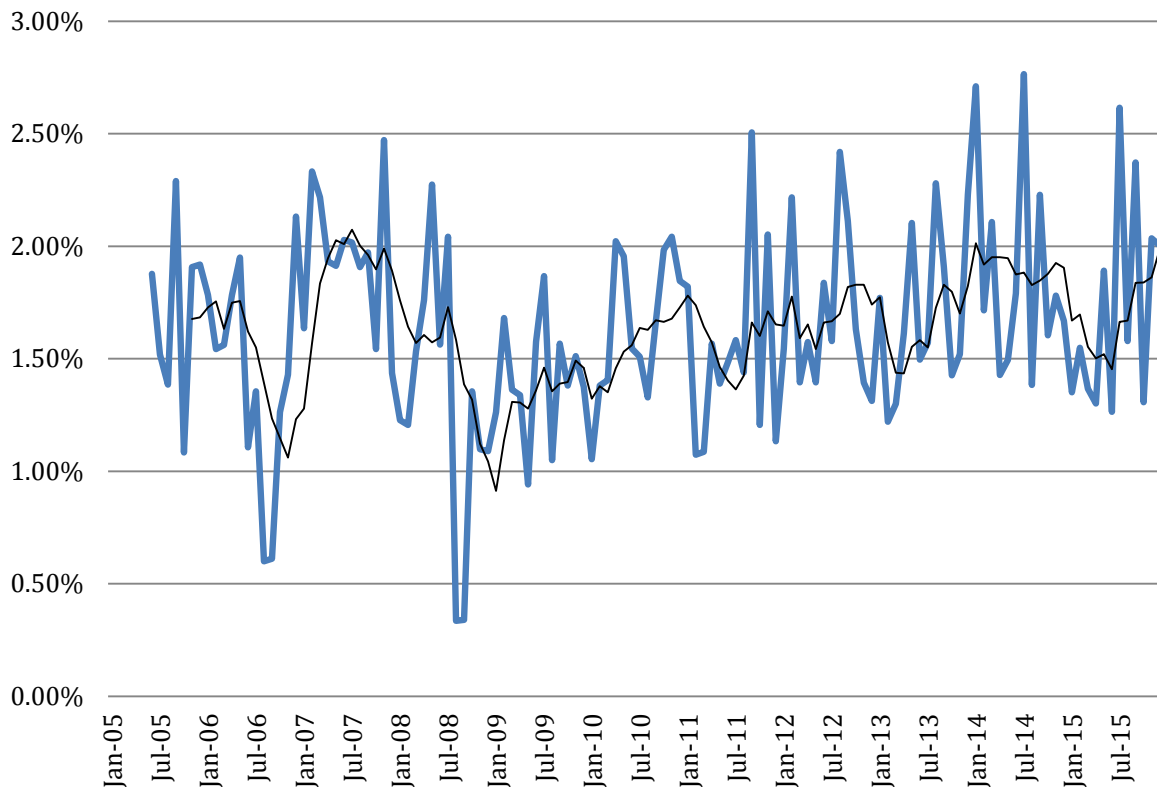
Source : Le Parisien

Query : transport or mobilité or Ministère des transports

#### Findings about media salience: Vienna

The figure below features the monthly salience of transport and mobility issues in *Der Standard* (in % of total number of articles), April 2005 – December 2015. The total number of articles in *der Standard* is very stable and varies between 1,800 and 3,200 articles per month.

Figure 7e. Monthly salience of transport and mobility issues in *Der Standard* (in % of total number of articles), April 2005 – December 2015



Source : Der Standard  
Query : Verkehr\* or Mobilität or "Bundesministerium für Verkehr"

#### Discussing findings from the media coverage dataset

**The data show great contrasts from one city's newspaper's coverage of transport and mobility issues to another.** Local newspapers in **Vienna, Copenhagen, and, to a lesser extent Berlin** have granted a considerable amount of attention to transport and mobility issues in the last 15 years. In these three cities, you can see peaks of attention and periods of relatively low salience (from 0.7% to 3.7% of the total number of articles in Copenhagen, from 0.3 to 2.8% in Vienna from 0.5% to 2.0% in Berlin). Yet, the level of salience has remained significant and has not shown any trend towards a decline.

Local newspapers in **Paris<sup>19</sup> and London (to a lesser extent)**, the level of salience is lower than in the three other cities. Even though these differences might be due to distinct newspapers' contents, one can yet see a tendency towards a very slow salience in the recent years, while attention to transport and mobility have peaked in 2002/3 and 2007 in both cities.

**In terms of issue attention cycles**, Berlin, London and Paris seem to have witnessed such dynamics with Berlin issue attention reaching high levels in early 2008, early 2011, 2012 and 2013. In London, the cycle seems to be one of rise and decline in attention to transport, with two peaks of attention (early 2002 and mid-2007). In Paris, one can see a tendency of attention decline. In Copenhagen and Berlin, one cannot detect any cycle or tendency regarding issue attention to transport.

#### Suggestion for future work on this dataset

Further work can be easily done by using the database we have constituted with press articles. Indeed, we have managed to produce a set of more than 3000 articles focused on transport and mobility, published in

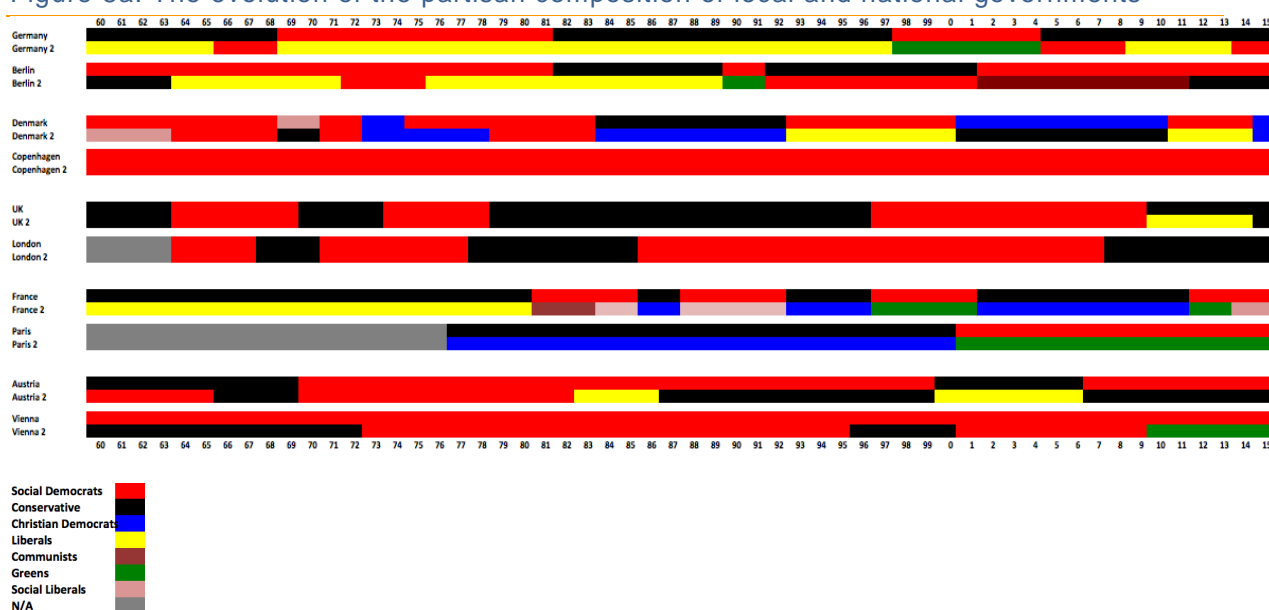
each city. These articles could be easily coded to evaluate thematic framing (which type of transport and policy issues are treated in each article), sentimental framing (is it favourable or not to policy change). The data can also be used to assess party competition or the role of interest groups, thanks to a careful analysis of articles talking about elections or mobilization.

If further work needs to be done on the qualitative analysis of peaks and bottoms of attention in each individual city<sup>20</sup>, a first comment must be made regarding the influence of elections on media attention to transport. Election periods do not feature significantly higher attention to transport than non-election periods (London's and Copenhagen's newspapers can however be seen as being more influenced by election campaigns). Second, the presence of mega-events does not seem to influence those issues' salience either. The London Olympics (2012), the German World Cup (2006) of the French Euro (2016) do not seem to have triggered any rise in attention to transport. Third, some deeper attention should be provided to the framing of transport and mobility issues of the media coverage in all five cities.

## 4.2.5 Electoral politics

We now turn to variables linked to electoral politics. Due to the difference between level of institutional autonomy, it seems important to always look at distinct level of electoral politics, local, regional, and national. This factor also has distinct components. It relates to the partisan composition of local and national governments: a left-wing government might not implement the same transport policies than a right-wing one. When looking at the figure below, things seem to be more complicated. Apart from Copenhagen, where the socio-democrats have governed without discontinuity, changes in the partisan composition of governments do not seem to be connected to changes in transport and mobility policies.

Figure 8a. The evolution of the partisan composition of local and national governments



Yet, the difference between left-wing and right-wing government might not be a sufficient factor of policy change. As far as transport is concerned, it might well be that socio-democrats and conservative parties are not as different as they might be regarding other policy issues. This is why we also tried to collect data from electoral manifestos in order to know what parties actually pledged regarding transport policies. However, as we made clear earlier, those manifestos were especially hard to collect systematically. We have done so, partially, for London, and have been able to study those manifestos carefully (see below and annexes), and it tended to show that parties followed, more than anticipated, transport policy change.

<sup>19</sup> A change in the format of Le Parisien might explain the decline in attention to transport and mobility issues but this is only a very small part of explanation.

<sup>20</sup> This work will be undertaken as part of research courses and seminars with Sciences Po master students, and will contribute to the WP4 dataset's legacy.

Figure 8b. Coalition between parties in local, regional, and national governments (extracted from the WP4 dataset)

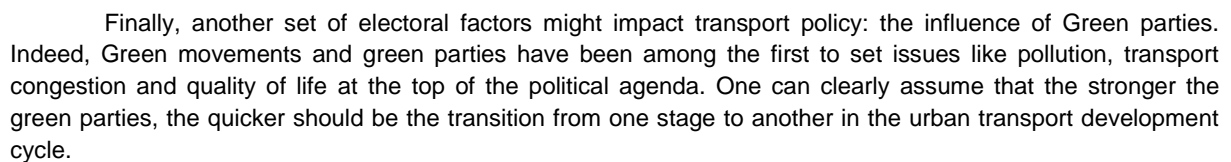
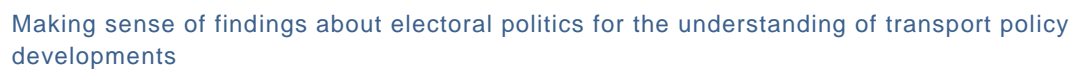


Figure 8c. The influence of Green Parties



Figure 8d. Presence of Greens in local, regional, and national government



Second it highlights the strong relationship between mayoral elections and an increased politicization of transport policies. In other words, regardless of an election's results, the analysis confirms the role of elections in shaping political debates about transport and mobility, this is consistent with findings from the political science literature and the work done by Schattschneider (1961), which show that elections open great windows of politicization. This is mainly explained due to the opportunities electoral campaigns open for discussions and debates, by encouraging political parties and candidates to differentiate themselves from one another. Furthermore, while confirming an increased politicization of transport policies over time, it also suggests that not all political parties chose to prioritize transport issues in order to foster controversies and seek for greater differentiation. Levels of competition between political parties at the local level only account to a limited extent for such choices, other dimensions should also be taken into account, such as the preference of the party candidate

for example. For these reasons, understanding partisan (non)differentiation in policymaking implies examining the distinctiveness of party positions in the electoral arena.

Third, this case study analysis of transport and mobility in political debates in London contributes to debates in the political science literature about the eagerness of elected mayors to respect their pledges<sup>22</sup>. Schmidt (1996) has already forcefully argued in favour of a conditional approach to partisanship in policymaking. In his view, governing parties, so his argument goes, can be expected to implement their pledges only upon the condition that they have the institutional power to do this: the more counter-majoritarian institutions there are, and the more of them are controlled by the opposition, the less the capacity of parties in office to enact policies (see also Tsebelis 1995; Krehbiel 1998). Tsebelis (2004) adds that additional veto players may hinder policymaking when government is formed by a coalition of several parties, when the support of the coalition partners is necessary to pass decisions.

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#### Suggestion for future research about the relationship between party politics and policy analysis

Based on findings about transport policy developments in the five stage-3 cities, we formulate the three following hypotheses:

**The conditions of partisanship in policymaking cannot be reduced to institutional capacity**, insofar as governments do not always implement their electoral pledges even if they have the institutional power to do so. In order to understand whether parties in government decide or not to pass their promised policies requires taking into account their motivation to do so. As political parties and their elected officials are usually strategic, vote-seeking agents (Katz and Mair 1995; Müller and Strom 1999), we expect these motivations to be shaped by incentives or, in other words, by the potential return expected from enacting such policies. Parties in office have to stand for re-election and to communicate about their policy record, which generates incentives to implement at least some of their campaign pledges. As their resources and margins for manoeuvre are limited, governing parties can be expected to target their policies at the issues on which they expect the highest electoral pay-off, while they are likely not to stick to a pledge on which they perceive no incentive to act, even if they would be institutionally capable to do so.

**Electoral incentives may be shaped by several factors.** Importantly, parties in office have strong motivations to take into account the demands of public opinion, as expressed in polls, or social movements. The literature on responsiveness indeed indicates that policies tend to follow public opinion moves (Page and Shapiro 1983; Soroka and Wlezien 2010). While it has been suggested that parties tend to follow public opinion when citizens' demands diverge from their position (Burstein and Linton 2002), congruence between both over a problem provides the incentives to pass a partisan policy, while a divergence — especially if intense mobilization is taking place — entices government to fulfil other, electorally more favourable, pledges. Issue salience is another potential condition affecting electoral incentives for pledge fulfilment, as it renders the policy environment more transparent and enhances public demands. **It may therefore exert two types of influence:** first, a strong salience may amplify rewards for respected promises and sanctions for inaction, or betrayal, and entice representatives to deliver on what they have announced. Second, salience may modulate the effect of public opinion on pledge fulfilment by increasing transparency<sup>23</sup>.

Finally, **the electoral gains and losses linked to the decision to fulfil (or not) a pledge may vary a lot depending on the party system.** Indeed, the non-implementation of an electoral pledge may be costlier if deceived voters can easily defect and vote for a competitor at the next election. This may be more the case in multi-party systems, where mainstream parties face competition from several, often more radical parties, and especially when a niche party exists, which specializes on the issue at stake (for instance a Green party

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<sup>22</sup> However, his article – and the attempts to explore conditional partisanship since – exclusively focused on the dimension of institutional capacity. The available evidence provides support for the diluting effect of counter-majoritarian institutions on partisanship in policymaking: the programme-to-policy linkage appears to be stronger in the United-Kingdom, a country characterized by a strong government, than in the United States, where the President has no legislative power (Royed 1996; see also Fischel 1985; Rose 1980). Unitary governments also seem to be more partisan in policymaking than coalition governments (Costello and Thomson 2008; Mansergh and Thomson 2007; Artés 2011; Naurin 2014).

<sup>23</sup> Recent empirical findings on decision-making regarding corporate control in France, Germany, the Netherlands and Japan confirm that salience generates incentives to aggregate corporatist interests regarding 'quiet' matters, while being more accountable and responsive to the general public in 'noisy' ones (Culpepper 2011).

generates incentives to deliver on nuclear energy phasing-out promises). These findings justified the attention we gave to Green Parties as part of the case study analysis of transport policy developments in each stage 3 city (see D4.2 reports).

### 4.3 Timelines (A. Carollo)

Drawing on the WP4 dataset, a visual representation of transport policy developments between 1960 and 2015 was produced for each stage 3 city in order to provide an overall representation of change over time<sup>24</sup>.

The cities' timelines propose a visual representation of WP4 results and provide systematic links to the work achieved as part of WP3. Their aim is to identify the overall tendencies in the process from pro-car policies to a much broader emphasis on liveability, to point out the main explicatory factors and turning points and to help understanding the relations between all these elements, in the form of co-variations. They represent the main ups and downs of those factors that may be explicative of transport policy evolutions between 1960 and 2015 as well as policy changes. The timelines include a large number of information in order to check: 1) The relevance of the 3 stages approach, 2) Identify covariations.

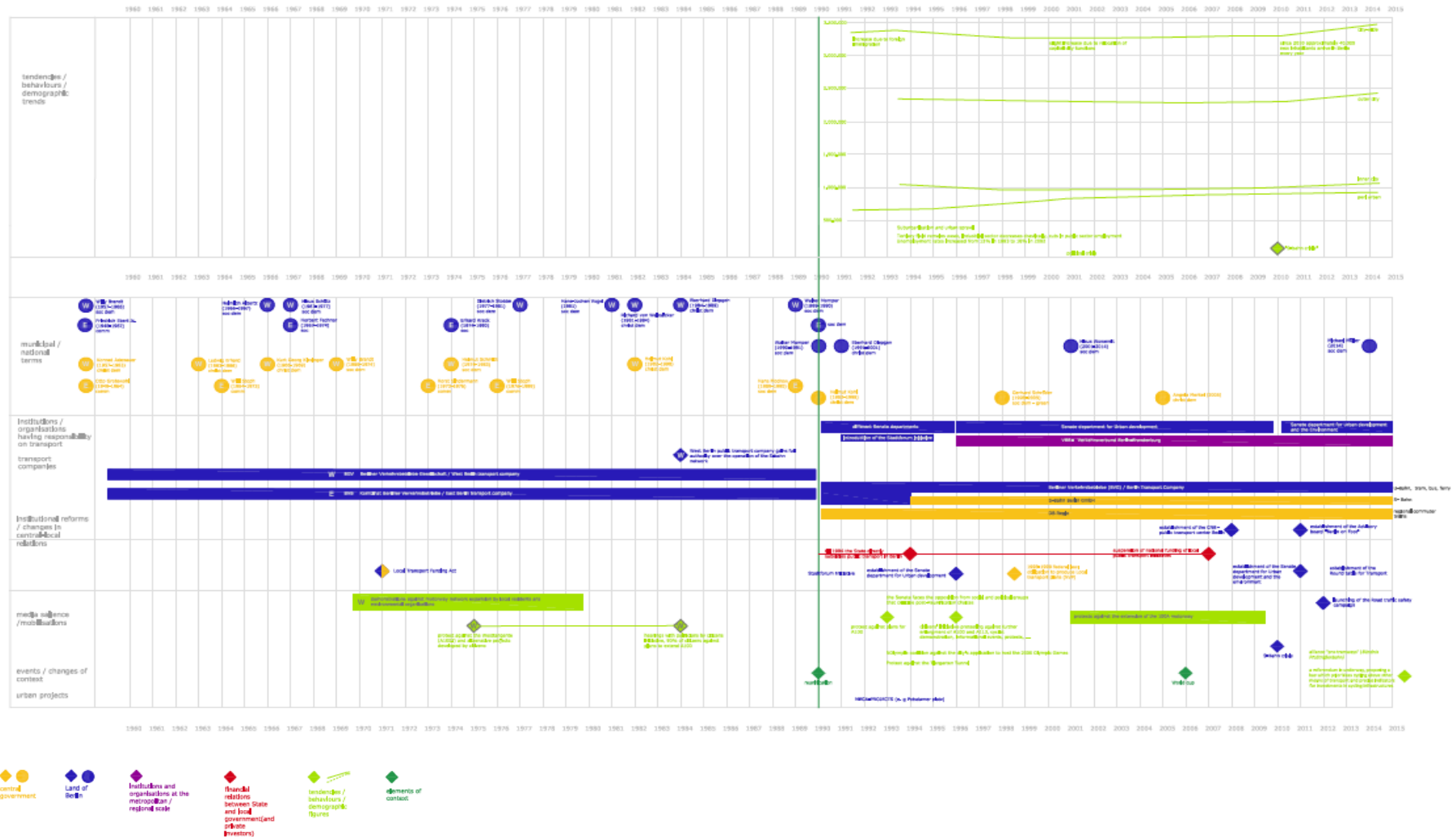
The timelines are structured around 4 types of information. A first section shows macro dynamics that take place outside the transport sector (mostly imported from WP3). The second section focuses on those factors (exogenous) that may be explanatory of the transport policy evolutions. The third section shows if, how and when such a change has been taking place (within-policy evolutions). Finally, the fourth section shows policy results in terms of modal share (mostly imported from WP3).

In addition to providing a useful working tool for highlighting changes in transport policies and governance over time, timelines also confirmed some differences across cities in terms of patterns of change, which will be addressed in the last section of this D4.3 report.

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<sup>24</sup> This was produced by Alessandra Carollo, using the Autocad software.

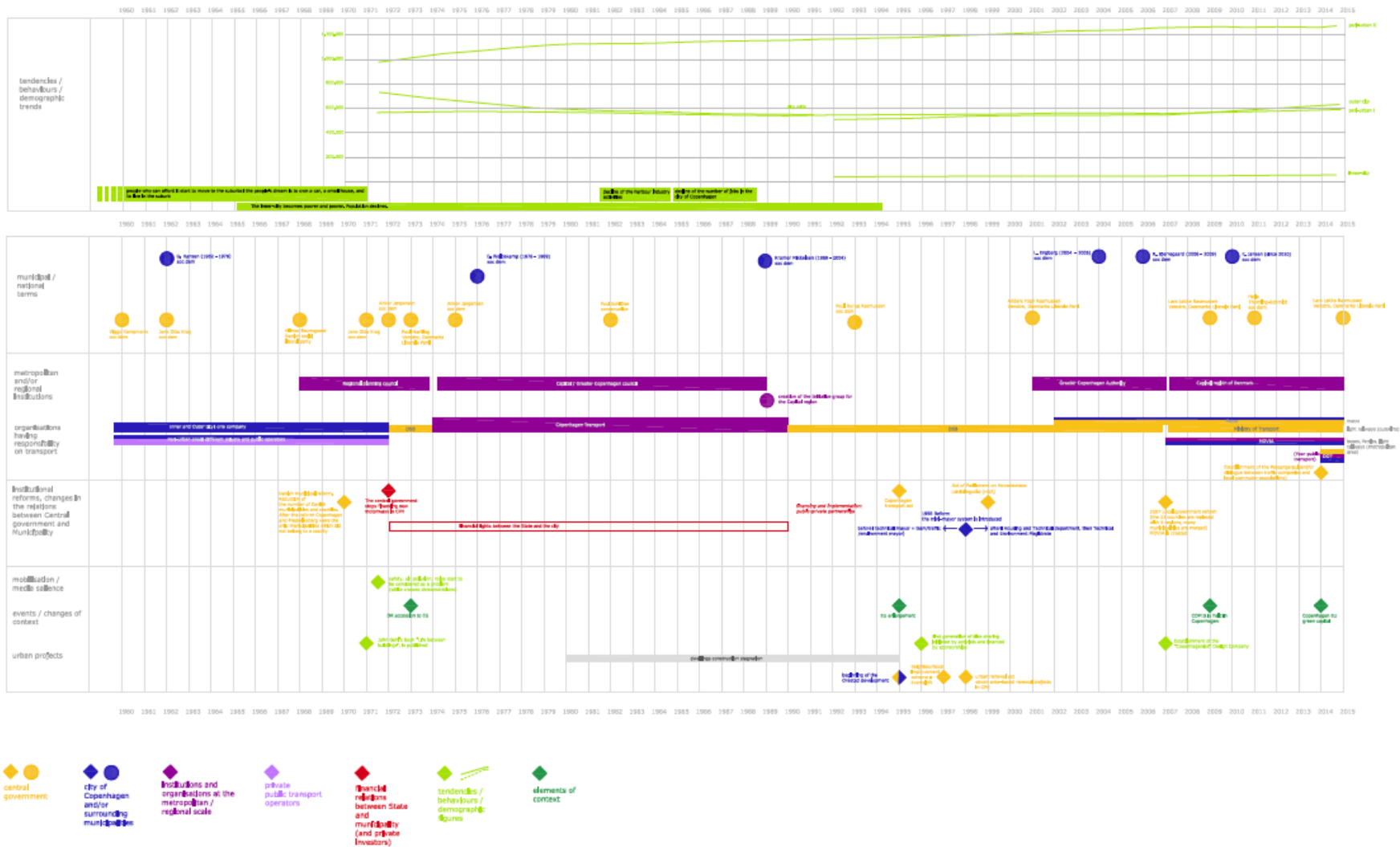
### 4.3.1 Timeline, Berlin, parts 1 & 2

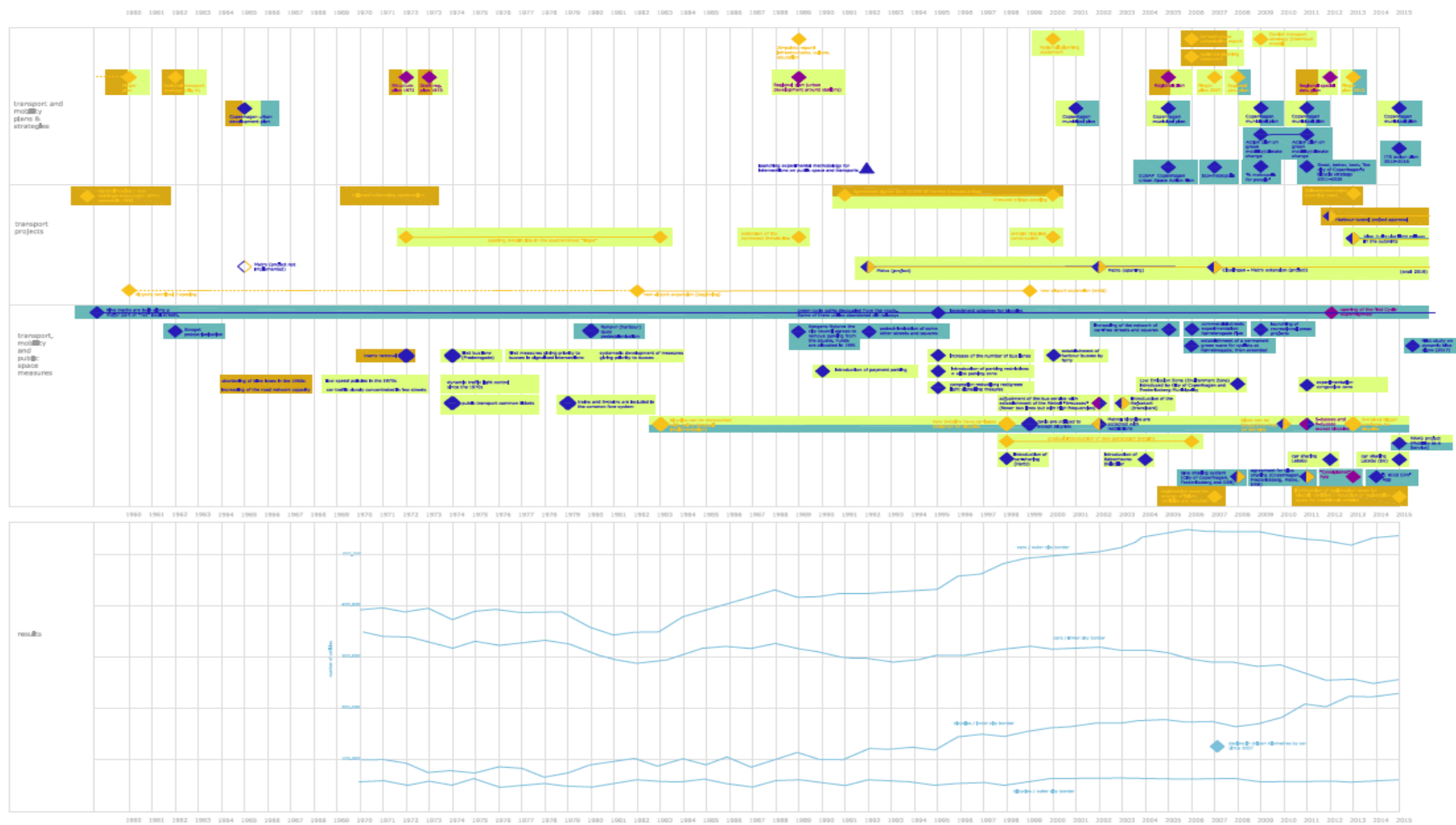




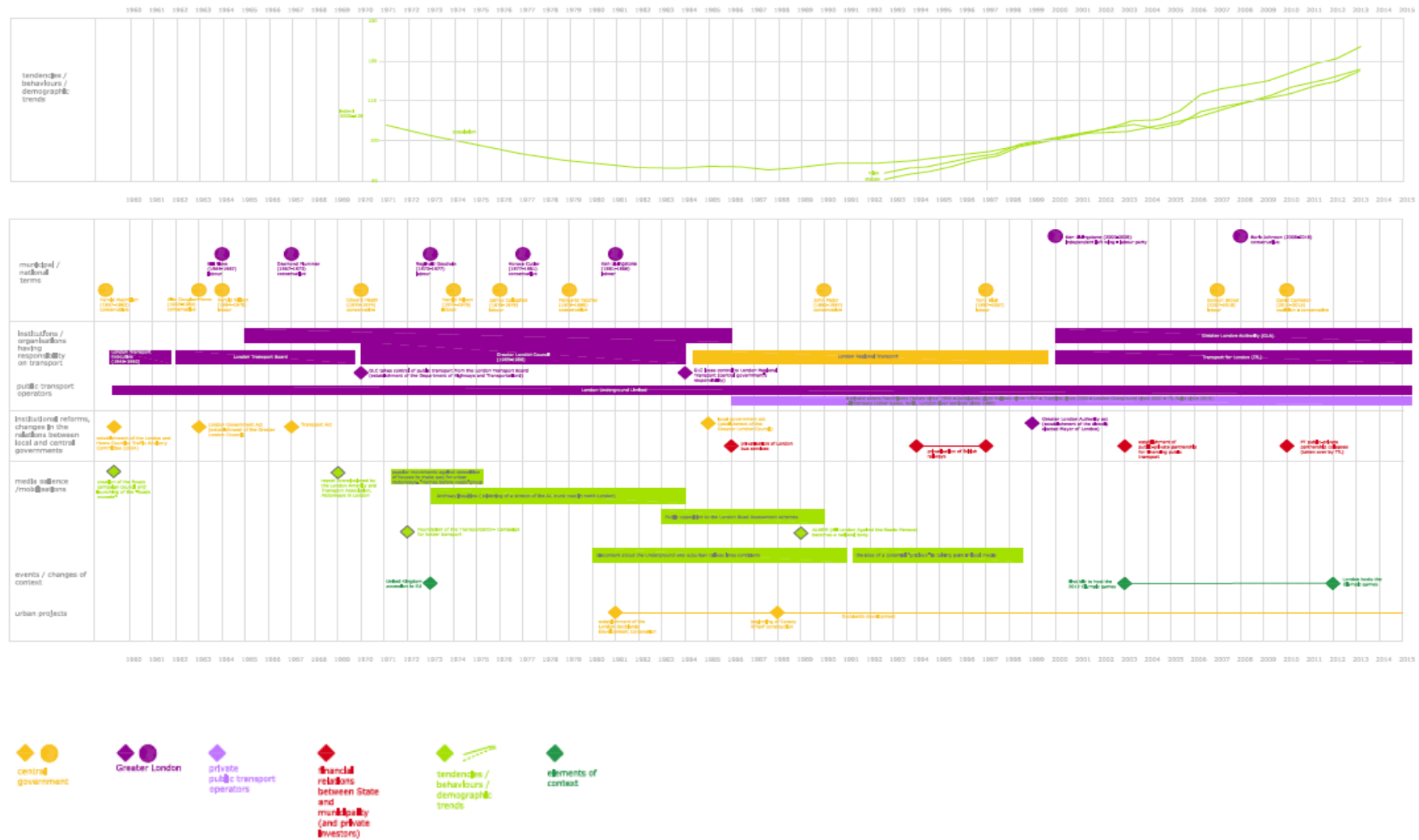


### 4.3.2 Timeline, Copenhagen parts 1 & 2



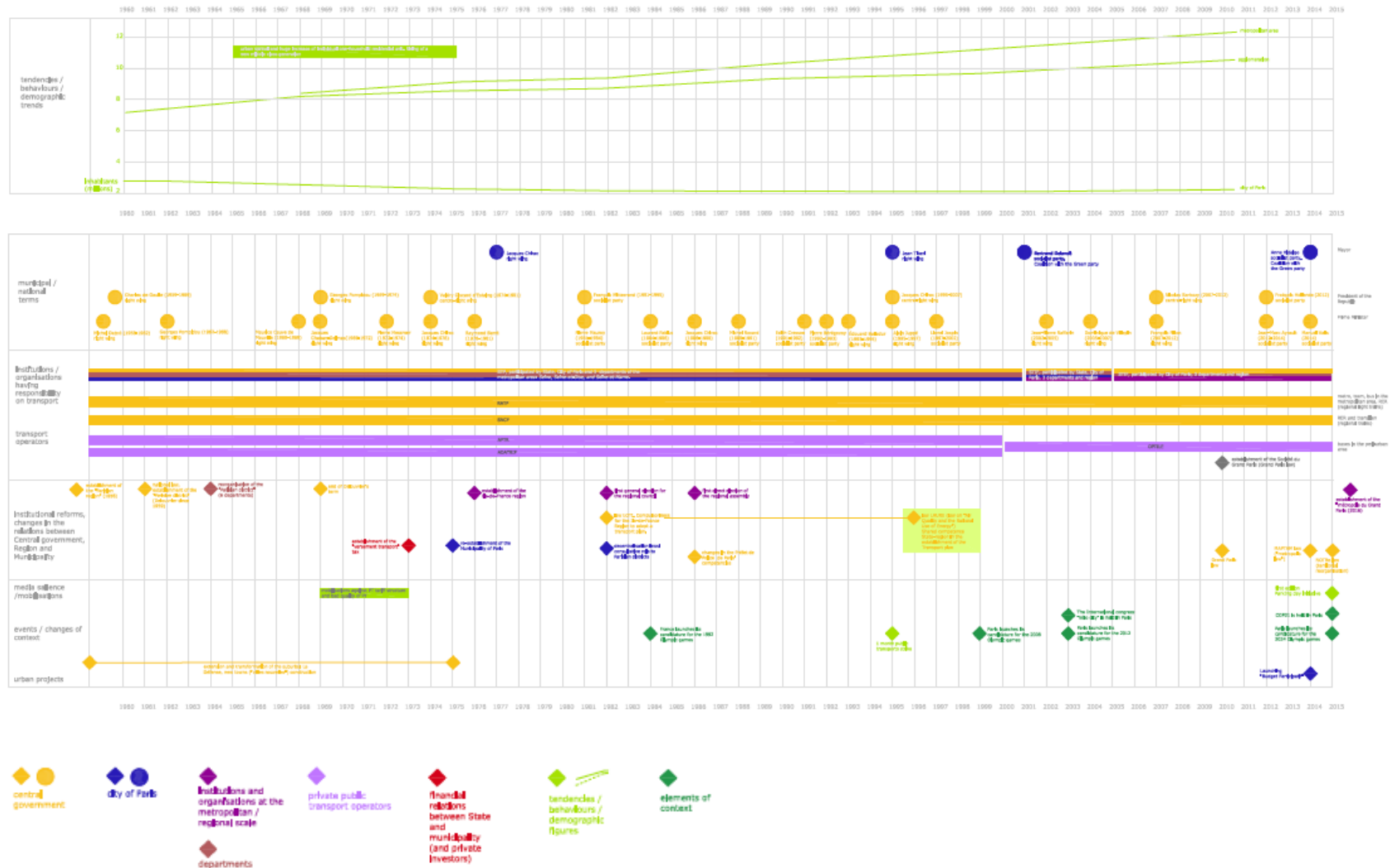


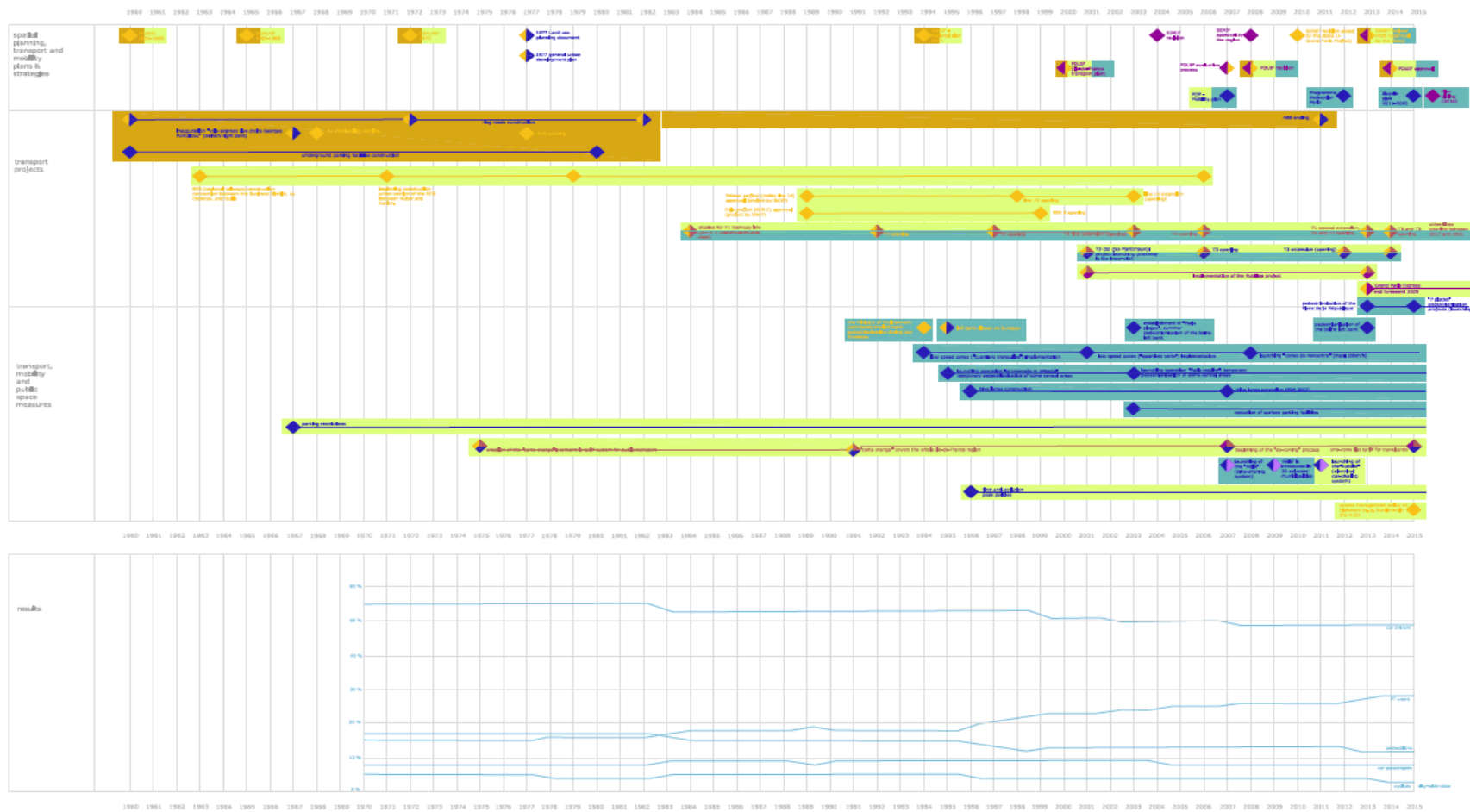
### 4.3.3 Timeline, Greater London parts 1 & 2



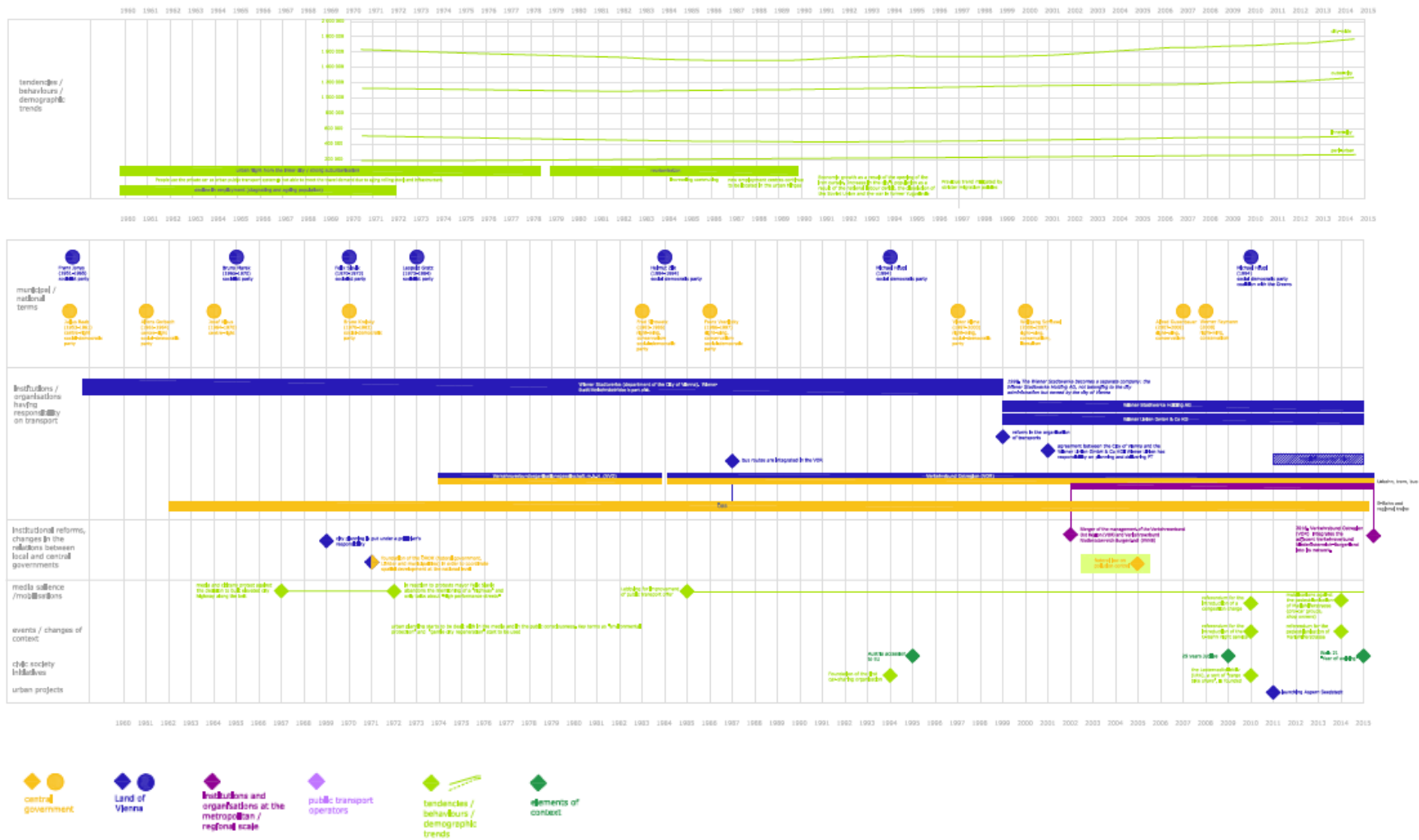


### 4.3.4 Timeline, Paris & Ile de France region parts 1 & 2

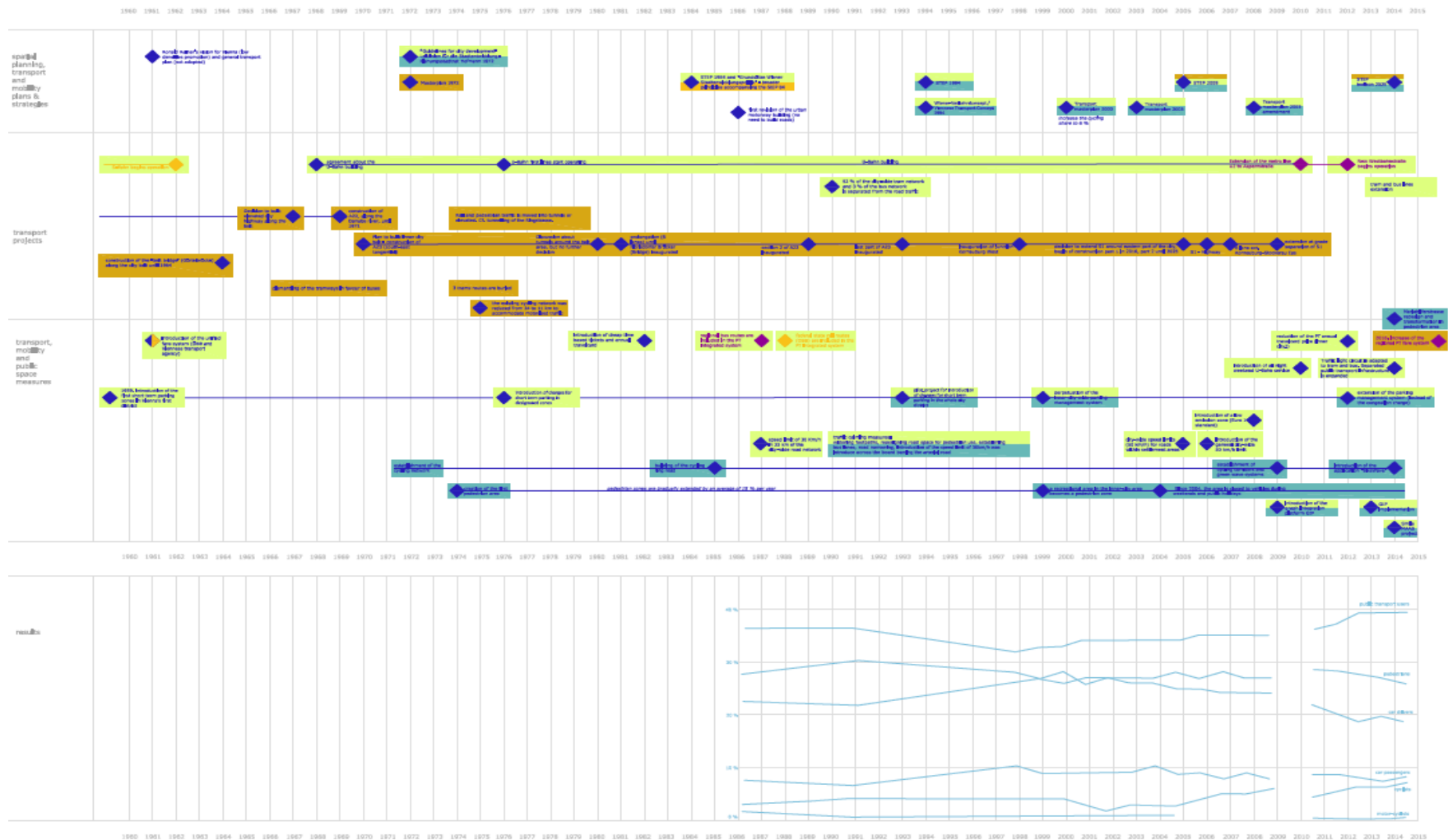




### 4.3.5 Timeline, Vienna parts 1 & 2







## 5 Transport policy developments: Findings from stage 3 cities (C. Halpern and C. Orlandi)

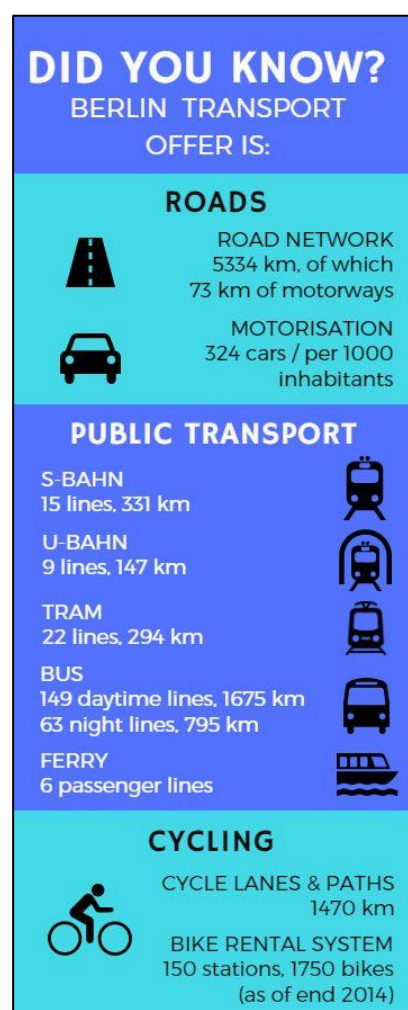
This section provides summary findings for each stage 3 city together with some infographics (C. Orlandi) and timelines (A. Carollo). It highlights key drivers and processes explanatory of the shift towards stage 3, current and future challenges, as well as a discussion of the relevance of the stage-1-to-3 approach. An indicative reference list is provided for each case study at the end of this document. We are very grateful for the comments and changes suggested by Charles Buckingham (TfL).

A technical report (D4.2 reports) was produced for each city and provides a comprehensive qualitative analysis of the historical development of policies relating to traffic congestion and car use over the past four decades<sup>25</sup>. Each report 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. They are meant as complementary to the work produced as part of WP3 on travel demand and behaviours in each stage 3 city. The reference for these D3.2 and D4.2 reports are provided in the bibliography at the end of this document. These reports – D4.2 technical reports – can be referred to for further information and are available in full on the CREATE project webpage together with outputs from WP3.

### 5.1 Transport policy developments: findings from Berlin

#### 5.1.1 Summary findings

Berlin constitutes a challenge for the «Transport Policy Evolution Cycle» approach and for the sequencing of historical transport policy developments. The city's unique history between 1945 and 1990 often justifies analysing it as a single case. The analysis of transport policy developments since the 1960s nevertheless highlights some long-term, robust institutional traditions such as the role of public transport as the backbone of the city's transport system. Such emphasis was repeatedly confirmed across policy documents since the Reunification in 1990. This was first achieved through infrastructure-led initiatives, which sought to reunite a divided network. Some years later, socio-political mobilizations pushed for the introduction of the integrated transport approach, which has become the core of the city's policy since the early 2000s. By opening an institutionalized venue for within-sector negotiations, the integrated transport approach helped to develop strong alternatives to car use, for example, negotiating the introduction of traffic mitigation measures. Over time, it ensured the progressive inclusion of new actors and coordination mechanisms to accelerate the shift away from the automobile-led city. Increased efforts were recently made in order to allocate more policy resources to active modes (walking and cycling) and promote multi-modal travel solutions citywide.



<sup>25</sup> For each of these report, the Sciences Po team produced a technical note, which content is available in a slightly different version on the project website as part the CREATE project's technical notes series – TN 6 to 9. We are thankful to Radu Gaspar and the EIP team for their support in editing the final version of the Technical notes.



### 5.1.2 Main drivers and policy processes: understanding the shift towards stage 3

#### Before the reunification: two different models (1945-1989)

The War had a devastating effect on Berlin's infrastructure, and its population reduced by 1/3<sup>rd</sup>. The public transport network reopened gradually – and selectively, partly because it largely exceeded the population's needs at the time and because of the rise of the automobile. New ideas that were very much inspired by the model of the Charter of Athens were applied to the reconstruction of the city centre in both parts of the newly-divided city. Yet in the context of Cold War politics, the implementation of the car-oriented city model remained limited and two different systems developed independently from one another.

**In the East**, public transport (tramway, S-Bahn) was favoured over car use. New motorways, even if planned, were not built due to the lack of funding.

**In West Berlin**, the exponential rise in motorization was considered a major policy issue, and as many hoped for Reunification, the main rationale was to conceive efficient traffic flows and urban

highways connecting to the East. Up to the 1980s, the construction of major roads and drafts for an inner expressway network were promoted with funding from the Federal government. Many housing blocks had to be demolished.

Inner-city neighborhoods were entirely redesigned by enlarging existing roads and developing intersections and junctions. Public transport was developed although at that point car use was still growing. The Western S-Bahn network deteriorated. It was not widely used due to boycott actions until the transport authority of West-Berlin (BVG) started operating the remaining 40 km of the network. The tramway network was dismantled, but many lines were substituted by underground lines in order to create space in the inner city.

These infrastructure developments led to major protests from local residents and environmental organizations from the 1970s onwards, which also reflected mobilizations taking place nationwide. In Berlin, alternative projects were developed such as the "Green Tangent". As of the mid 1980s, planning documents highlighted the need for **a better quality of living**. Major road development projects were put on hold. Nevertheless, the **daily management of roads** and the allocation of resources still operated **according to the car-oriented model**. Proposed changes were put on hold in the decade that followed the fall of the Berlin wall.

#### Reunification through infrastructure-based policy (1990-1999)

Following the Reunification, the main challenge was to reconnect the two transport systems through an **ambitious infrastructure-led policy agenda**. Its planning and implementation took place in a context of rapid socioeconomic transformations, population decrease and urban sprawl in the surrounding cities of Brandenburg. In addition, motorization and car ownership increased significantly.

The Berlin Senate was designated as the city's transport authority, but most infrastructure projects were done by or together with Federal authorities and agencies as part of the Reunification treaty and Berlin becoming capital city. Infrastructure planning was shaped by intense competition across levels of government (Federal, City-Land & Boroughs) and transport agencies (Deutsche Bahn, BVG etc.) over the setting of priorities and the allocation of budgets. The spatial distribution and socio-environmental impact of proposed capacity investments led to recurring social and political mobilizations against the ruling coalition (CDU-SPD). A number of initiatives were made in order to strengthen the Senate's capabilities and ensure coordination: with civil society (Stadtforum), within the Senate (reorganizing portfolios), with Boroughs (administrative reform) etc.

In terms of capacity investments, priority was given to reconnecting and modernizing existing networks, developing new tramway lines and connections with Brandenburg, reorganizing and extending public transport networks. The Ringbahn and the construction of large interchanges (e.g., Hauptbahnhof) were major flagship projects. New high-speed rail and road infrastructures were developed, (e.g., Tunnel under the Tiergarten, A100



motorway). In addition to socio-political mobilizations, the daily management of transport policies, which still prioritized car use, raised growing political and social concerns both within and outside the ruling majority.

### Integrated transport planning: from traffic mitigation to “city-friendly mobility” (1998-2013)

As mobilizations rose against the post-reunification transportation agenda, transport policy objectives were revised in a context of profound socioeconomic changes, demographic stagnation, and fiscal debt. Drawing on the ideas and principles laid out in the 1980s in West-Berlin, a first series of traffic mitigation initiatives were introduced at city level (e.g., parking management, traffic calming measures, segregated bus lane) together with a common tariff system at metropolitan level. A number of professionals and policy makers advocated the need to go beyond and develop an alternative to both the automobile city and infrastructure-led policies.

Between 1998 and 2001, the election of a red-green majority, the reshuffling of portfolios within Senate and an administrative reform provided the Senate with increased political capacity, and within it, those in favor of the **integrated transport planning approach**. Drawing on the principles elaborated in West-Berlin within the urban planning professional community, it promoted a **shift in both policy processes and objectives**. A strategic policy framework for sustainable mobility (StEP Verkehr) was designed in cooperation with the work done collaboratively within the Round Table for Transport. Rather than stigmatizing car use policy priorities were **reshuffled according to the principles of the “city-friendly mobility”**. This consensus-seeking strategy also led to prioritizing and expanding traffic mitigation initiatives: emission level control (noise, air pollution, CO<sub>2</sub> emissions, etc.), traffic calming and road safety. By adopting a strategic, long-term planning perspective (2020), it introduced “lock-ins” at implementation stage. A new generation of policy tools was introduced in order to monitor and assess performance in public transport.

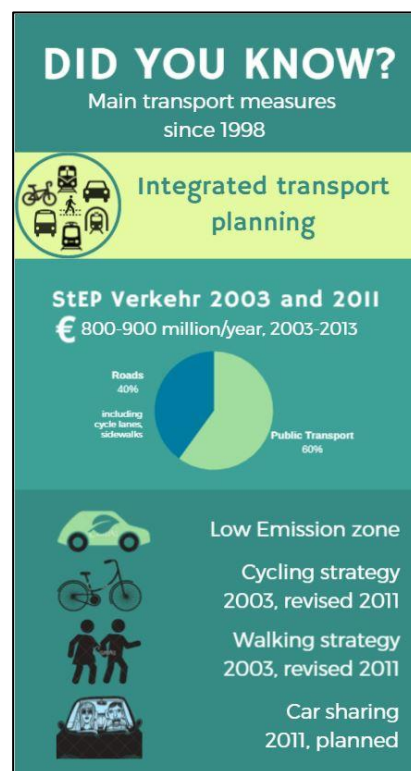
These policy objectives were revised a decade later **according to the same methodology and taking into account new issues and entrants**. Critically assessing the work achieved since 2003, major institutional and organizational barriers had slowed down implementation of traffic mitigation and parking management within Boroughs. The new StEP also took into account the impact of initiatives introduced outside transport (e.g., environmental zones) and at Federal level. In public transport, the S-Bahn crisis highlighted the need to strengthen the city’s regulatory powers over transport companies. A new set of monitoring tools were introduced as part of the 2011 walking and cycling strategies. Non-motorized transport was encouraged.

Even though the integrated approach demonstrated its robustness, it also faced a number of limits. Civil society organizations are pushing for more radical cycling measures and for abandoning urban motorway projects (A100). Car-sharing services are developing, together with increased social demands for individualized travel solutions. The automobile industry advocates optimising smart city solutions in order to reduce congestion, as well as a differentiated set of priorities outside the core urban area.

Together, these demands challenge the idea of the “city-friendly mobility” and fuelled in recent socio-political controversies over transport.

### 5.1.3 Current and future challenges (since 2011)

Implementing the integrated transport planning approach has resulted in **increased capabilities and resources at city level**. So far, it has demonstrated its effectiveness in fostering consensus over policy



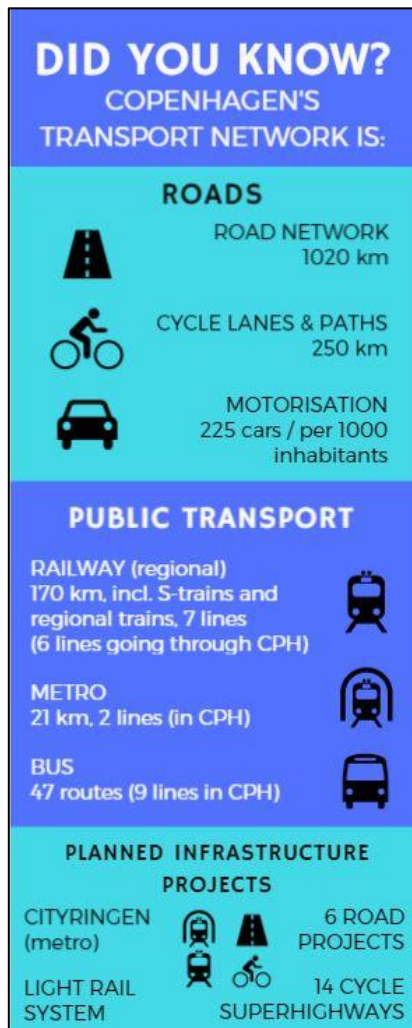
objectives and processes. Yet at the implementation stage, resource-seeking strategies from a wide range of stakeholders also highlighted the limits of the “city-friendly mobility” principles in fostering a middle way between pro-public transport and pro-car groups, who still hold important resources and veto-powers. More precisely, civil society organizations are pushing for more radical pro-cycling measures, increased quality in public transport services and banning new urban motorway projects. In the meantime, the automobile industry advocates the use of optimising smart city solutions in order to reduce congestion, as well as a differentiated set of policy priorities outside the core urban area. Car-sharing services are developing rapidly together with increased social demands for individualized travel solutions.

Beyond transport, another set of challenges now constrains transport policy developments and their pressure is expected to grow in the near future. For the first time in several decades, the population is expected to grow rapidly up to 3,828,000 by 2030 – some 7,5% growth in total – with an average yearly increase of some 135,000 residents. Urbanization patterns show, on the one hand, a growing re-urbanization of the inner city and on the other hand, continued urban sprawl at the fringes. New urban areas are currently being developed outside the inner-city area, with a specific focus on housing and transport.

#### 5.1.4 Conclusive remarks, stage1-to-3 approach in Berlin

A number of changes have been taking place since the mid-1990s in a unique institutional, political, demographic and socioeconomic context. Yet in Berlin, more than in any other cities in the CREATE project, there is no clear-cut demarcation between traffic mitigation (Stage 2) and planning for city life (Stage 3) policies. This shift away from the automobile city (Stage 1) has been gradual, and negotiated as part of the integrated approach. **In terms of transport policy objectives and policies, traffic mitigation initiatives have been prioritized and the pivotal role of public transport as the backbone of the city’s transport system was confirmed.**





## 5.2 Transport policy developments: findings from Copenhagen and its region

### 5.2.1 Summary findings

Copenhagen is considered to be a 'gold standard' example of the liveable city. This mainly reflects the priority given to cycling as part of the city's climate agenda (2006) and to the hugely transformative role of sustainable urban transport in the city's reinvention, following several decades of deep socioeconomic decline. As such, Copenhagen is a source of inspiration for other cities worldwide wishing to "Copenhagenize" their streets through measures aimed at supporting public life and well-being. When considered from a regional perspective, transport policy developments and the shift away from the car-oriented city are neither unidirectional nor are they evenly spread. Copenhagen city is relatively isolated in a wider region where diffuse urbanization, low levels of investments in non-motorized transportation and weak policy capacity have strengthened car dependency over time.

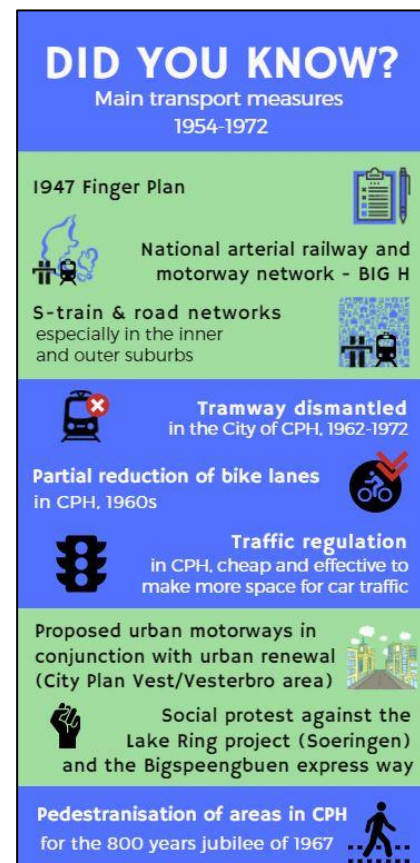
### 5.2.2 Main drivers and policy processes: understanding the shift towards stage 3

#### The golden age of the car-oriented city (1954-1972)

Following WWII, the need to structure urban growth became a source of concern for public authorities. Spatial planning principles were introduced as part of the **1947 Finger plan** in order to shape urbanization beyond the city's borders. It was to be concentrated alongside five major axes corresponding to planned and existing regional train lines (S-train). Open spaces in between were to be preserved.

In practice, the **largest share of capacity investments benefited the road network**. The car-oriented city model was a preferred policy solution among policy-makers in order to make the "Danish Dream" come true and foster growth. In their attempt to attract wealthier income groups, municipalities outside Copenhagen promoted a way of living in which single-family houses were inextricably linked to car ownership. Low levels of coordination between public-owned municipal transport companies further reduced the attractiveness of public transport. At the national level, implementing the 'Big H' strategy (1962) progressively led to singling out road investments as a preferred solution to enhancing the capital-city's function as national hub. National transport systems were meant to connect with a network of urban motorways in Copenhagen's inner core.

Unless it increased connectivity to and from the region/country, transport capacity investments in Copenhagen were considered less of a priority. It had inherited a decent public transport network (tramways, buses and regional trains). Cycling and walking were commonly used means of transport. By contrast to the suburbs, **the city entered a period of deep socioeconomic decline** that lasted until the late 1980s. Wealthier income groups moved away from an ageing housing stock. Local politicians and technicians considered state-led road development projects **an opportunity for growth and renewal**. Additional road space was allocated to car use, investments in public transport decreased, the urban tramway was entirely dismantled.



Yet, the city's financial crisis in combination with social demonstrations put a temporary stop to both urban motorways and renewal projects. In the absence of a regional planning authority, demographic and socio-economic factors combined with municipal and national policies fuelled in **the growing disconnect** between the city and the region.

### Transport planning in a context of spatially differentiated growth (1972-1991)

During the next two decades, administrative and fiscal reforms led to increased inter-municipal competition and a substantive reduction of State investments in the capital-city region. The trends initiated during the post-WWII era intensified: **in the suburbs**, continued demographic growth and low density urban development confirmed the dominant role of motorized transport. The largest share of capacity investments led to additional road projects and a new (and last) S-Train line. **In the city of Copenhagen**, demographic decline, an ageing housing supply and the dismantling of industrial workplaces further contributed to economic recession and fiscal debt.

Yet transport developments were also characterized by **a number of initiatives** that shaped later transformations. **At regional level**, the short-lived regional planning authority (HR) and public transport company (HT) laboriously developed joint public transport initiatives and services. Both organizations were dismantled towards the end of the period due to active lobbying at State level from municipal authorities and transport companies, including national railways (DSB), to maintain their autonomy.

In Copenhagen, **daily incoming commuting flows raised new concerns** among local residents and practitioners about the externalities of car use (e.g., safety, noise, congestion). In a context of low investment and continued political support for car use, some **traffic mitigation policies aimed at increasing road safety** were introduced. Being the only affordable transport alternative, cycling became **a rallying symbol for city life**. Within the planning community, J. Gehl's work highlighted the added value of small-scale initiatives as a way to enhance public spaces. Spreading across many sectors, his ideas encouraged transport planners **to explore new traffic and speed reduction measures that drew on urban design**. Together with a reduction in car use and ownership, this initiated a shift away from traffic planning towards an integrated approach to mobility.

### Intensifying traffic mitigation policies in a context of regional growth (1991-2007)

Transport policies evolved rapidly in the context of the 1995 EU enlargement. The most remarkable change took place as a result of an unprecedented city-state alliance that was to last two decades. Developing a new understanding of the 1947 Finger plan, priority was given at State level to **strengthening the city (the Finger plan's palm)** through major infrastructure projects (e.g., airport extension) and the *de facto* opening of an additional corridor (finger) across the Øresund (e.g., road and rail tracks). In Copenhagen, the ruling majority pushed forward **a comprehensive urban growth agenda**, including large-scale housing renewal and urban development projects. Single-purpose public-owned corporations were jointly created by the city and the State, with the explicit goal of regenerating large urban areas (docks), maximizing the value of public land (Ørestadt), and using the revenues to finance the new metro system. **Policy priorities were reshuffled according to sustainable urban planning goals**, administrative portfolios were reorganized accordingly.

## DID YOU KNOW?

Main transport measures  
1972-1991

**in the Region**

- Greater Region Copenhagen Council (HR)
- Copenhagen Transport (HT)
- Last S-train line southwards, 1972-1982
- Public transport initiatives such as the common ticket, 1972

**in the City of Copenhagen**

- Protest against car use externalities especially safety for cyclists
- Car traffic mitigation to increase road safety
- Construction of new cycle lanes
- Jahn Gehl, "Life between buildings"
- Small-scale urban planning and design initiatives drawn upon Gehl's ideas



## DID YOU KNOW?

Main transport measures  
1991-2007

### LARGE-SCALE INFRASTRUCTURE PLANNING

Øresund link to Malmö  
4-lane highway, 2-tracks railway

Metro construction in CPH

### TRAFFIC MITIGATION IN CPH

Traffic and Environmental Plan, 1997  
Traffic Improvement Plan, 2000  
Traffic Safety Plan, 2001

€ 8 million (DKK 60 million) for the  
road network  
of which 1/3 on cycle lanes

### INTEGRATED APPROACH AND FOCUS ON PUBLIC SPACE AND QUALITY OF LIFE

2005 Copenhagen Urban  
Space Action Plan (CUSAP)

### ENHANCEMENT OF CYCLING

Cycling policy initiatives since 1991  
2002-2012 Cycle Track Priority Plan

At national level...

Car traffic mitigation  
Regulation/taxation  
on car ownership and fleet renewal  
Compatible with a pro-car approach

cycling has benefited from unprecedented levels of political support and visibility. As a model, “the cycling city” combines: a change in policy discourses and practices, which increasingly refer to streets (vs. roads), a diversity of users and to mobility (vs. transport); innovative forms of policy-making, grounded in story-telling, experimentations and continuous readjustments; a set of communications tools helps maintain the public’s attention together; and flagship initiatives projects (ex. in Nørrebrogade, the Bicycle snake). The “Cycling city model” also relies on a **strong eco-system** of sympathetic civil society organizations, academics, urban planners, think-and-do-tanks, etc. who ensure its promotion worldwide. Together, these joint efforts account for Copenhagen becoming a **full-scale laboratory and showcase for innovative urban planning and mobility practices**. This also ensured the city’s attractiveness after the 2008 crisis.

Nevertheless, the “cycling city model” only partly accounts for the changes taking place in transport and city planning in Copenhagen. **Other major transport initiatives** were introduced at the same time, confirming the multi-dimensional nature of car reduction strategies. **In public transport**, a joint state-city-owned company, Metro, took over responsibility for operating the metro system and planning future extensions. The local bus network was reorganized. **Traffic mitigation policies** were strengthened together with urban design initiatives. A congestion charge project was also proposed in order to contain incoming traffic.

Although not the most prominent issue on the political agenda, transport benefited from increased resources in this changed context. A comprehensive set of traffic mitigation measures were introduced in order to tackle congestion by containing incoming traffic (e.g. speed reduction, parking and traffic light management) and limiting its externalities. Initiatives aimed at enhancing city life through urban design were introduced in the vicinity of large transport corridors. In addition to the metro project, cycling benefited from dedicated resources. Relying on a diverse set of stakeholders, resources, tools, funding mechanisms, these initiatives accelerated the shift away from the car within the city. By contrast, **car-oriented planning remained dominant in the surrounding region**. Some traffic mitigation initiatives were introduced at municipal level. At national level, the tax system on car use and ownership incentivized green vehicles. In political discourses, the city of Copenhagen was blamed for what was considered an insular strategy, and the State for the lack of capacity investments in the region, especially in railways. Together with the Danish Ministry of Environment, the newly-created Greater Copenhagen Authority (2001) aimed at overcoming institutional competition by fostering a regional debate on the revision of the Finger plan.

### The triumph of the cycling city model: the tale of the city (2007-2015)

The emergence of the “**Cycling city model**” results to some extent from the experience accumulated in Copenhagen since the 1970s. Yet it only developed into a full-fledged model when cycling was singled out as a major driver of change in the city’s **climate change agenda** and place-making strategy. Since then,

## DID YOU KNOW?

Main transport measures  
in the City of Copenhagen  
2007-2015

Failed proposal: congestion charge

### Development of the metro system

Inner Cityringen project,  
expected in 2019, line 3, 17 stops;  
Extension planned in Nordhavn, by 2020  
and Sydhavn, by 2023

### Reorganisation of the bus network, 2005-2007

A-buses, primary bus network  
S-buses, higher speed bus network

### Restrictions on car traffic

Reduction in parking spaces,  
traffic lights management

### Emblematic projects

Nørrebrogade, car free zones  
(Since 1962, env. 140 ha in 2016)

### Cycling Strategy and investments

Bicycle path prioritization plan 2017-2025

### Flagship investments in cycling

Bicycle bridge  
Cycle Superhighways project

### Communication strategy

(bicycle account, appraisal  
techniques, indicators, tools)

### Over 30 awards between 2013-17

Ex. European Green Capital (2014),  
World’s most liveable city (2014)



### Uncertain mobility futures (since 2009): the tale of the city-region

In spite of the “Cycling city model” ‘s fame, Copenhagen’s insularity within a car-dominated region challenged the model’s long-term viability. In the changed post-2008 crisis economic and political context, the state-city alliance weakened, and highlighted the need to reframe the city’s sustainable transportation agenda in a regional context. National interests now prioritized carbon reduction strategies and green technologies (ex. green and electric vehicles, urban light rail solutions) as part of the government’s pro-growth agenda. Some attention, and limited resources, were devoted to cycling. Following the rejection of the city’s congestion charge project, a **national Commission on congestion and air pollution** was introduced in order to foster a consensus over mobility futures in the region. Advocating a “**holistic approach**” to congestion reduction, the commission laid the ground for a shift away from the automobile in the region, and for the reshuffling of transport policy priorities in Copenhagen.

Having lost most of its powers relating to transport after the 2007 administrative reform, the newly-created Capital Region of Denmark actively worked to promote **a sustainable transportation agenda in the region**. Up-to-date demographic growth estimates and travel demand forecasts highlighted the need to foster a polycentric approach to spatial planning, develop multi-modal travel solutions and direct connections between existing corridors and around urban cores.



The Commission on congestion reduction offered a major opportunity to push for joint initiatives. Together with 11 municipalities and the region, the State committed to develop **the Ring 3 light rail**, the largest public transport project in the region since WWII. A joint public-owned company was created in order to plan and develop the future system. **Transport companies are working to develop joint initiatives** aimed at strengthening public transport (ex. DOT platform) and mobility as a service (ex. the ECO system). The city-initiated cycle superhighways project is being extended in Greater Copenhagen. Electric mobility was singled out as the region’s flagship traffic mitigation initiative.

In Copenhagen, **the search for new political alliances in the region** became a major priority. Significant financial and policy support is allocated to joint initiatives. Furthermore, as the city grows more attractive for wealthier residents and workers, transport policy priorities have been reshuffled towards public transport, smart technologies, and large-scale urban development (ex. Nordhavn). Copenhagen’s Sustainable Urban Mobility Plan (2012) reflects growing contradictions between the need for mass-transit and roads, to fuel in the urban growth model and the city’s commitment to reduce car use as part of its climate agenda. The choices made during the Commission on congestion reduction, including the decision to support the Harbor motorway and tunnel projects in exchange for continued State support in metro extensions, led to **growing social and political opposition**. Pro-

cycling organizations are concerned that giving priority to multi-modal travel solutions and smart technologies should, in the end, weaken the amount of resources allocated to cycling to the benefit of investments in public transport, roads and motorized transport.

#### 5.2.3 Current and future challenges

Following three decades of uninterrupted expansion, Copenhagen’s sustainable urban transportation model is again seeking to reinvent itself. Some 100.000 new residents are expected by 2025, together with a similar number of workplaces. In order to postpone a much-feared “**cycling peak**” and **maintain low levels of car ownership and use**, multi-modal travel solutions are being developed and new transport modes, such as walking, are being promoted. **At a regional level**, traffic congestion remains a major source of concern. Planning for city life type policies (Stage 3) are mostly developed in Copenhagen city itself and in a small number of adjacent municipalities. In the absence of strong region-wide interests, inter-institutional and inter-organizational competition has the effect of benefitting of motorized and rapid-transit transportation.


Yet a major challenge lies in the state's determining role in shaping transport policy preferences and capabilities in the region, and to a lesser extent, in Copenhagen city. Its continued 'divide and rule' strategy offers limited scope for capacity building at regional level. Local authorities very much depend on national subsidies for funding transport initiatives and capacity investments, in a context in which the State's commitment to sustainable transport remains ambiguous and a source of uncertainty. Since the 2008 crisis, the state's attention shifted towards secondary cities and, more recently, rural areas. Pro-car interest groups obtained a significant reduction of taxation levels on car ownership and use following the arrival of a conservative majority in 2015. Capacity investments in roads and rail have been pushed forward. Tax exemptions on electric vehicles were temporarily suspended, and so far, the proposed 2013 Finger plan has not received formal government approval. Differences between levels of government in transport policy preferences have never been so visible. **In the absence of institutionalized financial and cooperation mechanisms in the region, the collective ability to push forward the urban / regional sustainable transportation agenda requires identifying new drivers of change.**


#### 5.2.4 Conclusive remarks, stage1-to-3 approach in Copenhagen and its region

Three transport policy types compete with one another, very much reflecting different views on the Danish capital-city's role and function within the wider region. While the city promotes itself as the showcase for the "city for people" approach (stage 3), other stakeholders both within and outside the city (politicians, public authorities, transport companies, private actors) also promote car-oriented (stage 1) and/or traffic mitigation (stage 2) policies in the name of accessibility and congestion reduction. **Together, these policy developments account for the persistence of strong differentiation dynamics between the City of Copenhagen, the metropolitan area and the city-region.**


**DID YOU KNOW?**  
GREATER LONDON'S  
TRANSPORT OFFER IS:


**ROADS**


 ROAD NETWORK  
14800 km


 MOTORISATION  
294 cars / per 1000  
inhabitants

**PUBLIC TRANSPORT**

RAILWAY  
800 km including the Overground,  
the Docklands Light railway,  
suburban railways,  
Heathrow Express 

METRO  
11 lines, 400 km 

TRAM  
1 line, 27 km 

BUS  
673 routes 

## 5.3 Transport policy developments: findings from Greater London

### 5.3.1 Summary findings

Despite London being a city with a developed public transport system, car-oriented policies were prevalent for a number of decades from the 1940s onwards. What these policies led to in a context of fragmented local political leadership was to enable a lower density suburban growth and the removal of some of the city's public transport infrastructure, such as the entire tram network. The opposition to road-based policies came from the grassroots, as part of a growing 'anti-road' movement. In a context of steady economic growth and following the reintroduction of Mayoral functions in 2000, there came a remarkable change in transport policies. Combining car traffic reduction measures together with investment in public transport services, the thinking regarding transport increasingly reflected the concerns associated with mitigating the negative impacts of car traffic (including air quality, health). More recently, increased attention has been given to walking and cycling, as well as to accommodating mixed uses on road space.

### 5.3.2 Main drivers and policy processes: understanding the shift towards stage 3

#### Prioritising car traffic as part of the road hierarchy approach (1948-1972)


Dominant for a number of decades, the car-oriented type of thinking enabled a lower density suburban growth in London. However, it was never fully realized because of the existing public transport infrastructure and the lack of popular appeal. Population in London decreased from the 1960s, alongside a movement to suburban and peri-urban areas. Thanks to the post war economic boom and to decreasing fuel prices, car ownership increased and there was general support for building new roads.


The Abercrombie plan (1948), the Buchanan report (1963), and the Greater London Development Plan (1968) reflect the car-oriented model. 'Predict-and-provide' was the main policy approach and influenced transport policy-making across all levels of government. Building more roads was considered as the solution to accommodate car-ownership and to solve traffic congestion. Measures to restrain traffic were believed to hinder economic prosperity. Roadway plans were superimposed on what now are termed "transit oriented developments" of pre-automobile times. The destruction of parts of London during WWII would have enabled some of the urban motorway proposals to be realised. However, only few of the road proposals were implemented.


London had a developed public transport network well before the growth of car-use. Tramlines were dismantled to make room for cars, including on street parking. Bus services were seriously neglected, with fares higher than car costs; this making it even less attractive for people to use public transport. But to a large extent, public transport remained significant throughout the post-war years. Some zoning policies and street designs discouraging walking and cycling were adopted in implementing the road hierarchy, segregating the car from pedestrians on top level roads, but this was not widespread.

Car-oriented policies were more acceptable in the new suburbs from the 1930s onwards, mostly outside Greater London, typically featuring suburban detached housing with cul-de-sacs, collector and

**DID YOU KNOW?**  
Main transport measures  
1948-1972

 **M25 Orbital motorway**  
since 1973, finished in 1986

**Tramway dismantled**  
by 1952 

**Trolleybus dismantled**  
by 1962 



distributor roads. Up until the 1970s there were very few voices that questioned the axiom that building roads was necessary to cater for the inevitable growth of car ownership.

#### From anti-road movements to stagnating transport policies (1972-1997)

The opposition to road building came from the grassroots and led to the introduction of traffic mitigation policies. However, this was not enough in a context of fragmented local leadership and new economic paradigms.

By 1970, opposition grew against solutions involving further investment in road infrastructure. The realisation that building new roads could not of itself solve transport issues soon developed into political, social and institutional conflicts. In this phase, abrupt political and institutional changes were interrelated with a more gradual shift taking place among transport experts and traffic planners in order to address congestion. Motivated by environmentalism, political ecology and a 'not in my back yard' type of reactions, the "Homes before Roads" movement opposed the road-building programme of the Greater London Development Plan. In this context, the London Labour party, which was originally responsible for the motorway proposals, won the 1973 local election by promising to abandon new urban motorway projects. The

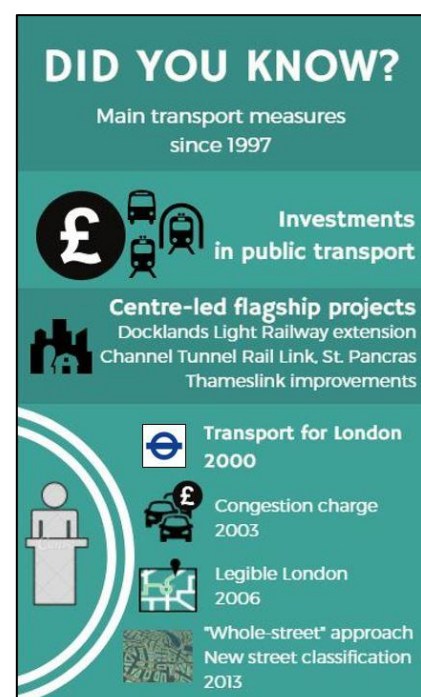
London Ringways plan was put aside and, within the Greater London Council (GLC), increased attention was given to traffic mitigation measures in order to lessen the negative impacts of traffic in residential areas.

Following the abolition of the GLC in 1986, all transport functions of the capital city were transferred to the central government. In a context of population decline and lacking a champion to promote the city's interests, financial constraints and the new neo-liberal thinking resulted in the idea that it was up to the private sector to build and operate transport systems; this deepening the neglect of public transportation. During the following decades, apart from developments underway in the Docklands, there was little or no public investment in any form of transport. Transport policy was characterized by **stagnation**, leading to a period of gradual decline. To help address this on the London Tube, the Labour Government, elected in 1997, opted for a Public-Private Partnership. In taking this decision it faced opposition from a number of quarters, including unions, safety campaigners and the future Mayor of London, Ken Livingstone.

#### From traffic reduction to reallocating road space (1997-2011)

With population increasing again from the mid-1980s, transport demand increased accordingly. Traffic congestion emerged as a major priority, due mainly to its economic impact. There was also increased realisation of the adverse impacts of traffic pollution on public health. The increase in demand and deteriorating conditions on the network led to a change of view in favour of improving transport conditions in Greater London. **In this context, the reintroduction of local democracy in London accelerated the emphasis towards traffic mitigation, improved public transport and, ultimately, the reallocation of road space between street users.** From then on, transport was considered a major priority in successive Mayoral election campaigns. By the late 1990s there was general agreement that it should be a priority to secure investment in London Underground in order to bring the network up to modern standards after a long period of lack of investment that created a big backlog of maintenance.

A historic turn took place after the establishment of the Greater London Authority (GLA), the election of Mayor, and the creation of an





integrated transport agency, Transport for London (TfL) which took responsibility for all modes of transport, including major roads and road traffic. Capacity investments in public transport, which were required from the 1970s, were finally introduced thirty years later. A reflection of this shift came with the introduction of the central London Congestion Charge (2003), one of the most radical policies to have been undertaken in a metropolis of this size. Significant investments were made in the public transport system, with a combination of large scale projects (e.g., Crossrail, extending the Docklands light railway) and massive investments in improving existing infrastructures and systems (e.g., bus, over- and underground networks, etc.).

Together with accommodating projected population growth, air quality, vehicle and greenhouse gas emissions reduction now form an important determinant for transport policy developments in Greater London. Although with some differences, successive Mayors' transport strategies have considered transport policies as a driver for economic growth and a tool for managing transport demand, but also as a way to improve quality of life. The post-WWII road hierarchy was replaced by a nine-fold classification of 'street-types'. A more diverse range of transport solutions were introduced, and now increasingly favour non-motorized solutions, especially in the urban core.

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#### Since 2007, a new "policy orthodoxy"?

The new "policy orthodoxy" now combines a double approach: the reduction of road supply together with increased investments in public transport and active travel modes. Between 1992 and 2009, it is estimated that some 25 per cent of the effective road network capacity in central London was reallocated away from general traffic towards a range of other priorities, such as safety and urban realm improvements. Capacity loss allows for capacity re-allocation towards other street users. Roads are not to be seen exclusively for the movement of motor vehicles but also for a diverse range of street users and outdoor living, thus confirming the definite shift away from the car-oriented city. The "Healthy Streets approach" in London's latest Transport Strategy particularly exemplifies this, together with continued investments in public transport and cycling investments (e.g., "cross rail for cycling").

### 5.3.3 Current and future challenges

Since the mid-1990s, in a context of rapid population growth, car use decreased substantially, while public transport use increased significantly. Nowadays, walking and cycling have a prominent place in the Mayor's and TfL's agenda. Paradoxically, although traffic demand has fallen, **traffic congestion is still a priority**. More optimizing through smart city solutions and technologies is possible, but there might be a need for a more comprehensive re-appraisal of priorities for the road network. In addition, more efforts are needed in order to further expand this new policy orthodoxy outside the urban core, in areas characterized with lower densities where car use remains high.

Future challenges mainly result from new projections of **population growth** reaching 10 million in two decades, which justify the planning and building of new public transport infrastructure. The public transport network will also have to accommodate changed travel behaviours among younger generations, including lower driving licence holding, car ownership and use. These changes in lifestyles and **demographics**, together with **evolving patterns of employment and consumption**, raise new issues about the **need to travel in the future**. New technologies will undoubtedly contribute to accommodating some of these challenges. Yet other changes may shape transport policy developments in the future: resources available for transport, changes in the political outlook etc.

### 5.3.4 Conclusive remarks, stage1-to-3 approach in Greater London

From the historical analysis undertaken, **it can be said that London has followed the three 'stages of change' model, but it has not done so categorically**. There is an added level of complexity that has to do with legacy, geography and spatial differentiation. As with other older cities there was never a pure "car oriented" policy situation in London as there was an extensive public transport system in operation well before the mass advent of the motorcar. Furthermore, whilst Inner London has shifted towards sustainable urban transportation, some socio-demographic groups or parts of outer London and London's peri-urban area still display car-oriented type policy-making.

**DID YOU KNOW?**

Main transport measures  
1959-1977

Creation of a regional public transport authority  
(Syndicat des transports parisiens (STP))

5 New Towns and new business centres (e.g. La Défense)

Construction of motorways  
A1, A15 towards the west of Paris  
Paris ringroad (Boulevard périphérique)

Planned urban motorways  
Paris Motorway Plan

Regional Express Railways (RER)  
H shape, incl. two north-south routes, serving city centre & suburban areas

## 5.4 Transport policy developments: findings from Paris and Ile-de-France region

### 5.4.1 Summary findings

When considering transport policy developments in both Paris and the Ile-de-France region since the 1960s, **competition emerges as the main driver for change**: competition between levels of government, between political parties, between transport companies and between social and economic groups. Yet, competition has not led to inertia. Transport policies and governance underwent massive transformations in the context of two different dynamics: a **state-led approach to mass-transit transportation**, aimed at structuring regional growth through large scale transport infrastructures; and a **city/region-led approach to urban/regional mobility planning**, which prioritised small-scale interventions and non-motorized transport. Acknowledging the continued **coexistence of both dynamics** as well as their **interplay over time** contributes to the better understanding of transport policy developments and their spatial distribution.

### 5.4.2 Main drivers and policy processes: understanding the shift towards stage 3

Enhancing regional polycentrism through rapid transit infrastructures: State-led transport policy-making (1959-1977)

The region has experienced continued **demographic and economic growth since the 1960s**, mainly in the inner and outer suburbs, with an increased dependence on motorized transport. A series of state-led initiatives were launched under the De Gaulle presidency in order to contain urban sprawl and foster the emergence of new towns and business centres, such as the La Défense district. Spatial planning priorities were introduced in the 1965 planning document. Institutional reforms mainly aimed at side-lining the Parisian “red belt”, where the Communist Party remained dominant, and at **overcoming political fragmentation**: both Paris and the Region were placed under the direct control of the State, and five new towns were developed outside the urban core.

Competing elite networks shared a similar interest in **developing mass transport solutions** - either motor- or rail-based - and using the capital-city region as a showcase for promoting them nationally and worldwide. Transport authorities and companies were re-organized under the leadership of the State, with the creation of powerful public-owned companies (SNCF for railways, RATP for public transport) and administrations (National Roads Directorate for car traffic). Massive investments were made in transport infrastructure throughout this period. For public transport, **the Regional Express Railway (RER) network** was jointly developed by RATP and SNCF from the 1960s onwards in order to address daily commuting travel demand to and from Paris. The largest share of investments favored increasing road capacity. It was considered a preferred solution in order to reduce congestion, enable high-speed connections and accommodate transport demand. A large share of **the proposed 900 km network** was achieved by 1975, including radial routes between New towns (Mantes-la-Jolie, Cergy Pontoise) and towards Paris, the Parisian ringroad and the urban motorway alongside the Seine river.

**Growing concerns were raised against such policy choices** towards the end of the period. State-led urban and regional planning

**DID YOU KNOW?**

PARIS ILE-DE-FRANCE  
TRANSPORT OFFER IS:

**ROADS**

40771 km, of which  
1314 km of motorways

**PUBLIC TRANSPORT**

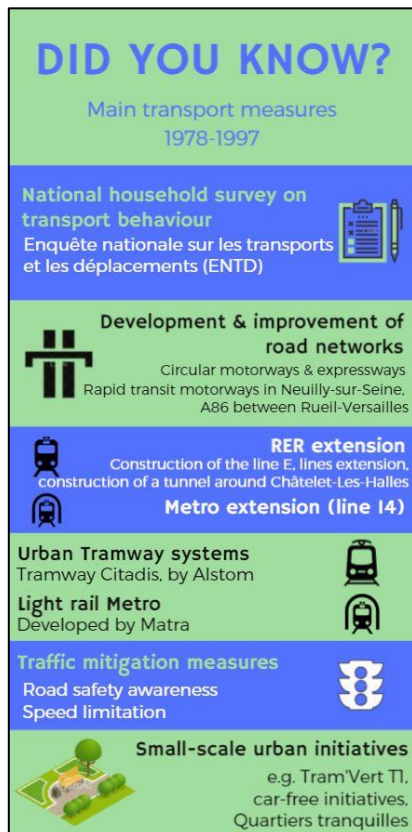
RAILWAY & RER  
13 lines, 1651 km

METRO  
16 lines, 218 km

TRAM  
7 lines, 145 km

BUS  
1412 lines, 31511 km (City of Paris, inner & outer suburbs)  
2 (+ 5 planned) lines, Mobilien  
47 night lines, 1050 km

FERRY BOAT  
1 line, 6 km



only had a limited impact on urban sprawl. Increased political competition slowed down implementation processes. A growing number of social and political organizations underlined the lack of investments in public transport and in Paris, they were joined by opponents to the proposed urban motorway plan.

#### The emergence of an urban transportation agenda (1978-1997)

Decentralization reforms, environmental concerns and urban social movements accelerated the emergence of an urban transportation agenda across the IDF Region. Transport was considered a priority for both local authorities, due to urban-specific issues (pollution, chronic underinvestment in public transport, congestion), and conservative elites at State level, due to rising political opposition from labour organizations and left of centre political parties. **Significant policy resources were made available** at State level for local authorities to develop innovative urban transport systems (e.g., a dedicated business tax - Versement Transport, new technologies). Traffic mitigation measures were introduced in order to increase safety through traffic calming and urban design measures.

Yet implementing these initiatives in the capital-city region was delayed: Paris and the Region had gained some autonomy, but the State retained considerable resources and powers. In this context, the largest share of capacity investments in the region still benefited rapid transit networks and car focused developments. Investments in the RER

and metro networks were shaped by SNCF-RATP rivalry, preventing investments aimed at optimizing existing networks and the development of radial routes. Real-estate developers and the construction industry proposed new motorway developments in the wealthy western suburbs. In Paris, Mayor Chirac suggested dismantling on-street parking in order to increase road capacity for car traffic. Right-of-way bus lanes were introduced, together with some cycling lanes.

**Small-scale, transformative, municipal initiatives promoting alternatives to motorized transportation** only emerged in the region towards the end of the period. The first urban tramway line opened in 1992 outside Paris, in the heart of the red belt and against transport companies' preferences. It was soon followed by new tram projects. Following the 1995 general strike, users turned to cycling and car sharing, unexpectedly demonstrating to policymakers and technicians that transport alternatives could be encouraged across the region. In Paris, **air pollution peaks created a new momentum** for alternative solutions, such as car-free initiatives, weekly traffic bans on expressways alongside the Seine river, and the Quartiers Tranquilles initiative (reducing traffic speed and car access in designated areas). By contrast, the State-designed 1994 regional planning document proposed developing additional economic centres and new towns further away in outer suburbs, in connection with the speed rail network. New motorways were developed as part of public-private partnerships.

**Towards sustainable mobility (1998-2011): institutional competition and enhanced policy capacities as major drivers for change**

Regional sprawl, socio-spatial inequalities and increasing transport demand were still priorities to tackle. The functional metropolitan area spread beyond the region's borders and demographic growth was strongest in the outer suburbs, and only partially absorbed by new towns. By 2000, only 25% of workplaces were





located in Paris, as opposed to over 35% before 1975; a ¼ of the economically active population worked and lived in the same municipality.

With the election of a Left-Green majority across levels of government, state elites and transport professionals were challenged in their ability to set transport planning principles. Transport became a highly politicized issue, with each level struggling against one another in order to champion its preferred solution and preventing joint initiatives. Despite fragmentation, transport policies evolved rapidly, with institutional competition emerging as a major driver for policy change.

### Paris takes the lead

The new administration **tapped into urban regeneration resources and environmental protection** in order to introduce alternatives to car-based mobility, strengthen local public transport and enhance the quality of public spaces, first with the introduction of the urban tramway. Traffic calming, pedestrianizing (e.g., the Montorgueil area) and car-free initiatives (Paris Plage) were introduced citywide. This laid the ground for ambitious policy goals by 2030 (Mobility plan, 2007): reduced the share of individual car use by 40%, and achieved a 20% increase in public transport capacity. The overall impact was not immediate due to various resistances but allowed the progressive inclusion of many new policy initiatives into **a long-term agenda for change**. Efforts primarily drew on street-design initiatives: right-of-way bus lanes, cycling paths, space for walking and reducing road-space allocated to cars. Speed limits were introduced (Quartiers verts), the urban tramway extended. Bike- and car-sharing systems were developed as part of public-private partnerships, soon extending towards the region's inner suburbs. Electric mobility is being encouraged, and ride-sharing is tolerated as a timely solution to travel demand at night. Over time **the city accumulated knowledge, policy capacities and legitimacy**, asserting its leadership through transportation. It now takes every opportunity to showcase the transformative role of urban transport.

### Building capacity for change in the region.

During negotiations with the State, public transport was the new administration's priority. Taking responsibility over the public transport authority (STIF) and strategic planning (SDRIF), it focused on streamlining public transport supply across the region as part of a new generation of bilateral network operation contracts. Increased tax rates on businesses were introduced region-wide. Bus services were improved (extended time slots, bus priority, higher frequencies, right-of-way lanes), the urban tramway and the Parisian metro were extended in the inner suburbs. Significant efforts were made to provide region-wide travel information, change the tariff policy, and install new ticketing systems. In doing so, the Region not only pushed back against state imposition of spatial and transport planning agendas but also against municipalities, including the powerful City of Paris.

This lack of cooperation caused delays or the abandonment of regional initiatives. This particularly impacted proposals aimed at modernizing the RER and regional train networks, due to state elites' reluctance in acknowledging STIF's authority and to continued RATP-SNCF rivalry. In its draft 2007 strategic plan, the region advocated a "planning for people" approach to regional mobility, committed to reduce socio-spatial inequalities resulting from the mismatch between public transport supply, affordable housing and commercial areas, and highlighted the urgency to modernize ageing networks (Transport investment programme).

### "All against Sarkozy": unprecedented levels of institutional cooperation in the region

The Region's "planning for people" approach opposed the State's vision of the region as national hub, championed by President Sarkozy as part of the Grand Paris Express initiative. This initiative focused on rapid-transit connections between business districts, airports

**DID YOU KNOW?**  
Main transport measures  
in the City of Paris and IDF region  
since 1997

**City of Paris**  
Paris Mobility Plan (PDP)  
since 2007

**Transformation of urban space**  
Car-free zones and promotion of walking  
(e.g. Paris plages, Berges de Seine)

**Urban tramways**  
**Bike sharing**

**Private initiatives**  
(Paris & IDF)  
Vélib  
Autolib

**Ile-de-France Region**  
STIF - Regional Public transport  
authority, since 2001

**Regional Mobility Plan (PDUIF)**  
since 2003

**Strategic Planning Document (SDRIF)**  
2007, 2013

**Increase of "Versement transport" tax**

**Improvement of bus services**  
e.g. Mobilien network, Noctilien (night bus),  
right-of-way lanes

**Urban tramways**  
**Metro extension**

**More user-friendly devices**  
e.g. Region-wide travel infos, tariff change,  
new ticketing system



and innovation clusters to enhance regional attractiveness. As the State vetoed the region's plan (2007-2011), local authorities rallied up against the State. Demonstrating unprecedented support to the regional sustainable transportation agenda, municipalities worked with STIF and RATP on a case-by case basis, tapping into alternative funding sources (e.g., urban regeneration & climate change policy resources, EU, private initiatives, etc.) in order to develop transport alternatives to car, including cycling, car-sharing, public transport, and enhance the quality of public spaces through urban design initiatives. In public transport, rail-based initiatives were favoured in the densest urban areas as opposed to bus services between and outside urban cores.

In 2011 a compromise was found: in addition to a revised version of the Grand Paris Express, the State agreed to co-fund the regional transport investment programme. A new state-led transport authority, Société du Grand Paris (SGP), was created in order to coordinate new capacity investments in the region.

### 5.4.3 Current and future challenges

Following four decades of decentralization reforms, each institutional level now has sufficient resources to champion its own policy priorities and preferred solutions, while seeking increased autonomy and policy capacities through aggressive place-making strategies. Paradoxically, and in spite of such major achievements, levels of authority still **compete and clash in most policy areas**. The City of Paris' decision to reduce car traffic by reallocating emblematic roads to other uses reopened a major institutional struggle in a changed political context and confirmed continued support outside Paris for car use in the region in the name of spatial justice, freedom of choice and accessibility. The lack of coordination between major stakeholders led to recurring infrastructural crises in the RER and regional train networks, further highlighting the need for massive investments. The State capacity was confirmed with the Grand Paris Express initiative, although the nature of its power has changed overtime.

From a public policy and a governance perspective, the main **challenges** are **institutional** – to ensure stabilized forms of coordination beyond political competition -, **organizational** – to ensure coordination between transport modes region-wide – and **financial** – to find a new compromise about financing new transport investments and optimizing existing networks.

### 5.4.4 Concluding remarks, stage1-to-3 approach in Paris and Ile-de-France Region

A shift away from the automobile-based city undoubtedly took place in the Paris Ile-de-France region over the past five decades. Policy developments show constant overlap between three different transport policy types. In spite of limited demographic growth – estimates of 0,8 to 1,8 million additional inhabitants by 2030 - diffuse urban sprawl has not been contained and now spreads beyond the regional borders. **Car dependency is still increasing rapidly in the outer suburbs, whereas car use reduction took place in Paris and the inner suburbs, where investments and capacity building have been most pronounced.**

## DID YOU KNOW?

The Grand Paris Express  
2018-2035

**Société du Grand Paris (SGP)**  
Created in 2010

- + up to 250 km of metro lines
- Metro line extensions**  
(lines 4, 11, 12 and 14)
- New, automated metro lines**  
(lines 15, 16, 17 and 18)
- 72 new stations**  
incl. 17 interconnecting stations
- 60 km/h average operating speed**



## 5.5 Transport policy developments: findings from Vienna

### 5.5.1 Summary findings

Transport policies have evolved considerably in Vienna over the past six decades, as a result of an incremental process of policy change. Robust forms of urban governance mitigated the impact of external pressures for change, these ranging from the Oil Crisis to Austria joining the EU, and also featured increased levels of political competition. The long-term viability of the Vienna approach to car reduction primarily draws on the combination between two policy tools, i.e., parking management and high capacity and good quality public transport. Elaborated in the early 1990s, this approach was considerably enhanced and strengthened during the following three decades. Since 2010, the diffusion of the “Green alliance” concept has accelerated the introduction of sustainable transport initiatives further (Stage 3).

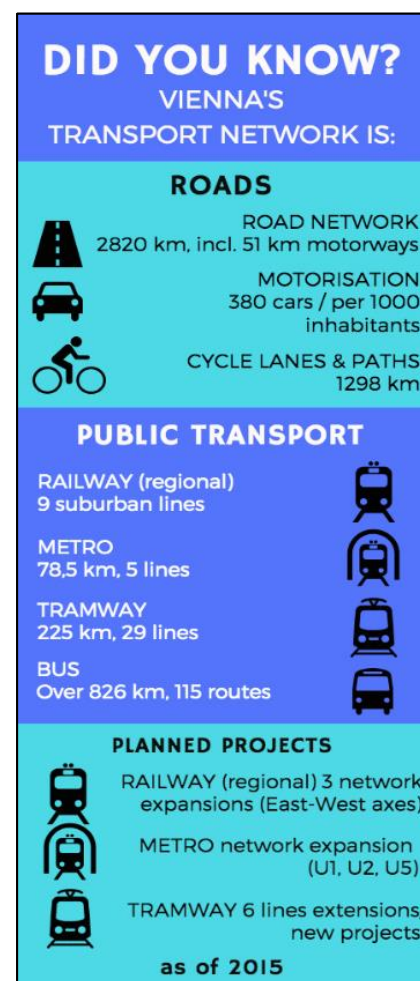
As of today, the Vienna approach faces a number of challenges in the context of population growth, a rapidly evolving political outlook, and uncertainties related to resources available for public transport in the future. Forms of urban governance are weakening, as reflected in the growing politicisation of transport issues, and this offers increased opportunities for a large array of stakeholders to champion alternative policy solutions, including car use and active modes. Furthermore, the mode shift away from car use has been particularly marked in the city’s urban core, whereas the role of the car remains largely dominant at the city’s fringes and beyond, thus resulting in increased commuting traffic flows. In this changed context, more efforts are needed in order to develop a metropolitan-wide comprehensive re-appraisal of priorities for the road network.

### 5.5.2 Car use as the backbone for the post-WWII city

The car-oriented city model emerged and rapidly expanded during the post WWII reconstruction period in Vienna. The city still relied on a pre-war compact urban footprint and legacy transport infrastructure routes. Yet the goal of developing a modern city increasingly clashed with efforts to preserve the historical city scape and architecture. Reconstructing the city offered an opportunity for successive generations of social-democrat leaders, technicians and policy-makers to reduce pressure on the inner-city while at the same time containing low density urban development in the outer districts.

At first, the largest share of resources was allocated to reconstructing pre-war networks, and little room was left for implementing new ideas. But as the automobile emerged as a symbol for overcoming the effects of the war, the road network emerged as the pillar of the city’s master plan. A strict differentiation was maintained between developments in the urban core, meant to preserve the heritage of national significance, and in the rest of the city, where the dream of a modern city justified the rapid development of car use. Priority was given to the construction of roads and parking places. An arterial road system including inner-city motorways was developed, with the first section of the inner-city motorway opened in 1970 (*Südosttangente*).

In this context, the use of cycling, and to a lesser extent, public transport, were considered to be transport modes linked with poverty and pre-modern city life. Alternative transport modes were accommodated insofar as they were compatible with the rapid development of car use. Their reconstruction benefitted from the Federal state’s support and the context of cross-utility financing at city level. Large segments of the tramway system were dismantled in order to allow sufficient road space for car traffic. Some tram routes were replaced with bus services, and it was also suggested to transfer tram routes below ground in order to allow car traffic to flow more freely. Cycle ownership and use was only encouraged as part of leisure activities and sports.





### 5.5.3 Over-ground vs. underground: the art of non-decision (1969-1991)

Post oil crisis, public transport initiatives benefitted from shifting federal transport policy priorities. These increasingly addressed issues related to the limited nature of fossil fuels and the negative externalities of transport (e.g., noise, air pollution). At the city level, even though Vienna's population was further diminishing (down to 1.5 million residents), increasing motorisation rates and daily incoming commuting traffic raised new concerns about the transport network's capacity to accommodate travel demand.

This justified the need to expand road space for car traffic and when possible, to relocate public transport below ground. Indeed, most transport investment during this period (new urban motorways, increased grade separation, etc.) were meant to create more space for traffic flows. This was particularly marked outside the inner-city. Yet public transport advocates also found new opportunities for pushing forward non-motorised transport solutions and renegotiated a status quo with pro-car advocates that was to last until the early 1990s. Remaining segments of the tramway system were converted into underground tramlines, allowing the upgrade of road space in order to speed up traffic flows. Tailor-made transport initiatives were introduced in the inner-city as part of the heritage preservation strategy. The suggestion to build a metro resurfaced in the late 1960s in a context of increased political competition within and outside the ruling majority. The metro was developed between 1968 and 1978, also resulting in rationalising remaining segments of pre-existing transport systems. It also opened new opportunities for on-street initiatives (e.g., pedestrian zones, reduced speed limits) in the vicinity of large U-Bahn stations in the

inner-city area. Meanwhile, the city administration developed increased capabilities to design and implement large-scale urban projects over time.

The metro system soon emerged as the backbone of the city's transport network, carrying the majority of passengers and shaping new urban developments in terms of both workplaces and housing. This approach also met with some resistance. Signs of greater civic engagement were visible among students, housing associations and the environmentalist movement. They opposed the idea of "gentle city regeneration" to large-scale urban developments and challenged hierarchic forms of urban governance and policy-making. These demands were accommodated by developing new forms of public consultation, and in transport, by strengthening road traffic mitigation, enhancing public transport, and to a lesser extent, developing cycling and reaching out to pro-cycling groups.

### 5.5.4 Limiting car traffic through the integrated approach (1991-2011)

Following the fall of the Iron curtain and in the context of pre-accession negotiations to the EU, transport policies evolved rapidly in Vienna. The capital-city benefited from capacity investments in national transport infrastructure aimed at increasing its attractiveness vis-à-vis other major European cities. An integrated approach to transport was developed at both federal and city levels in order to enhance public transport and reduce car traffic externalities. City planning priorities (e.g., STEP 1994 and 2005) and a changed transport strategy also reflected the city's changed role in an enlarged Europe.





**DID YOU KNOW?**  
Main transport measures  
1991-2011

**Fall of the Iron curtain** 1995 2004

**Federal level, Integrated approach**  
Intermodal transport masterplans (1991)  
Joint Ministry Roads&Rails, 2000  
Traffic mitigation

**Vienna as a hub**  
Cross-border cooperation  
VOR extended to Burgenland, 2002  
Airport extension, railways and highways extension, new Hauptbahnhof  
Metro & regional railways extensions

**Integrated approach: STEP 1994/STEP 2005 & Transport plans**  
Densification  
Donau City, Seestadt Aspern

**Systematic approach to parking management, since 1993**  
Short-term parking charges

**Traffic mitigation & calming measures**  
Speed reduction, Urban design initiatives  
Focus on historic center (UNESCO)

**Public Transport reorganization, 1991**  
2001, Wiener Linien  
Capacity investments in metro & bus  
Night bus lines (1995), Night metro (2010)

**Development of cycle networks**  
388 km in 2000, up to 1298 km today  
Bike sharing 2003

**✗ Congestion charge rejected**

city administration linking through its utilities companies with business groups, workers' representatives and users' groups was highlighted. Pro-cycling organisations claimed insufficient efforts were being made to develop cycling and to reduce car-use. Overall, these claims confirmed the prominence of transport politics in Vienna and highlighted the ruling majority's growing difficulties in integrating this large variety of claims through existing forms of governance.

### 5.5.5 Current and future challenges: implementing the sustainable urban transport agenda (since 2011)

Following the election of Red-Green political majority in 2010, adjustments were made to transport policies and tools. A comprehensive sustainable transport agenda was introduced in the light of population growth forecasts to 2030 - a yearly increase of 25.000 people and 10.000 housing units. Revised city and transport planning principles clearly state that building new roads is not a priority anymore. Furthermore, the focus is not solely on public transport, but on strengthening cooperation between non-motorised transport modes: together, public transport, walking and cycling (i.e., the "Green Alliance") are to reach a mode share of 80/20 by 2025.

Pre-existing transport policy tools are increasingly combined with sustainable and technical-led initiatives. Public transport services and infrastructure are being optimised and major efforts being made to incentivise demand through fares (e.g., € 1 per day season ticket). The extension of the parking management scheme to the outer districts also

In addition to the profound reorganization of the public transport sector, two flagship policy measures soon became the trademark for the city's efforts to ensure accessibility and reduce congestion. First a systematic approach to parking management was introduced in the inner-city area and progressively extended towards the outer districts. It was also used in order to develop off-street parking facilities, and in the urban core, to enhance green spaces, playgrounds, pedestrian areas and to revitalise historic places. The city also drew on federal legislation aimed at mitigating the impact of car traffic. Second, public transport emerged as Vienna's major transport priority. investment and extensions. The aim was for the public transport network to cover the whole built-up area, preferably through rail-based extensions (metro and regional railways). This shift was achieved through significant organisational reforms, notably the creation of the Wiener Linien, and the search for new funding sources. Together, these initiatives considerably enhanced the attractiveness of public transport in Vienna. On an average weekday the share of trips taken by public transport was 29 per cent in 1991. This rose to 35 per cent by 2010.

Irrespective of these results, the ruling majority's transport strategy met with some criticism, which culminated during the 2010 municipal election campaign. Parking management was widely acknowledged as a tool aimed at addressing road congestion, but its effect on car use reduction was questioned. The City of Vienna – and the inner-city districts in particular – were criticized for shifting congestion and other negative externalities of car use towards the outer districts and the neighboring province. The disconnect between, on the one hand, increased efforts to engage a wider range of stakeholders and the public in the setting of policy goals, and on the other hand, a perpetuation of the former corporatist form of policy-making at implementation stage, with the

**DID YOU KNOW?**  
Main transport measures  
since 2011

**Red-green coalition (2010)**  
**Mobilitätsagentur (2011)**

**Austrian Spatial Development Concept (ÖREK 2011)**  
**Liveable and Smart city agenda (2012)**  
Parking management  
Tech solutions to optimise traffic flow  
Urban design initiatives  
**Integrated mobility management approach**  
**Road traffic regulations**

**Transport strategy at metropolitan scale**  
Stadtentwicklungsplan 2025 (2015) Urban  
Mobility Plan Vienna

**Green alliance**  
**Fields of mobility, 50 measures**

**Strengthened public transport**  
Capacity investments metro/tram  
Night traffic in metro  
Priority to public transport  
Segregated lanes  
"€1 per day" annual ticket (2012)

**Parking management scheme greener and extended**

**Flagship urban design initiatives**  
Pedestrianizations and priority for walking, "Encounter zones"

**Active modes**  
Communication tools, streetlife festivals, international events (Walk 21 Conference, 2015)  
Comprehensive cycling programme

benefits from continued attention from the ruling majority. So far, socio-political resistance justified its incremental extension through micro-level political management at district and neighbourhood level. The city also strengthened its regulatory role in the context of rapidly developing new mobility services, including private-led initiatives. Lastly, the “fair streetshare” strategy highlighted the shift towards ‘planning for city life’ policies. Emblematic roads (e.g., the Mariahilferstrasse) were pedestrianized and/or opened to cyclists. Traffic calming measures were applied in these areas to car drivers and public transport. As part of their agenda for sustainable transport, the Green Party also prioritized the need for increased policy resources (e.g., knowledge, expertise, awareness-raising, etc.) as a necessary step towards mode shift. A Mobility Agency aimed at promoting the development of cycling and walking through added capacity building and a dedicated communication strategy was created to this effect.

Nevertheless, the Viennese approach also highlights old and new challenges. Political competition increased the role of micro-level political management at the implementation stage, opening a large avenue for influence-seeking groups to obtain exemptions and maximise their own benefits. The number of transport controversies is expected to increase in future and to offer new opportunities for pro-car interests, as observed recently in discussions about the Lobautunnel project, and ways to address growing demand for commuting travel at regional level.

### **5.5.6 Concluding remarks, stage1-to-3 approach in Vienna**

The analysis done in WP4 confirms the overall transformation of transport policies in Vienna and the shift away from car-oriented policies. Between 1954 and 2017, transport policies shifted progressively from planning for the automobile city (stage 1) towards planning for people (stage 2), which is still dominant in federal transport policies and to some extent, in transport policies at the city level as well, and planning for city life policies (stage 3), which have been incrementally introduced during the 2010s. Similarly to the situation observed in other WP4 cities, this evolution is not evenly spread in the city, with some strong differences between the historic city centre, and the inner and the outer suburbs. Beyond the city’s borders, the role of the car remains largely dominant and fuels commuting traffic flows. Third, the incremental nature of policy change in Vienna contributes to exacerbating the overlap between the three policy types and for the transition being neither unidirectional nor evenly spread in the region.

## 6 Understanding patterns of transport policy developments across the five stage 3 cities

In this section, we bring together findings from the WP4 dataset and from case studies in order to make sense of transport policy developments across the five stage 3 cities. This is done by discussing the relevance of the three-stages approach from a public policy and a governance perspective. Indeed, we argue that the research finds general support for the notion of a transition from Stage 1 to Stage 3. It also provides a clear overview of transport policy change over time. Yet it also highlights its limits and blind spots, especially in the model's attempt to identify the precise role of governance and policies in shaping travel trends over time.

Moreover, the work done as part of WP4 highlights some similarities across the five cases as well as remaining differences. More precisely, context matters ... but only to a limited extent. There is no one best way, but several pathways, towards Stage 3. Details of the processes and outcomes vary considerably from one city to another - with important spatial and temporal variations. Nevertheless, findings are also consistent with the public policy and the urban governance literatures, insofar as they provide strong evidence for common policy mechanisms being at play across the five stage 3 cities: 1) the choice and selection of policy tools and measures; 2) capacity building through processes of resource accumulation at the urban level.

### 6.1 The choice and selection of policy tools and measure: a first mechanism of policy change

First, we find that the relationship between the reduction in car use that is observed across the five cases under study in this project and transport policy processes is not be a straightforward one. It is mediated by the choice and selection of policy tools and measures, which reflect the different ways in which contradictions between different urban futures are reconciled over time and across cities.

#### 6.1.1 No single direction in history

First the "Transport Policy Evolution Cycle" is very much grounded in a functionalist perspective on policy-making, according to which public policies refer to *"the activity conducted by a number of policy actors in the hope of improving policy-making and policy outcomes through the accurate anticipation of the consequences of government actions"* (Howlett, 2011, 3). By assuming a single "direction in history", this cyclic, linear approach underestimates differences both between and within cities, possible contradictions and ambiguities in policy processes, and neglects the possibility of unpredictable policy outcomes. It also raises an **issue of causality** in considering the role played by public policies in achieving a reduction in car use (Pickvance, 1986).

Findings from WP4 and WP3 suggest that public policies and governance only account to a limited extent for the changes taking place in behaviours. It highlights the need to question the robustness of this linear approach to long-term policy developments in transport. Indeed, sustainable transport policies are not automatically conducive to a reduction in car use, and produce a large variety of socioeconomic unwanted and unintended effects. As it is often the case in complex social phenomena, car reduction also results from a combination of variables in which transport policy developments only play a minor part, in close cooperation with other changes such as economic cycles, demographics and political change. In this respect, the work achieved as WP3 and WP4 in the CREATE project confirms the critical role of macro trends as powerful drivers of change – population growth, levels of GDP and education, changes in the labour market and technological changes.

By contrast, governance arrangements and policies intervene as mediating factors in order to account for changes in behaviours and mind-sets (see D3.5 report).

#### 6.1.2 Governing transport and mobility: understanding the role of transport policies

Second, in many cities across Europe, transport and mobility policy goals are often vague and contradictory. In the case of sustainable transport policies, policy documents often combine somewhat uneasily three normative and cognitive frameworks (Halpern 2013): (1) promote economic growth through accessibility, connectivity and traffic flow; (2) ensure freedom of choice through some level of socio-spatial equality in the distribution of networks and services; (3) achieve sustainable development by reducing negative externalities

(e.g., air and noise pollution, safety and land consumption). These objectives tend to be rather broad; they only provide a very general characterization of sustainable transport policies. They give no indication of the concrete ways through which they are made operational through specific resources (e.g., legal, budget, knowledge, etc.) or tools (e.g., regulation, economic, incentives, etc.). This is conducive to some **discrepancy** between stated policy goals and the choice of means (Lindblom, 1959; Lascoumes, Le Galès, 2007).

This was confirmed in the work done on the five stage 3 cities, with the introduction, over time, of four major transport policy goals reflecting different urban futures, transport governance arrangements and types of transport policy tools and measures. More precisely, changes in transport policy objectives reflect a shift from:

1. The capital-city as a node<sup>26</sup>, which reflects the function attributed to these strategic areas in their respective national transport systems and economies.

In this perspective, mass transit infrastructure and traffic growth policies are to be prioritized in order to ensure the vehicles to flow rapidly through rapidly growing urbanizations. Two policy objectives are representative of this perspective: transport development and traffic congestion. Until the 1970s and in four cities out of five, these policy objectives mainly justified the development of urban and regional motorways, except in the case of the Paris and Ile-de-France region, where the RER system was planned and developed. Over time, it justified capacity investment in rail-based public transport (e.g., regional trains, metro systems) as well as region-wide public transport services that required fare agreements between local public transport and railways companies. As of today, projects, such as Crossrail 1 and 2 (Greater London), the Grand Paris Express (Paris and Ile-de-France), or the light rail ring (Copenhagen region), are particularly representative of transport policy initiatives with a limited urban dimension. City governments only contribute to a limited extent to their planning and development, according to the level of national subsidies and to the distribution of power and resources between national and local transport planning authorities and transport companies.

2. The 24/7 economy captures the function attributed to cities through the development of a second generation of transport policy objectives, namely economic development and socio-spatial equity.

In this perspective representative of the « Planning for people » type of policies, transport policies are adjusted, on the one hand, to the requirements of the labour market with a specific focus on mandatory trips between home and workplaces, and on the other hand, on increasing accessibility to existing and new business centres. In three cities in particular, Vienna, West-Berlin and Paris Ile-de-France, in which there is a strong public transport tradition, economic actors and unions supported increased capacity investment in public transport and parking places at workspaces from an early stage on. New governance arrangements are introduced in order to develop additional funding resources. Particularly representative of this evolution is the versement transport initiative in the Paris and Ile-de-France region, which allows urban transport authorities to introduce a local business tax in order to finance capacity investment in public transport. A large share of these services is funded under local and national Welfare systems in order to target specific age groups (e.g., students, seniors) and workers. In Vienna and West-Berlin, this leads to the development of underground metro systems ; and in London, to the Jubilee line and the Docklands light rail system. Bus services (e.g., route planning, fares, etc.) are adjusted in order to reflect changes in the spatial distribution of workplaces at metropolitan level as well as to increase accessibility from new urban developments outside the core urban centre. Today, these policies have adapted to the changes taking place in urban economies and labour markets. They include night services as well as increased accessibility to areas devoted to leisure and tourism. Particularly noteworthy in the case of Vienna and Paris is the introduction of socio-spatial equity policy objectives in transport from the early 1980s onward, which reflect the need to increase accessibility to and from new housing estates in the suburbs where low income social groups, mainly from foreign origin, have been accommodated.

By contrast, these developments are introduced later on in London, due to the city's specific institutional context under the Thatcher governments, and in Copenhagen, where pro-public transport advocates played a limited role until the early 2000s and the opening of the metro system.

3. The city as a place reflects the role of transport in enhancing urban public spaces, the quality of life and the allocation of space to different uses through objectives such as climate change environment, urban concentration and densification, and urban liveability and quality of life.

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<sup>26</sup> For the distinction between city as node and city as place, see the work by Veltz (2000) and Hall (2008).

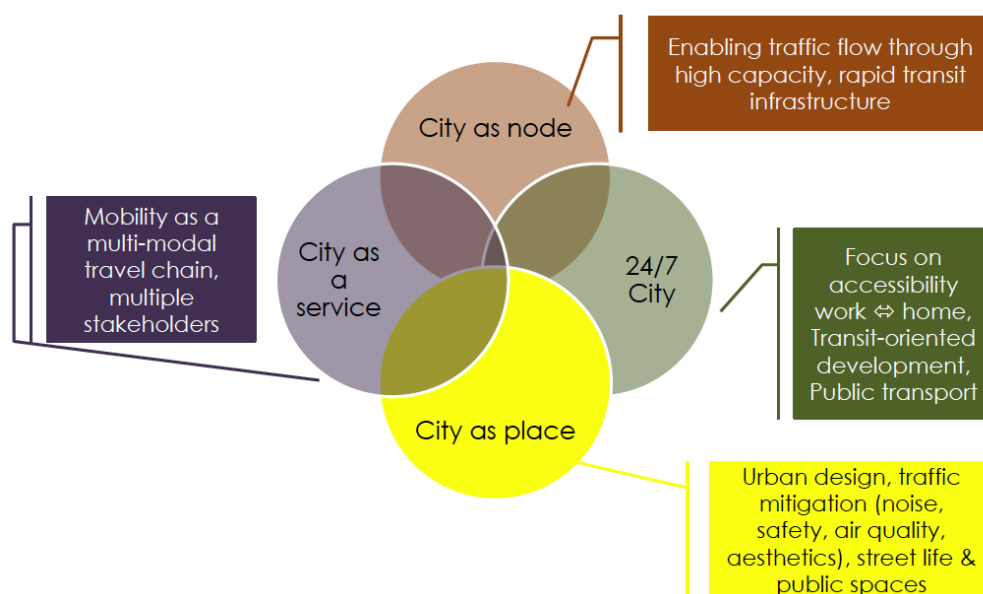


The “city as a place” approach is rooted in the idea that a capital-city should also cater the need of its residents, and not only the interests of national states and business groups for these strategic areas. As such, it should increase quality of life, enhancing public spaces and urban design. In some cities in CREATE, it is strongly related to the land use regulations and transport oriented development, as a way to reduce levels of density in the urban core and increase the quality of housing (Vienna), develop the space left vacant following the dismantling of industrial activities (Greater London, post 1990 Berlin, Copenhagen). In others, it reflects the prominence given to reallocating street spaces to non-motorized transport modes. The approach based on “regulation through space” – as opposed to “regulation through prices” which has often been used in the literature in order to characterize the London approach in the 2000s – was first introduced in Paris, and to some extent in Copenhagen, and is currently being systematised in London as part of the street types typology. Whatever forms these developments take, they draw on the strengthening of the urban dimension of transport and its submission to urban planning principles (see below).

4. The city as a service reflects the growing role of the platform economy in the provision of transport services and investments.

Interestingly, transport and urban planning documents since 2015 highlight the emergence of a fourth urban future, which relates to smart city agendas and the idea of the city as a service. It contributes to shaping what stage 4 might be, including the changing role of cities from transport providers to transport regulators. In this perspective, technical-led policy tools are instrumental in optimising existing networks and ensuring coordination between modes as part of multi-modal travel chains. In some stage 3 cities, it leads to the development of a new layer of transport policies, which adds up to the three pre-existing ones and creates new needs for cooperation.

Figure 9a. Competing urban futures



## 6.2 Transport policy change and the need for new mechanisms of cooperation

The development of the sustainable transport agenda raises classic issues of policy coordination (Bouckaert et al., 2016), both vertical (between levels of governance) and horizontal (between transport modes at city level).

### 6.2.1 The struggle for resources: ensuring coordination between transport modes

The shift away from the car towards sustainable modes implies a redistribution of resources within the transport sector in order to support a mode shift (cycling, walking, etc.) as well as an ability to monitor and enforce car restraint. There is nothing automatic in the diffusion of this policy agenda, but rather it is shaped by power relations within the transport sector – between transport modes, for example – and from evolving relationships, in a given political system, between the transport sector and a number of other, non-policy related, factors, such as economic growth, political cycles, technological changes and social mobilizations.



At first glance, different types of policy instruments were introduced (e.g., congestion charge, parking management, dismantling of road space, etc.) and original forms of central-local and public-private relations were developed. Also, and when observed at metropolitan level, the sharp contrast between policy offers in the city centre on the one hand, and in adjacent and further-out municipalities on the other hand, confirms that such efforts were not applied consistently throughout the metropolitan area. Differences in levels of population density only account to a limited extent for such findings. Transport policy developments do not take place in a vacuum. However, the unequal spatial distribution of transport policy level across the metropolitan areas could also result from the mechanisms through which political resources, including public services and investments, are distributed at city level. This confirms that cities enjoyed some room for manoeuvre in terms of the political capacity to allocate resources both socially and spatially.

This was confirmed across all five stage-3 cities (see above). In this perspective, the work done as part of WP4 confirms that:

- The governing of transport and mobility results from the why's, who's and how's these competing visions and interests of urban futures are politically reconciled as part of the setting of goals;
- Transport policy developments highlights the dynamic resulting from making these goals material through the choice and combination of concrete policy tools and measures.

### 6.2.2 The role of transport policy developments in shaping socio-spatial dynamics

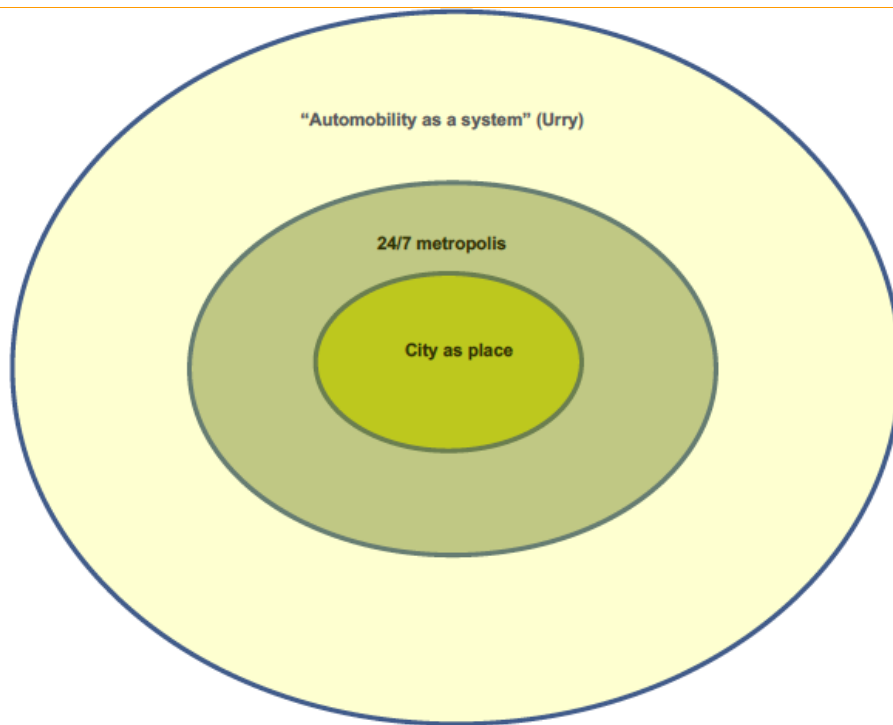
In a critical perspective on sustainable cities policies, it was argued that car reduction is instrumental to the “neo-liberal city project” (Reigner, 2013; Aalbers et al., 2013). In this perspective, changed mobility and transport patterns constitute an unintended – and positive – outcome to the sustainable urban agenda. It is also conducive to, on the one hand, the rapid transformation of urban societies and economies, including gentrification processes and, on the other hand, to increasing the role of market actors and market mechanisms in the governing of transport (Peck, 2004; 2013).

To be sure, the work done on the five stage 3 cities confirms that sustainable cities policies are not equally distributed within metropolitan areas, but are often concentrated in urban cores or the inner-city/peri-urban 1 area<sup>27</sup>. In most cases, capacity investment in transport was fully integrated into large-scale urban regeneration programmes in city centres or into mega urban development projects (Fainstein, 2008). They constituted an opportunity for urban authorities to experiment with new forms of partnerships with economic actors as observed in the case of bicycle or car sharing systems for example (Huré, 2012), or in the case of the fair streets policy in London and Vienna. By contrast, road transport, car use and large road infrastructures remain dominant in the suburbs and the peripheries of large European cities. In this perspective, they constitute a more silent, less visible dimension of urban policies (Cochrane, 2011; Peck and Theodore, 2013). Despite the strong limitations of the “neo-liberal city” assumption, this literature suggests that sustainable cities policies are **not neutral**. As any other political process, they contribute to the socio-spatial distribution of resources – and nuisances – within metropolitan areas and may be, as such, conducive to some spatial inequalities (Le Galès, 2011; Pinson and Morel-Journel, 2017).

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<sup>27</sup> See area selection, WP3, D3.1 report

Figure 9b: the typical spatial distribution of the three stages



### 6.2.3 Winners and losers? Context-dependent policy choices

Findings from WP4 challenge the uniformity of the process at stake and suggest the role of context-dependent dynamics. In other words, there is no one best way in the shift away from the automobile city towards the sustainable and liveable city. This is consistent, on the one hand, with findings from the literature on sustainable cities, which highlights some major differences in the ways through which policy goals are achieved, and on the other hand, with findings from the work done in the transport studies literature on the diversity of paths and policy mixes that are conducive to major policy transitions (Banister 2005, 236). Rather than a linear trajectory, transport policy developments in various urban contexts suggest a combination of different types of policies.

More precisely, the shift observed in transport policy discourses and objectives across the five stage 3 cities was not conducive to similar policy choices. These findings thus raise **a second issue of causality** and question the relationship between different strategies (context-dependent sustainable urban mobility strategies) and similar outcomes (changes in travel trends / peak car phenomenon). Findings from WP4 provide some explanation for this, and highlight the role of interest groups, conflicts and resistances in shaping the allocation of resources and constraints between stakeholders. In other words, these variations are best explained by assessing, in each city and over time, who are the winners and the losers from the shift away from the automobile city. In all these cities under study, the introduction of stage 2 and 3 policies met with strong resistances and protest from a large variety of stakeholders, including car drivers and the car industry, shop owners and traffic planners. In other cases, the introduction of stage 3 policies spurred some resistance in the transport sector itself, e.g., bus drivers, taxi drivers, etc. Together, these resistances and conflicts, and the way they were resolved over time, account for the specificity of each city's trajectory towards sustainable urban mobility agendas. Taking them into account allows understanding the logic of choice and combination between policy tools and policy measures.

These findings are also consistent with the work done on policy implementation (Pressman, Wildavsky 1973), as another way to explain the discrepancy between policy objectives and policy results. This work also questions whether such policy changes are definite as opposed to contextual changes, and whether or not such decrease in car use will continue in the near / far future.

### 6.2.4 Concluding remarks from the public policy perspective

All in all, the work done on transport policies and governance as part of the CREATE project confirm findings from the policy studies literature, which have repeatedly highlighted that policy outcomes are neither

purely deterministic nor random (Margetts et al., 2010). Rather, they are contingent upon a large variety of factors, including the ability of public authorities to effectively regulate socioeconomic behaviours or to sustain such policy goals and resources in a medium- or long-term perspective.

### 6.3 Strong urban governance: a second mechanism of policy change

Analysing transport policy developments in cities raises additional issues that are linked with forms of urban governance. In the European context, transport policy developments are closely related to the changing role of cities and urban elites. More precisely, capacity building and the accumulation of governing resources over time constitutes a major mechanism of change across the five stage 3 cities.

#### 6.3.1 Urban transport policies as specific type of public policy

Similarly to other urban policies (see D4.1 report), urban transport policies differ from local policies, insofar as they are multilevel (Marshall 2005; Cochrane, 2007). They cannot be considered as a classic redistribution mechanism that is, a mere transmission belt from the national/European towards the local (Pflieger, 2012). They cover a wide range of actors and are conducive to the reframing of one-dimensional issues into a multidimensional perspective. They imply some form of political regulation, to the extent that urban policies rely upon specific representations of the issue at stake and pursue territorially defined goals (Le Galès, 1998). Also, they constitute a solution to emerging issues as well as an opportunity for urban authorities to mobilize resources both internally and externally (Beal and Pinson, 2013).

In all five cases under study in WP4, the stage 1-to-3 evolution is closely related to the strengthening of the urban dimension of transport and mobility policies. Transport is reframed into mobility, whereas roads are reframed into streets (Halpern, 2014). This also implies that a larger variety of actors and levels of government become actively involved in this long-term evolution. What used to be mainly organized at national level as part of the transport sector appears to be increasingly territorialized at the urban level and/or the metropolitan/regional levels. By contrast to the monopoly held by transport / traffic planners and engineers over policy design and implementation, stage 3 cities rely upon a more diverse set of knowledge and expertise. Across all five stage 3 cities, profound organizational reforms were introduced within the city administration – distribution of administrative portfolios – and in local public transport organizations. These reforms accelerated the recruitment of additional staff and the use of new models, methodologies and approach. In return, this contributes to reshuffling transport policy priorities and accounts for the emergence of new issues and entrants.

Table 2 below summarizes this shift in perspective, which is suggested from the urban governance literature.

Table 2. The reframing of transport into mobility issues.

	Traditional transport policies	Mobility policies
Aim	Accommodate traffic management through the provision of a limited number of infrastructures and services	Managing urban mobility demand through highly differentiated services as a way to maximize travel experiences.
Expertise	Engineering, economics and planners.	Engineering, economics, planners, marketing and communication, social scientists, users, residents
Policy structures	Vertical organization (State level), small number of stakeholders that are clearly identified	Territorial organization (multi-level), large number of stakeholders
Position in social realm	Strong autonomy	Strong interdependence
Policy priorities	Defined per transport mode, in silo	Transversal issues

Source: own elaboration, D4.1 report

#### European cities as sustainable mobility heroes?

One of the most remarkable change observed in WP4 relates to the strengthening of cities over time in their ability to govern a policy domain that used to be mainly organized at national level. This finding is consistent with the literature on urban governance (see D4.1 report) and confirms the strength of the “European city model” assumption (structure and morphology, urban societies, etc.) in order to account for the shift away from the automobile city.

Moreover, the growing role of cities and urban authorities also relates to the policy resources they relied upon. European cities are structured and organized within European States, which in part protect and support them through the direct injection of resources and investments (Le Galès, Lorrain, 2003). Evolving central-local relations in Europe also explain the strong political dimension of the European cities model, to the extent that the representation of the city and the legitimacy of political elites in sustaining and reinventing forms of political representation and participation is a distinctive feature of European cities (Reynaert et al., 2009; Sellers et al., 2013). Since the 1970s onwards, devolution reforms across EU member states have contributed to strengthening forms of local political leadership, even in the cases where mayors are not elected. Apart from the UK, local and urban governments control 60% of public investments (EC, 2011). Professional networks of expertise are in parts organized at the urban level, and cities have massively invested in organizational resources in order to design policies of their own. The development of EU- and worldwide networks of cities and mayors encourages the diffusion of knowledge and policy solutions (Hamedinger and Wolffhardt, 2010; Payre, 2010).

Together, these resources provide cities and urban authorities some level of autonomy in designing urban policy priorities and additional political capacity to effectively structure the allocation of resources and the resolution of conflicts about transport. They have been critical in funding and supporting transport policy developments over time and across the five stage 3 cities, regardless of major differences in political and institutional systems. Indeed, this analysis holds even in those countries where most policy resources were concentrated at national level or among a small number of highly specialized actors.

Last but not least, the interest of urban policy-makers for mobility and transport is closely related to the increasing number of mobilisations and protest about these issues: unions and workers' representatives that claimed for more transport services, socio-environmental mobilisations who protested against the nuisances associated with car use (e.g., congestion, air pollution, noise, safety), city-users and shop-owners that complained against urban congestion, ... and many more. In a context in which local authorities were gaining increased powers and competences, transport and mobility emerged as a key issue in central-local relations (Offner, 2000), and as an opportunity for a new generation of mayors to mobilise a larger variety of social groups in support of major reforms in transport governance.

### 6.3.2 Evolving central-local relations

In many cities across Europe, urban transport and mobility policies show a striking paradox between, on the one hand, multiple initiatives and conflicting political leadership, and on the other hand, the making of a mode of governance, with massive and transformative outcomes (Halpern and Le Galès, 2015). As urban political elites across Europe faced increasingly diverse economies and societies, mobility and transport was considered as both a tool and a resource in support of their urban – and now metropolitan – growth models. It became a growing area of interest both in view of the demands associated with transport and mobility, but also as an opportunity to experiment with new forms of governance. Drawing on their newly gained resources, urban authorities introduced alternative urban transport and mobility policies. This contributed to increasing interdependency between levels of governments and to the reshuffling of political priorities associated with transport.

In those cases where support from the national Government was lacking, the need for investments and new technologies led urban political elites in order to explore new forms of cooperation with large firms and with the private sector (Lorrain 2011; Halpern and Pollard, 2013). In some cases, cities relied upon loans from the EBRD or the EIB in order to finance capacity investment in transport infrastructure. Moreover, in those cases where knowledge and expertise were lacking at the local level, they relied upon horizontal forms of cooperation and policy diffusion, and collectively lobbied the EU for additional funding and support in the field of urban mobility and sustainable cities policies (Hamedinger and Wolffhardt, op.cit.; Pflieger, 2012). New forms of expertise, public debates and participatory devices were introduced at the urban level in order to seek for the involvement of citizens and avoid resistances. In spite of increasing social tensions and inequalities and of reduced public investments – especially in the post 2008 crisis context –, European cities rely upon a continued accumulation of policy resources and political legitimacy which decidedly differentiate them from other cities worldwide – and from the dual city model (Krätke, 2014; Pinson and Morel-Journel, 2017)<sup>28</sup>.

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<sup>28</sup> These findings have been summarized as part of the 1<sup>st</sup> WP4 infographic “Governing urban mobility” that was produced with the support of EUROCIITIES.

**Together, these developments confirm the need to take into account the urban dimension of transport policy developments** in our attempt to explain their long-term evolution as well as the ways through which they led to the reduction of car use in the five stage 3 cities.

### 6.3.3 Is there a “capital-city” effect?

Only a few European cities were able to achieve a reduction of car use. It is all the more remarkable that this should occur in capital city-regions, which are often depicted in the urban studies literature as exacerbated cases of fragmentation, complexity and interdependence (Buck et al., 2002; 2005; Travers, 2003).

Findings from WP4 confirm to some extent the specific nature of transport governance arrangements in capital-cities. Urban authorities enjoyed less autonomy in their ability to set their own policy priorities and make them operational (Le Galès and Lorrain; 2003). These cities ensure a strategic function in national economies and societies and are, as such, under a stricter control from national governments. State authorities repeatedly challenge urban political leadership and the ability of urban authorities to set priorities and develop their own policies. When they were not simply abolished in view of the threat they represented for national governments (e.g., Paris, London), capital city governments often face the following dilemma: they benefit from additional resources and investments due to the strategic function of capital cities, but they are often less autonomous in deciding where and how to allocate such resources.

This is partly explained through institutional features: many European capital cities hold a specific, distinctive, status in central-local relationships and devolution reforms. Unlike secondary cities such as Manchester, Lyon, Turin and Barcelona, few European capital cities were able to gain the support from the State or from adjacent municipalities in order to form strong metropolitan governments. Last but not least, capital cities governments also face the resistance from Boroughs who question – and when possible openly challenge and oppose - their ability to design citywide policies and to allocate resources (Travers, 2015).

Furthermore, vertical fragmentation and strong competition over political leadership is also coupled with additional horizontal fragmentation. These cities have been submitted to processes of metropolisation, which in turn highlighted the need to develop specific institutional arrangements at metropolitan level (Lefèvre et al., 2014). Levels of socio-economic fragmentation in capital cities are particularly exacerbated due to globalization processes and the attractiveness of such cities as strategic places for resource production and accumulation (Lorrain 2011). Capital cities also feature a very dense superposition of networks, services and systems, which, in turn, require additional and specific needs for vertical and horizontal cooperation. Networked industries, large utilities and construction firms remain critical players in this process, together with real estate developers and the bank industry (Halpern and Pollard, 2013). Over the recent period, they were joined successively by the global finance industry and consultancy firms, followed by NTIC firms, which directly and increasingly contribute to the design, the production and the management of cities. Part of the challenges attached with stage 4 and “city as a service” type of policies relates to the ability of urban authorities to regulate platform industries and integrate private-led services and investments into their own transport policy goals.

Nevertheless, in all five stage 3 cities, changes in the transport and mobility policy offer were conducive to massive and visible urban transformations. Infrastructure projects have been implemented; existing networks and services have expanded; new networks, technologies and services have been introduced in order to optimise existing systems or to develop new ones. A reduction in car use was achieved. These cities have become a source of inspiration for cities worldwide. Copenhagen is considered as the ultimate “Green and liveable city”, whereas Vienna was awarded as a “public transport model”. The congestion charge that was introduced in 2003 in London remains a source for inspiration to cities worldwide, as did the invention of the bicycle sharing system in Paris (Mboumoua, 2016). What used to be limited to ambitious political discourses incrementally led to concrete policy measures, which, over time, contributed to transforming the role and function of capital cities in order to better combine their function as national hubs with that of a liveable environment for their citizen. This in turn accounts for the critical role of symbolic transport policy initiatives and the continued search for innovations.

## 6.4 What changed? Policy substance and policy capacities

### 6.4.1 Understanding differences in patterns of policy change

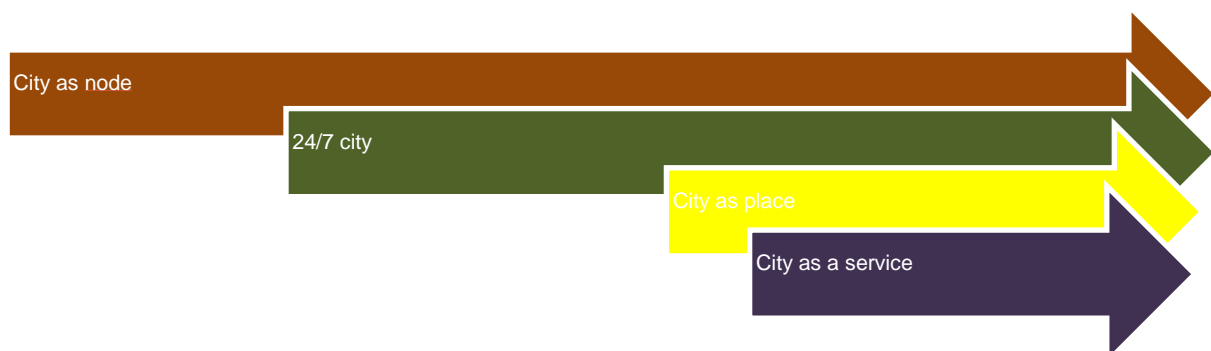
In spite of strong similarities across the five stage 3 cities in the mechanisms through which the reduction of car use was achieved, some differences were observed in the choice and combination of concrete policy tools

and to a large extent, the choices made at the urban level differ from those made at national level. Findings from WP4 show that two major patterns of policy change were conducive to the stage 1-to-3 evolution over time.

The first one relies upon the critical role of public transport – infrastructure, stakeholders, etc. – as the backbone of the city’s transport network. It reflects the way through which processes of change have been managed in three out of five stage 3 cities and which can be summarized as follow:

- Vienna = Metro (1968) + Public transport reform (1991) + Parking management (1991) + MaaS (2014)
- Berlin = Integrated transport (2003) + Environmental zone (2008) + Green alliance (2011)
- Greater London = Public transport reform (2000) + Congestion charge (2003) + Street types (2011)

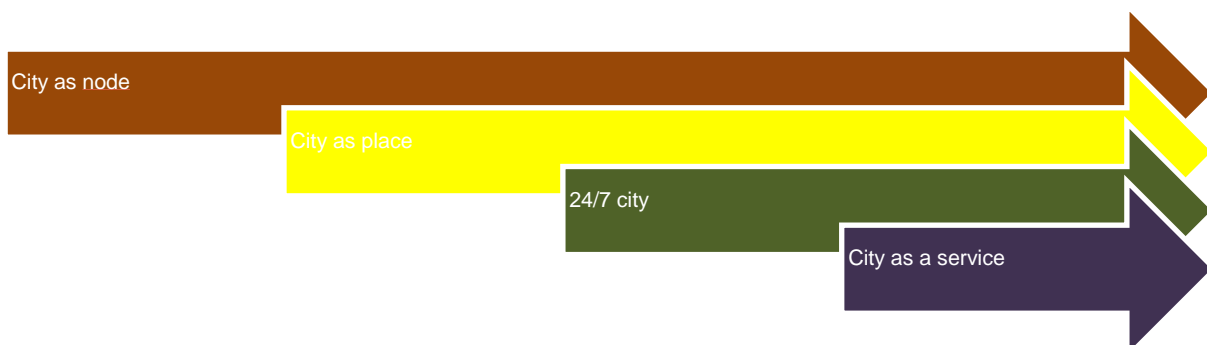
Figure 9a: Strong public transport “Moving people around”



The second one relies upon the critical role of urban design and public space as major drivers for changes in transport policies. This is particularly the case in those cities and regions where a large share of transport policy resources was concentrated at the national level and/or shared between different levels of government. In those cases, land-use regulation, urban planning principles and urban design have played a critical role in reducing the space allocated to car use (Paris IDF) and strengthening the urban dimension of transport policies. This reflects the way through which processes of change have been managed in two out of five stage 3 cities:

- Paris IDF = Reclaim street life + Urban regeneration + Public transport reform + Rail-Based
- Copenhagen = Life between buildings + Urban regeneration + cycling + Metro

Figure 9b: Strong urban dimension “Reclaim street life & public space”

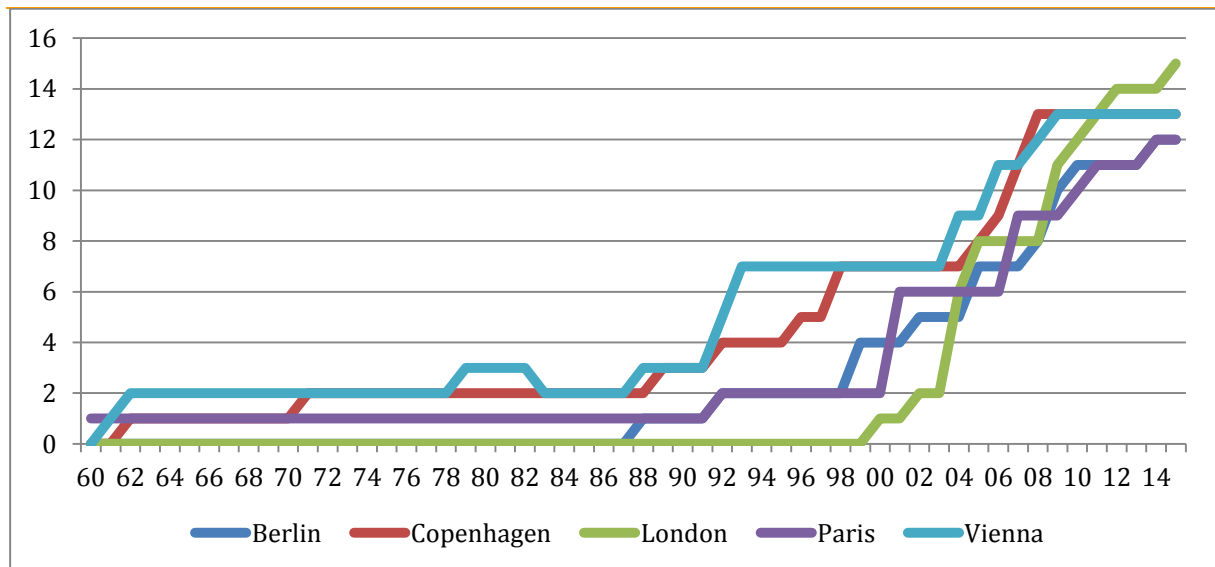




## 6.4.2 Understanding the accumulation of policy capacity over time

In addition to major changes in policy substance, urban authorities have gained more responsibilities and resources. They seek to maximise their effectiveness by fostering new forms of cooperation among a large variety of actors and interests, in order to address urban problems and set their own policy priorities. Drawing from the WP4 dataset, and more particularly information about policy resources and the political and institutional setting, a Policy capacity index was developed.

Figure 9c. Policy Capacity Index



In all five stage 3 cities, the restructuring and strengthening of urban governance often combine two different types of policy processes, which developed incrementally over time and during which:

- In those areas in which cities draw on a low level of policy resources, including political legitimacy or formal powers to act, they have benefited from transforming themselves into laboratories, during which a number of experiments in governance, technologies, services, etc. were introduced. This allowed for a number of stakeholders, also from the private sector and at community level, to design and implement alternative ways to dealing with old and new transport issues.
- In combination with highly innovative policy solutions, the five stage 3 cities have also been able to develop optimizing strategies which combine high -and low-tech solutions, aimed at modernizing existing networks. This is mainly achieved by mobilizing transport organizations (infrastructure owners, operators, service providers etc.) and restructuring funding mechanisms. More generally, it implies the ability to capitalize on small-scale innovations and experiment-led policies in order to accumulate policy resources and incrementally transformed forms of urban governance and policy-making in transport and beyond.

## 6.5 Conclusion: summary of findings from WP4

The work achieved as part of WP4 provides valuable findings for cities in CREATE and beyond. More specifically, it provides some understanding about the role of governance and policies in encouraging the switch from cars to sustainable modes of transport. It highlights the added value, as part the work being done in CREATE on congestion reduction, to explore the concrete ways through which policy processes are governed over time and in different context. Findings can be summarized as follow:

### 1. There has been a policy shift in all five cases from the car-oriented towards the liveable city.

In this perspective, the Transport Policy Cycle Evolution approach can be considered as a helpful descriptive tool, thus confirming the contribution of CREATE to international debates about the Peak car and whether or not policy matters.

**2. Transport policy developments in all five stage-3 cities confirm the shift, but it has not done so categorically.**

Sequences are not clear-cut, there is no “one best way” and the three stages policies often coexist with one another at the same point in time. In all the cases under study, pre-World War II developments and pre-existing transport infrastructure and governance arrangements limited the hegemony of car-oriented policies even though the car-oriented city model was dominant in political discourses and urban planning models. Similarly, the sustainable and liveable city model did not put an end to the strategic role of car-oriented policies. This is particularly the case at the fringes of these large European metropolises, where car dependency dominates policy perspectives. The diffusion of the liveable city model towards outer suburbs is altogether more recent and encounters significant barriers. In this context, policy transition depends upon the local authorities’ ability to effectively mobilize sustained internal and external support in favour of reshuffling policy goals, but more importantly, policy resources. This suggests that **the liveable city is a process, not an output**. It requires continued support, action and resources in order to contain pro-car perspectives.

**3. Uncertain mobility futures: transport policy evolution is not a straightforward, linear and definite process.**

In recent decades, the liveable city perspective has dominated transport policy developments in the five stage-3 cities. Yet findings suggested that macro trends, such as economic growth, the cost and availability of fuel and changing lifestyles, also play a decisive role in shaping travel trends. Particularly noteworthy is the co-occurrence of the peak car phenomenon and the post 2008 economic slowdown that was observed across EU cities. In the future, technological advances and demographic changes are also expected to exert greater pressure on transport policy developments and governance arrangements in each of these cities. In other words, **governance and policies matter but only to a limited extent and only in combination with other factors**.

**4. There are some differences in the transport evolution's rhythm, width and scope.**

The shift towards the liveable city is not uniformly applied both socially and spatially. In other words, sustainable policies are not neutral and contribute to understanding remaining differences between core-cities and their periphery, and between social groups within those cities. This suggests that the liveable city model might not be suited for all urban areas, and that a more differentiated policy approach should be developed outside the core-city centres of large EU metropolitan areas in order to accelerate the shift away from the car-oriented city.

**5. There is no uniform understanding of what the liveable city and sustainable mobility policies refer to or the way they are made material.**

There is no one best way towards the liveable city. In most cases, it primarily refers to the strengthening of public transport as opposed to car traffic, to the development of an integrated approach to transport and in some cases only, the development of soft modes (walking, cycling). Preferred modes of regulation vary from one city to the other, according to the context, the circulation of ideas and policy solutions, and to competition between cities (within each member state, the EU and worldwide). Achieving the liveable city combines both high-tech and low-tech policy measures, some that are highly visible, others that relate to optimising existing networks and systems. Some similarities are observed, but in most cases, heterogeneity rules.

**6. This shift towards the liveable city results from an incremental yet hugely transformative process in terms of urban governance.**

In all five stage-3 cities, the shift towards the liveable city perspective is concomitant with a considerable increase in their political, institutional and financial autonomy. Cities have emerged as laboratories for experimentations and small-scale innovations with support from public authorities across levels of government, the public and the private sector, the EU, citizen initiatives, etc. In most cases, the shift towards the liveable city perspective results from the ability to extend these experimentations to the entire city and beyond. This process often results in new forms of decision- and policy-making in order to mobilize a wider range of stakeholders, develop new financing capacities and strengthen the ability to effectively implement these policy choices.

In other words, urban governance matters and can be measured through: 1) additional resources and autonomy as a result from governance reforms, 2) capacity building, knowledge and expertise about urban transportation, 3) massive investments in transport infrastructures and policies across transport modes, 4) the strategic use of sustainable urban planning in order to accommodate growth.



## 7 Conclusive remarks, lessons from past transport policy developments

The work done as part of WP4 also holds some valuable lessons regarding the governing of mobility futures, and links together with the work done in WP6 and at project level (see CREATE summary of findings).

First, drawing on the empirical findings from the five stage 3 cities, these cities will face a number of challenges in the near future which might undermine efforts being made to reduce congestion and car use (D4.2 reports). These challenges can be briefly summarized as follow:

- Population growth
- Incoming commuting traffic
- Beliefs in technical-fix
- Different political outlook

Second, analysing transport policy developments over five decades showed that policy change has been characterized as follow:

- Incremental AND abrupt
- some muddling through AND some strategic thinking,
- some constraint AND some incitation
- Some winners AND some losers

In this context, four major lessons can be drawn from the work done as part of WP4 for cities aiming at maintaining or further reducing levels of road congestion and car use:

### 1. No city is an island

Regional cooperation needs to be enhanced through functional governance (agreement on fares, integrated transport planning authorities) or through political forms of governance at metropolitan/regional level

### 2. Lobby national government and the EU for continued support

Over time, changes in national and European regulations have been instrumental in shaping traffic mitigation strategies, fostering fleet renewal and accelerating technological changes. Furthermore, financial support was instrumental in securing sufficient funding for capital investment in non-motorized transport infrastructure. Yet the current political outlook across EU countries suggest that such levels of support might not be sustained over time, thus requiring for capital-cities to work jointly with other urban governments in Europe and within their respective national context in order to maintain ambitious urban agendas at EU and national level.

### 3. Engage with stakeholders and citizens

This is instrumental in order to mobilize and maintain high levels of support for car use reduction strategies. This involves a large variety of policy tools, such as communication and information-based policy tools, as well as specific participatory devices.

### 4. Regulate access to service provision at the city level

In a context in which technical-led policy tools have become instrumental in optimising existing networks and ensuring coordination between modes as part of multi-modal travel chains AND in which a number of new entrants challenge existing governance arrangements, there is a need for cities to shape this emerging market and strengthen their position as regulatory authorities.

## 8 Annexes

### 8.1 Annex 1: WP4 database codebooks

These annexes provide a precise overview of the information collected as part of WP4 and how it was classified. In the earliest stages of WP4, a semi-inductive approach was preferred in order to fully assess whether or not reliable information would be available across all 5 stage 3 cities between 1960 and 2015. Following the production of the 1<sup>st</sup> WP4 technical report (D4.1 technical report, analytical framework), C. Halpern and S. Persico decided, in agreement with WP3 leaders and steering committee members, to select a smaller number of variables for which we knew reliable information could be found. Following the completion of the database, we did a second selection process in order to identify those variables that would be useful for developing a set of indicators.

Two documents are provided here: 1) a qualitative database codebook, which provide a comprehensive codebook for the WP4 database, as well as the list of the variables that were not included; 2) a quantitative database codebook

#### 8.1.1 Qualitative database Codebook, S. Persico

##### Information regarding the coding and the database

The coding of the database was supervised by Simon Persico Persico, with the support of C. Halpern, and three coders took part in gathering information: Ann-Kathrin Bersch (Berlin and Vienna), Alessandra Carollo (Copenhagen and Paris) and Angela Jimenez (London). All coders were in close contact with city-teams, which allowed for a rather thorough collection of data.

The qualitative database includes 82 variables for which we have reliable information. Each row of the database relates to a variable\*city, for which we have the following information (in column): ID (ID in the qualitative database) varname (variable name in the quantitative database); city (Berlin=1; Copenhagen=2; London=3; Paris=4; Vienna=5); vardesc (variable description); metrics (quantitative variables' metrics and categorical variables' categories); Values or categories for years 1960-2015.

##### Dependent Variables

###### Policy Objectives

- DV01: Transport development (Yes/No and Document)
- DV02: Economic development / Competitiveness (Yes/No and Document)
- DV03: Traffic congestion (Yes/No and Document)
- DV04: Climate change and environment (Yes/No and Document)
- DV05: Socio-spatial equity (Yes/No and Document)
- DV06: Urban concentration, densification (Yes/No and Document)
- DV07: Urban liveability and quality of life (Yes/No and Document)

###### Budget

- DV08: Overall transport budget (in Euros)

###### Measures

- Motorised transport
  - DV09: Taxation of conventional fuel (Yes/No and description)
  - DV10: Incentives on the use of alternative fuel (Yes/No and description)
  - DV11: Incentives on the use of electric cars (Yes/No and description)
  - DV12: Incentives on the use of low emission vehicles? (Yes/No and description)
  - DV13: Reduction of diesel fuel (Yes/No and description)

- DV14: Tax on carbon emissions (Yes/No and description)
- DV15: Road pricing at the urban level (toll lanes, roads & bridges) (Yes/No and description)
- DV16: Congestion Charge (Yes/No and description)
- DV17: Incentives to reduce noise pollution (Yes/No and description)
- DV18: Charging system for urban transit (heavy vehicles) (Yes/No and description)
- DV19: Motor vehicle taxation (ex. vignette) (Yes/No and description)
- DV20: Workplace parking levies by local authorities (Yes/No and description)
- DV21: Peak congestion avoidance system (Yes/No)
- DV22: Car-free zones and streets (Yes/No)
- DV23: Car-Sharing Facilities (Yes/No and description)
- DV24: Ride sharing system (Yes/No and description)
- DV25: Anti-pollution peak policies (Yes/No and description)
- DV26: Low emission zones (Yes/No)
- DV27: Transport optimization (Yes/No)
- Public transport
  - DV28: Buses safe lanes (Yes/No)
  - DV29: Tram lines (Yes/No)
  - DV30: Underground lines (kms)
  - DV31: Railways (Yes/No)
  - DV32: Development at public transport nodes (Yes/No)
- Cycling
  - DV33: Bike lanes (kms)
  - DV34: Bike-Sharing Facilities (Yes/No)

#### Independent variables

- Institutional and governmental setting
  - Distribution of competences between levels of government
    - IV01: Nature of political regime (Federal/Unitary)
    - IV02: Specific status for the capital city / region (Yes/No)
    - IV03: Government at metropolitan level (Yes/No)
    - IV04: Level of government in charge of transport policy design (Local/Regional/National)
    - IV05: Level of government is in charge of transport planning (Local/Regional/National)
    - IV06: Level of government is in charge of transport funding (Local/Regional/National)
    - IV07: Autonomy in local finance (Yes/No)
    - IV08: Coordination between levels of government through legal documents (Yes/No)
  - Transport funding
    - IV09: Level of taxation dedicated to transport (Local/Regional/National)
    - IV10: Land-value capture (Yes/No)
  - Integrated transport agency
    - IV11: Presence of an integrated transport Agency (Yes/No)
  - Mega-projects, mega-events
    - IV12: Mega-project or mega events (Olympics, Expo, World Cup) (Yes/No and description)
    - IV13: Non-governmental organisation in charge of the mega project (Yes/No)
- Economic regulation of transport
  - Transport Infrastructure
    - IV14: Number of infrastructure owners (N)
    - IV15: Status of infrastructure owner #1 (Public/Private)
    - IV16: Status of infrastructure owner #2 (Public/Private)
    - IV17: Status of infrastructure owner #3 (Public/Private)
    - IV18: Status of infrastructure owner #4 (Public/Private)
  - Transport companies

- IV19: Number of public transport companies
    - IV20: Status of public transportation company #1 (Public/Private)
    - IV21: Status of public transportation company #2 (Public/Private)
    - IV22: Status of public transportation company #3 (Public/Private)
    - IV23: Status of public transportation company #4 (Public/Private)
    - IV24: Status of public transportation company #5 (Public/Private)
    - IV25: Status of public transportation company #6 (Public/Private)
  - Price-setting, tendering and contracts
    - IV26: Presence of contracts between transport authorities and transport companies (Yes/No)
- Electoral politics
  - National electoral politics
    - IV27: Parties in power in national coalition/government (names)
    - IV28: Coalition in national government (Yes/No)
    - IV29: National Election Year (Yes/No)
    - IV30: Color of the national government (Right/Center/Left)
    - IV31: Green candidates at national elections (Yes/No)
  - Regional electoral politics
    - IV32: Parties in power in regional coalition/government (names)
    - IV 33: Coalition in regional government (Yes/No)
    - IV34: Regional Election Year (Yes/No)
    - IV35: Color of the regional government (Right/Center/Left)
    - IV36: Green candidates at regional elections (Yes/No)
  - Local electoral politics
    - IV37: Election for the local council (Yes/No)
    - IV38: Elected mayor (Yes/No)
    - IV39: Parties in power in local coalition/government (Names)
    - IV40: Coalition in local government (Yes/No)
    - IV41: Local Election Year (Yes/No)
    - IV42: Color of the local government (Right/Center/Left)
    - IV43: Green candidates at local elections (Yes/No)
    - IV44: Score of Green candidates at local elections (%)
  - Interest groups
    - IV45: Presence of an organized pro-car interest group (Yes/No and qualitative description)
    - IV46: Presence of the pro-cycle club (Yes/No and qualitative description)
    - IV47: Presence of a public transport users association (Yes/No and qualitative description)
  - Media
    - IV48: Salience of transportation issues in the press (%)

#### List of left-out variables

The coding of many of the intended variables proved to be hard, and we could not find any reliable or systematic information regarding many of them, even though most cities did their best to help us. We also left out some variables which are to be collected by the work package 3. Other variables could not be filled-in, for they implied the thorough coding of press articles in five cities (in terms of framing, and in order to assess local and regional parties' positions on transport). This led us to leave-out 60 variables, which are listed below for information.

- Variables that would require intensive coding of the collection of press articles
  - Framing of transportation issues in the press (Main frame)
  - Mobilization of the automobile industry (Yes/No and qualitative description)
  - Mobilization of an organized pro-car interest group (Yes/No and qualitative description)
  - Mobilization of the pro-cycle club (Yes/No and qualitative description)
  - Mobilization of a public transport users association (Yes/No and qualitative description)
  - Citizen initiatives, grassroots movements (qualitative description)
  - Public opinion (All information regarding public opinion)

- Position of local government/coalition on transportation policies (Qualitative description)
  - Position of local opposition party on transportation policies (Qualitative description)
  - Position of regional government/coalition on transportation policies (Qualitative description)
  - Position of regional opposition party on transportation policies (Qualitative description)
- Variables that relate to a small number of cities and/or for which we found no information in 3 or more cities
  - Congestion Charge Amount (in Euros)
  - Congestion Charge Spatial Coverage (Size of the area)
  - Congestion Charge Type of vehicles covered (Types of vehicles)
  - Territorial jurisdiction of transport Agency (Yes/No)
  - Policy jurisdiction of transport Agency – Road (Yes/No)
  - Policy jurisdiction of transport Agency - Public Transport (Yes/No)
  - Policy jurisdiction of transport Agency – Cycling (Yes/No)
  - Policy jurisdiction of transport Agency – Walking (Yes/No)
  - Policy jurisdiction of transport Agency - Shared mobility (Yes/No)
- Variables for which information can be derived from the WP3 database
  - Bus routes (kms)
  - Pricing (Type of transport pricing)
  - Total length of road network (km)
  - Low speed zones (% of road network)
  - Speed limit in low speed zones (km/h)
  - Evolution of parking pricing (euros/hour and qualitative description)
  - Evolution of parking space (square meters)
  - Size of the automobile industry (Cars built in countries and sold per year)
- Variables for which we could not find reliable or systematic information over time & across the 5 stage 3 cities
  - Information, knowledge about transport
  - Source of information regarding transport demand
  - Frequency of information regarding transport demand (in years)
  - Geographical level of information regarding transport demand (Regional/Local)
  - Transport modes studied in information regarding transport demand (Cars/PT/Cycling)
  - Indicators used in information regarding transport demand (Types of indicators)
  - Staff in transport department (Number of people)
  - Training & skills (% of engineers/technicians)
  - Outsourcing (Yes/No and qualitative description)
  - Overall investments in transport budget (in Euros)
  - Share of operations in transport budget (%)
  - Public transport capacity investment (%)
  - Public transport subsidy (%)
  - Overall fixed capital in the local/regional transportation authority (in Euros)
  - Salience of the issue in local opposition party's manifesto (%)
  - Salience of the issue in local governing party/coalition's manifesto (%)
  - Salience of the issue in regional opposition party's manifesto (%)
  - Salience of the issue in regional governing party/coalition's manifesto (%)
  - Strikes (Days of strike in public transport)
  - Air pollution crisis (Yes/No and qualitative description)
  - Other Campaigns / Events (Qualitative description)
  - Technical innovation (Qualitative description)
  - Technical innovation (Yes/No and description)
  - Support the use of new ICT, e.g. Home delivery of goods and service (Yes/No and description)
  - Demolishing Stage-1 infrastructures (Yes/No and description)
  - Bike-Sharing Prices (in Euros)
  - Bike-Sharing Stock (1) (number of bikes)

- Bike-Sharing Stock (2) (number of stations)
- Car-Sharing Prices (Annual price)
- Car-Sharing Stock (1) (Number of cars available)
- Car-Sharing Stock (2) (Number of stations available)

### 8.1.2 Quantitative database codebook, S. Persico

#### Information regarding the coding and the database

S. Persico developed the quantitative database under the supervision of C. Halpern, by using variables present in the qualitative database. 53 variables are directly drawn from the qualitative databases (those for which ID starts with DV or IV) ; 9 variables are indexes created from those row variables (those for which ID starts with IN).

All in all, the quantitative database includes 61 variables. Each row of the database relates to a variable\*city, for which we have the following information (in column): ID (ID in the qualitative database) varname (variable name in the quantitative database); city (Berlin=1; Copenhagen=2; London=3; Paris=4; Vienna=5); vardesc (variable description); Values or categories for years 1960-2015.

#### Dependent variables

Presence/absence of following objectives in main transport and planning policy documents:

- Policy Objectives
  - objtransdev: Transport development (1) / Else (0)
  - objecondev: Economic development (1) / Else (0)
  - objcongest: Traffic congestion (1) / Else (0)
  - objenvir: Climate change and environment (1) / Else (0)
  - objequity: Socio-spatial equity (1) / Else (0)
  - objconcent: Urban concentration and densification (1) / Else (0)
  - objliveab: Urban liveability and quality of life (1) / Else (0)
- Budget
  - budget: Overall transport budget (in % compared to first collected year)
- Measures
  - Motorised transport
    - taxcon: Taxation of conventional fuel (1) / No taxation (0)
    - fuelincent: Incentives on the use of alternative fuel (1) / No incentives (0)
    - elecincen: Incentives on the use of electric vehicles (1) / No incentives (0)
    - lowem: Incentives on the use of low emission vehicles (1) / No incentives (0)
    - dieselincent: Incentives against diesel fuel (1) / No incentives (0)
    - carbontax: Tax on carbon emissions (1) / No tax (0)
    - roadpricing: Road pricing at the urban level (1) / No road pricing (0)
    - congestioncharge: Congestion Charge (1) / No congestion charge (0)
    - noise: Incentives to reduce noise pollution (1) / No incentives (0)
    - heavytransit: Charging system against heavy transit (1) / No system (0)
    - peakavoid: Peak congestion avoidance (1) / No avoidance (0)
    - carshare: Car sharing facilities (1) / No car sharing facilities (0)
    - rideshare: Ride sharing service (1) / No ride sharing service (0)
    - lowemzones: Presence of low emission zones (1) / No zones (0)
    - optim: Transport optimization (1) / No optimization (0)
  - Public transport
    - bussafedicho: Bus safe lanes (1) / No bus safe lanes (0)
    - tramdicho: Tram lines (1) / No tram lines (0)
    - metro: Metro lines (N)
    - metrodicho: Metro lines (1) / No metro lines (0)
    - raildicho: local railways (1) / No local railways (0)

- nodes: Urban development at public transport nodes (1) / No development at nodes (0)
- Cycling
  - bikelane: bike lanes (in km)
  - bikelanedicho: Bike lanes (1) / No bike lanes (0)
  - bikeshare: Bike sharing facilities (1) / No bike sharing service (0)

## Independent variables

- Institutional and governmental setting
  - federal: Federal (2) / Decentralized (1) / Unitary (0)
  - capital: Specific status for the capital (1) / No specific status (0)
  - metrogov: Metropolitan governance (1) / No metropolitan governance (0)
  - designlevel: Level of government policy design: Local/Regional (1) / National (0)
  - planninglevel: Level of government planning: Local/Regional (1) / National (0)
  - fundinglevel: Level of government funding: Local/Regional (1) / National (0)
  - autonofina: Autonomy in local finance (1) / No autonomy (0)
  - agency: Presence of an integrated agency (1) / No integrated agency (0)
- Economic regulation of transport
  - infrafrag: Number of infrastructure owners
  - transfrag: Number of transport companies
  - contracts: Contracts between authorities and transport companies (1) / No contract (0)
- Electoral politics
  - National electoral politics
    - rilenat: Rightwing national government (-1); center national government (0); left-wing national government (1)
    - coalnat: Coalition in the national government (1) / No coalition (0)
    - greennat: Green in national government (1) No Greens in national government (0)
    - elecnat: national election year (1) / no national election year (0)
  - Regional electoral politics
    - rilereg: Rightwing regional government (-1); center regional government (0); left-wing regional government (1)
    - coalreg: Coalition in the regional government (1) / No coalition (0)
    - greenreg: Green in regional government (1) No Greens in regional government (0)
    - elecreg: regional election year (1) / no regional election year (0)
  - Local electoral politics
    - eleccoun: Election for the local council (1) / No election (0)
    - elemay: Election for the mayor (1) / No election (0)
    - rileloc: right-wing local government (-1); center local government (0); left-wing local government (1)
    - coalloc: Coalition in the local government (1) / No coalition (0)
    - greenloc: Green in local government (1) No Greens in local government (0)
    - greenscoreloc: Score of the green candidate / list at the local election
    - elecloc: local election year (1) / no local election year (0)
  - Interest Groups
    - carclub: Presence of pro-car interest group (1) / No pro-car interest group (0)
    - cycleclub: Presence of pro-cycling interest group (1) / No pro-cycling interest group (0)
    - pubtransclub: Presence of pro-public transport interest group (1) / No pro-public transport interest group (0)
  - Media
    - mediasal: share of local newspaper dedicated to transportation issues (%)



## 8.2 Annex 2: assessing the role of transport and mobility in political debates (M. Vergara, with the support of S. Persico)

While the “Do-parties-matter?” question is still open to fierce debate in the political science literature, the study of transport policy at a local level offers a very interesting case to evaluate the influence of electoral politics on public policies with a renewed focus. As part of the work achieved in WP4, we chose to focus on London, the only case for which we could rely on a comprehensive dataset since the first mayoral elections in 2000.

More precisely, analysing municipal electoral programs constitutes an interesting starting point for analysing the evolution of transport issues in political debates. The manner in which candidates for the London Mayoral elections refer to or deliberately avoid certain themes, as well as the proposals made on a year-by-year basis and cross-sectional comparisons, make it possible to clearly assess the evolution of the content of public and political debate on transport and mobility. These documents also reveal the changes concerning conflicting London transport policies and the discrepancy between the proposals and the strategies implemented. Moreover, they make it possible to assess the extent to which conflicting public debate structures competition between political parties in London, given that transport is a crucial policy issue in this city.

This specific analysis begins with a macro analysis, i.e., by analysing the electoral programs in their entirety. It then focuses on the specific passages devoted to transport and mobility.

### 8.2.1 The form of electoral programs for Mayoral elections

From a formal perspective, London's electoral programs have a very similar structure. Candidates always begin with a letter of intent in which they briefly describe the city's current issues, propose solutions and justify how their policies, experience and/or proposals will be the most effective. They then set out what they consider to be the priority issues and, for each of these issues, propose concrete actions to be implemented. In some programs, candidates rely on the support of other policy-makers. This support appears in the form of short stories written by political figures from their parties currently occupying or previously having occupied a post in the local or national government. In these “letters of recommendation”, they praise the candidate's qualities, highlight their strengths and defend their capacity to preside over the Mayor's office of the British capital. In the descriptive section, the candidates give an account of the situation and mobilise data, graphics and statistics to highlight the problems facing decision-makers. They refer in particular to the policies, programs and initiatives put in place by previous governments, as well as their outcomes. Moreover, they underscore the lack of action relative to certain themes and the consequences of this lack of initiative in both the city and in people's lives. In the proposals section, candidates lay out their objectives and strategies and explain how these might be implemented; they also outline their schedules, funding, and expected results. The details included in these two sections notably depend on each candidate and on the year analysed.

The second formal observation is that electoral programs have evolved and become more complex. The documents produced in the 2000s are fairly simple, easy to read, and contain short, concise proposals. Candidates focused on the proposals and attempted to pass on a clear message to voters. It could be argued that, rather than proposing analysis and reflection, these documents were closer to political propaganda, although this is hardly surprising. Recent electoral programs are much more detailed and mobilise information, data and statistics, enabling in-depth and more elaborate reflections on urban issues. It is also worth noting that, since 2008, candidates for the London Mayoral elections have developed a full manifesto in which the priority topics are listed, as well as specific documents devoted exclusively to a specific theme. This explains why there is one program for transport policy, one for housing, one for crime, one for economic development, etc. This allows candidates to delve deeper into the details of each topic, analyse the topic more accurately and fine-tune their strategies and proposals.

The third observation related to the form of the programs is the personalisation of electoral programs. Although, generally speaking, the programs have the same structure, each candidate has his/her own distinct manner of addressing issues. While some candidates place more emphasis on graphic elements, others focus on more formal documents. Those who opt to concentrate on the graphic section often insert photographs of the candidates in an attempt to highlight the work they have accomplished. These images convey the message that the candidate is committed, is interested in the city's issues and its people, and already has experience in managing such issues. Candidates who opt for a more formal document primarily focus on content, giving a more academic aspect to the document.

The “personalisation of electoral programs” also reveals the specific characteristics linked to the candidates’ status. For instance, it is quite common for the manifestos of candidates seeking re-election (such as Ken Livingstone for the Labour Party in 2004 and Boris Johnson for the Conservatives in 2012) to devote much of the document to presenting and inflating the positive results of the policies developed during their mandate. Their narrative is accompanied with allusions to the risks that a possible change of government might occasion with respect to these advances.

Competing candidates focus on the negative aspects of the outgoing Mayor’s performance and explain how their own proposals will turn the situation around in the short, medium and long term. Given that the Green Party has never chaired London City Hall, the electoral programs of its candidates relate, in particular, to their work undertaken in the London Assembly. They show how they have developed and advanced the initiatives and programs they promote through their management and policymaking.

The fourth and final observation is related to the forces that drive politics in London. The analysis of electoral programs highlights the strength of London’s bipartisanship and illustrates the rise of the Green Party on the local political scene. The office of Mayor of London has been exclusively presided over by candidates from the Labour and Conservative parties<sup>29</sup>. Parallel to this domination, there has been a marked advancement of the Green Party in the political world of London. It was the sixth political force in the city in the 2000s, coming after the traditional parties (Labour, Conservative, Liberal Democrats) and the Christian Party (Christian Peoples). In 2004, it was seventh, trailing behind parties such as UKIP (Party for the Independence of the United Kingdom) and the BNP (British National Party). In 2008, it rapidly ascended and was placed fourth, immediately behind the three traditional parties. Since 2012, it has occupied third position, pushing the Liberal Democrats into fourth place.

### 8.2.2 Methodology

In order to analyse the evolution of transport issues in political competition in London, part of this study focused on the electoral programs of candidates for London’s Mayoral elections.

The study includes the electoral programs of the years 2000 (the first election of the Mayor of London by universal suffrage), 2004, 2008, 2012 and those of the recent election held in May 2016. The initial idea was to obtain, at the very least, the programs of the candidates of the most important parties in London, i.e., the Labour Party, the Conservative Party, the Liberal Democratic Party and the Green Party.

The first step in the analysis of electoral programs in London was the collection of documents. The results obtained were strictly in line with the year concerned and the political party. Electoral programs in recent years (2008 to 2016) are, for the most part, freely accessible online and were thus easy to access. The same was not true for the programs of 2000 and 2004. To collect these documents, we relied on the support from CREATE partners in London. Although political parties were contacted, responses, if any, were often negative. Indeed, the only party that responded to the request for documents was the Green Party, which explained that the party did not keep digital copies of the electoral programs of the early 2000s.

It is worth briefly mentioning the accessibility of electoral programs because conditions differed from one political party to another. The electoral programs of the Labour Party and the Green Party were the most accessible. They were freely accessible on the Internet and party employees responded to our emails on the subject. In contrast, the electoral programs of the Conservative Party were not all available online, and although we contacted the Party staff several times we received no response. Documents of UKIP were the least accessible. The electoral program of 2016 is the only program available online. The four previous programs are not available and the Party never responded to our requests. While some of the documents of the Liberal Democratic Party were freely accessible online, others were not. The Party did not respond to our requests on the subject.

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<sup>29</sup> Ken Livingstone won the first municipal election in 2000. It should be noted, however, that he ran as an independent candidate in this 2000 election after losing the Labour nomination to Frank Dobson and challenging this decision by standing as an independent candidate. He was re-elected in 2004, as the candidate of the Labour party, but lost his place to the Conservative Boris Johnson in 2008. Sadiq Khan, former MP for Tooting (2005-2016), former Minister of State for Communities (2008-2009) and former Minister of Transport (2009-2010), regained London City Hall for Labour in 2016.

Table 3. Availability of electoral programs for successive mayoral elections in London

2000		
Candidates	Party	Availability of documents
Ken Livingstone	Independent	No
Steven Norris	Conservative	No
Frank Dobson	Labour	Yes
Susan Kramer	Liberal Democratic	Yes
Darren Johnson	Green	No
2004		
Candidates	Party	Availability of documents
Ken Livingstone	Labour	Yes
Steven Norris	Conservative	No
Simon Hughes	Liberal Democratic	No
Frank Maloney	UKIP	No
Darren Johnson	Green	Yes
2008		
Candidates	Party	Availability of documents
Boris Johnson	Conservative	Yes / Transport Manifesto
Ken Livingstone	Labour	Yes / Transport Manifesto
Brian Paddick	Liberal Democratic	No
Sian Berry	Green	Yes
2012		
Candidates	Party	Availability of documents
Boris Johnson	Conservative	No
Ken Livingstone	Labour	Yes
Jenny Jones	Green	Yes
Brian Paddick	Liberal Democratic	Yes
2016		
Candidates	Party	Availability of documents
Sadiq Khan	Labour	Yes
Zac Goldsmith	Conservative	Yes
Sian Berry	Green	Yes
Caroline Pidgeon	Liberal Democratic	Yes
Peter Whittle	UKIP	Yes

The analysis of electoral programs begins with a macro analysis, i.e., an analysis of the full manifesto; it then focuses more specifically on issues related to transport and mobility. The analysis of each sentence in the electoral programs was the first step to distinguishing sentences dealing with transport and mobility from the rest of the program. This made it possible to extract proposals related to London's transport policies. Based on these sections of the programs, it was necessary to assess the evolution of the visibility of transport issues in order to respond to the following question: What proportion of electoral programs is devoted to transport and how does it evolve? The different proposals were then coded according to a specific codebook, in an attempt to respond to the following two questions: What transport and mobility issues are evoked by the candidates? What are their

proposals? Lastly, an analysis of the results obtained from the statistical processing of the coded data enables us to evaluate the degree of conflict in various transport issues in partisan competition in London.

### 8.2.3 Transport policy within electoral programs

Since the 2000s, transport policy proposals have featured prominently in the electoral programs of candidates for London's Mayoral elections. Indeed, proposals on mobility and urban transport appear as a major priority of all candidates. Since the year 2000, transport has been at the forefront of manifestos, appearing even before proposals concerning housing, economic development, employment or the environment.

Although the order in which subjects appear in the programs is not in itself an explanatory variable of their importance, it nevertheless reflects the deliberate choice of each candidate who has free rein to present his/her proposals. At the top of their electoral programs, candidates place the themes they consider most urgent, or those they consider will be the subject of the population's highest expectations. This choice is all the more important in an electoral context where attracting the attention of voters is crucial. Candidates need to send a clear and concise message to the electorate, which explains the importance of always starting with subjects that require immediate intervention.

The analysis of the 2000, 2004, 2008, 2012 and 2016 election programs reveals that transport was one of the top five priorities of all candidates in the London Mayoral elections. The position occupied by transport in these rankings notably depended on the year studied. In the year 2000, transport ranked first in all electoral programs. In 2004, it lost its hegemony and gave way to other themes such as investment. This theme, however, also encompassed other issues such as budget and investment for transport: candidates presented their strategies for fund-raising and investment in transport. The elections of 2008 revealed that while transport continued to feature among the top five priorities of candidates, it experienced a drop in the rankings. It was replaced by other themes such as crime, the economy and employment, the environment, and issues related to equity and diversity. Since 2012, transport has consistently occupied fourth position among the Green Party and Liberal Democrats but has continued to be the top priority for Labour. The Green Party relegated transport to fourth position in order to highlight measures on equity and diversity, the economy and employment, and the environment. For their part, the Liberal Democrats put forward measures on crime reduction, Londoners' spending (income tax, taxes, public transport fares) and the creation of jobs and development opportunities for the entire population.

In 2016, transport dropped to second or third position. Most candidates perceived housing policy as the top priority. This might be explained by the housing crisis in the British capital, which recently sparked major debates and protests on both the London and national political scene. The Green Party thus made housing its key priority, followed by its analyses and proposals concerning transport, air pollution, public health, employment and entrepreneurship, and the fight against crime. Economic development policies were the top priority for Labour, followed by housing policies, transport, the fight against crime, education, and vocational and technical training. The Liberal Democrats chose to begin their manifesto with housing proposals, followed by proposals related to the local police, transport, jobs, childhood and, finally, health and the environment. The Conservative's electoral program identified housing as its key priority, followed by proposals on transport and mobility, environmental policies and local police. Lastly, Peter Whittle, UKIP's candidate, followed the trend of the year and made housing proposals his main priority, followed by transport, local police, employment, culture and emergency planning

### 8.2.4 Transport modes in electoral programs

An important observation that can be drawn from the data collected is the significance each candidate placed on the different means of transport. We selected the following modes of transport: public transport (London underground, train, tram, bus), car, cycling, walking, and air and river transport. Data processing involved first identifying each occasion on which a specific means of transport was alluded to, and then measuring the weight of each category internally. The pie charts below highlight the annual trends for each of the candidates.

Figure 10: Evolution according to the mode of transport in the year 2000

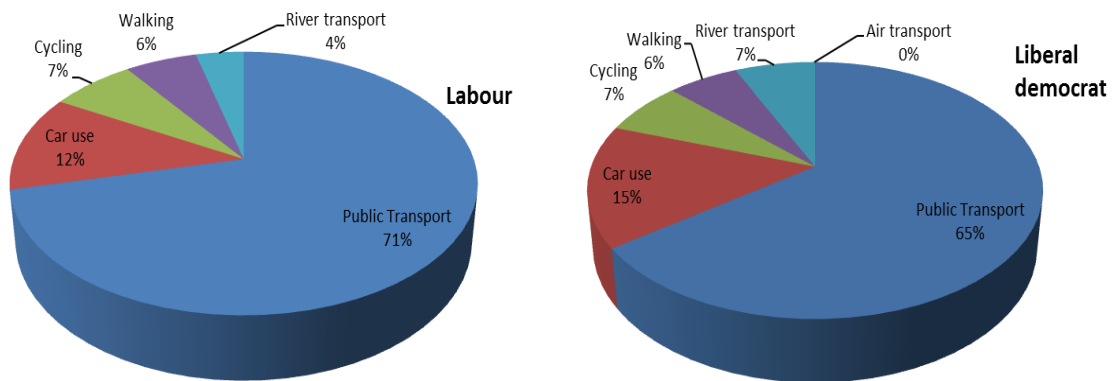


Figure 10b: Evolution according to the mode of transport in the year 2004

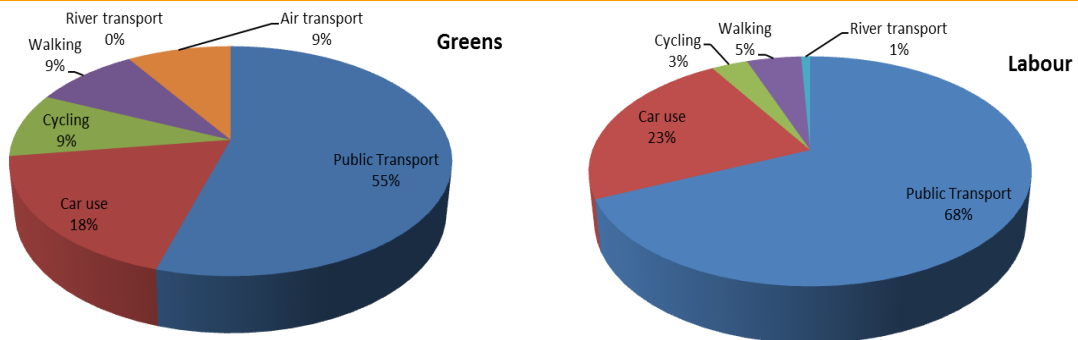


Figure 10c: Evolutions according to the mode of transport in the year 2008

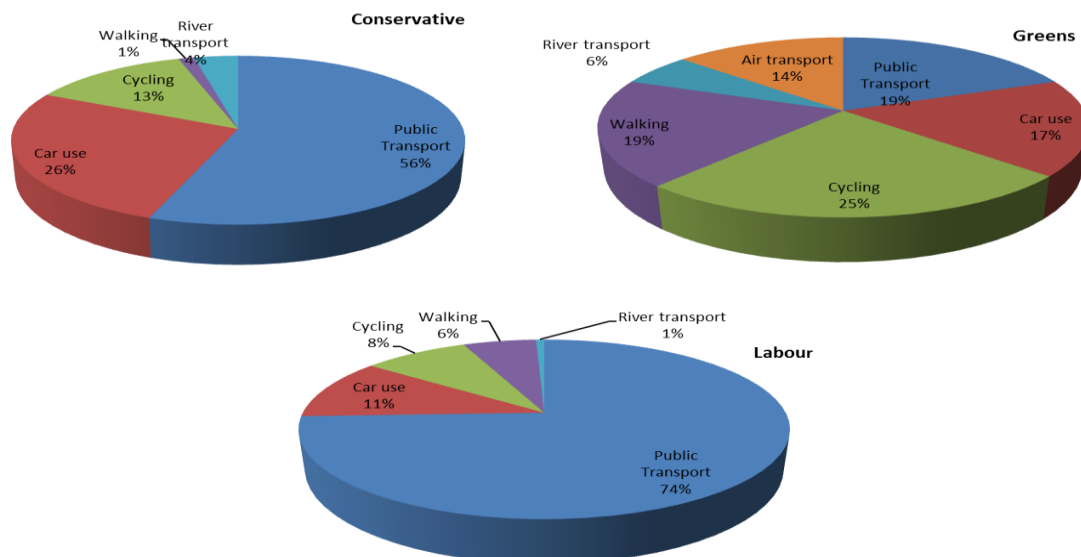


Figure 10d: Evolutions according to the mode of transport in the year 2012

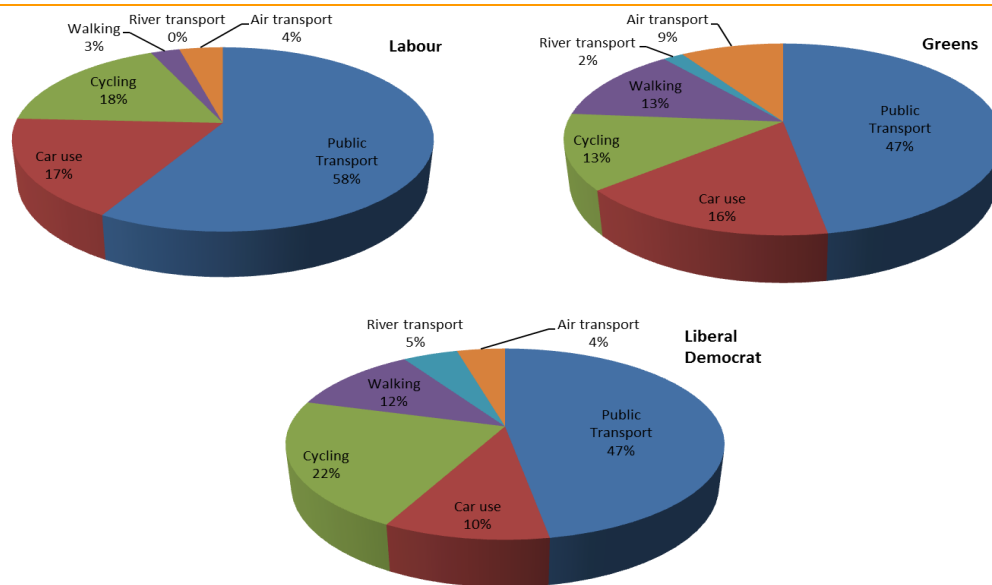
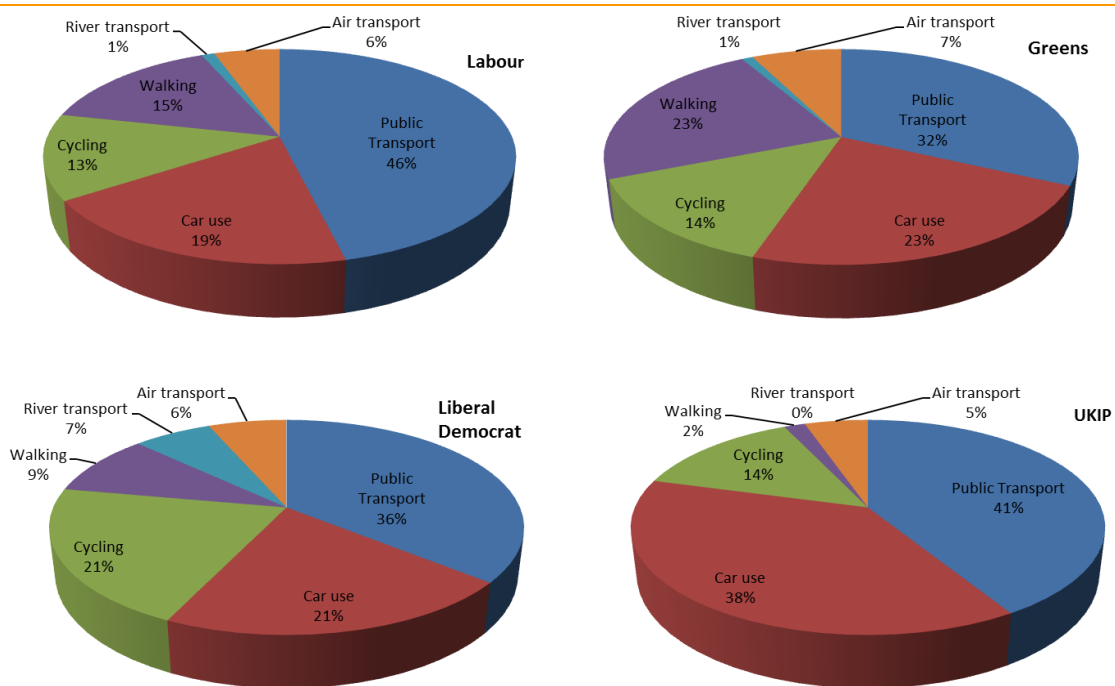


Figure 10e: Evolutions according to the mode of transport in the year 2016



An analysis of candidates' proposals concerning the various means of transport reveals changing viewpoints. In the 2000s, public transport featured prominently in candidates' programs; this was gradually replaced by the focus on other means of transport such as cycling and walking. This explains why walking and cycling are the two means of transport that have gained the most popularity in candidates' electoral programs across the period analysed (2000-2016).

With regard to individual transport, the place allocated to cars remained stable in general (between 11% and 23%), rising or falling depending on the political party analysed. Although we were unable to identify a clear trend over time, the Labour Party devoted between 11% and 23% of the total references to modes of transport to cars, (the two record years are 2004 - 23% - and 2008 - 11%). The Green Party devoted a stable percentage to cars. This percentage varied between 16% and 23%, slightly increasing over time. Moreover, the Green Party had the most equitable distribution across the various modes of transport and also referred to other means of

transport such as river and air transport (issues related notably to the expansion of Heathrow Airport), perceived to be of little significance by the majority of the other candidates.

Focus on river transport (the use of the Thames as a transport route and the development of river services) was very low and decreased considerably over time. All parties considered, the Labour Party paid the least attention to the development of river transport. The Green Party and the Liberal Democrats devoted part of their programs to how the Thames might be used: the Greens dedicated between 1% and 6% of their proposals on means of transport to river transport and the Liberal Democrats devoted between 5 % and 7%.

The candidates differed substantially with regard to air transport. In 2000, 2004 and 2008, Labour did not focus on this mode of transport; it began, however, to introduce more proposals on air transport in 2012 and 2016. This may be explained by the intensive debate on the possible expansion of Heathrow Airport, the potential construction of motorways leading to airports, or even the building of a new airport for the British capital. The Liberal Democrats, however, have always dedicated a small section of their programs (between 1% and 6%) to this issue; their greatest attention to this issue was observed in 2012 and 2016, thus adapting to the evolution observed in Labour. The issue of air transport has always been present among the Greens. It represents between 7% and 14% of programs devoted to transport and mobility. Unlike the other two parties, the Green Party paid the most attention to air transport in 2008 (14%) and the least in 2016.

### 8.2.5 The annual evolution of proposals

This section compares the annual evolution of candidates' proposals. To this end, we compared the ten most common categories in each electoral program. This comparison also includes a "contextual" section in which the programs are described briefly and linked to the initiatives and projects initiated in the years leading up to the Mayoral elections. This will enable us to determine the extent to which candidates' proposals differ from or are similar to one another, and the extent to which they relate to the external context.

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#### 2000 Mayoral Election

##### Context

- First London Mayoral elections
- Establishment of the Greater London Authority (greater financial autonomy of local authorities)
- Creation of Transport for London (TfL)
- Transfer of competences in transport policy: the competence for the design of the transport policy is conferred on local and regional authorities
- Introduction of the vehicle excise duty (VED tax car) in 1999

The development of public transport was the most popular issue addressed by both Labour and Liberal Democrat candidates in the 2000s. Both candidates agreed that public transport in London was the highest priority and was in need of modernisation in order to respond effectively to the people's demand for mobility. They also committed to massive investment in transport networks to overcome years of underinvestment. Both candidates were opposed to the restructuring of public transport through privatisation. The proposals, however, differed on the sources of investment. While Susan Kramer, the Liberal Democratic Party candidate, considered that the bulk of the investment in transport networks should be obtained by selling revenue bonds, the candidate for the Labour Party, Frank Dobson, considered that this investment should be obtained through the establishment of public-private partnerships, thus increasing the participation of the private sector in the city's development. Both candidates extensively advocated technological innovation, proposing the introduction of a more modern and efficient ticketing system allowing mixed-mode commuting. Both candidates thus proposed the introduction of the electronic ticket.

At the first London Mayoral elections, candidates' campaigns primarily focused on regulatory measures, the restructuring and creation of organisations, and the internal organisation of contract management, budgets, investments and human resources. This involved the restructuring of the transport policy at the local level, driving candidates to present their visions of the management, operationalisation and procedures to be implemented in this first stage of institutionalisation.

Another element common to the two electoral programs was the large proportion they devoted to the pricing of public transport. The two candidates both agreed that Tube fares should not increase by more than the



rate of inflation. The candidates, however, proposed different solutions for buses: the Liberal Democrat candidate proposed that bus fares be simplified and unified through the introduction of a single 70p flat fare for adults on all routes and free buses on Sunday. The candidate for Labour, Frank Dobson, proposed free travel for those under 18.

A major difference between the two candidates lay in how they referred to the different modes of transport. While Labour's candidate focused essentially on the development of the metro and trains, the Liberal Democratic Party candidate laid emphasis on the development of buses, cycling and river transport. Despite these differences, the two candidates proposed a few similar initiatives: with regard to tramways, they agreed on the creation of new trams such as the Croydon Tramlink; with regard to cycling, they proposed the extension of the London Cycle Network, and to promote walking, they proposed, among other things, the pedestrianisation of parts of Parliament Square and Trafalgar Square.

Candidates, however, supported radically different positions relative to one proposal: the Congestion Charge. Indeed, the Labour party candidate refused to countenance the introduction of this urban toll, neither by charging incoming vehicles, nor by collecting parking taxes. By contrast, Susan Kramer was in favour of both the congestion charge and the introduction of an urban pricing system for motorised vehicles. Of interest, however, was the significance of this proposal in the manifesto. Indeed, Dobson, who was against the urban toll, repeatedly made reference to this proposal, placing it as the seventh theme in transport. Kramer, however, did not emphasise the proposal despite its symbolic significance in her program. As a result, "congestion charge" did not feature within the first ten categories on which most emphasis was placed.

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## 2004 Mayoral Election

### Context

- Introduction of the e-ticket in 2003
- Publication of the London plan
- Presence of a European project: Cleaner Urban Transport for Europe – hydrogen buses
- Introduction of the Congestion Charge in 2003
- Reorganisation of the London Underground in Public-Private partnership (PPP)
- Introduction of AFD and EVD in 2003 (Alternative Fuel Discount and Electric Vehicle Discount)
- Trafalgar Square pedestrianisation in 2001

In 2004, proposals for the development of public transport remained a top priority of the electoral programs. However, proposals relative to public transport were now associated with the concepts of accessibility and safety. Indeed, in 2004, proposals for the development and modernisation of transport networks also included the idea that people's right to mobility must be guaranteed. As a result, proposals were oriented towards the redevelopment of infrastructures – especially bus, tube and train stations – to make them more accessible by circumventing or getting rid of stairs. In terms of security, candidates proposed the reinforcement of team patrols at public transport interchange points, as well as the installation of CCTV cameras at London's underground and bus stations.

While the Labour Party continued to focus its proposals on improving the metro and the rail system, the Green Party emphasised the development of cycling, walking and tramways. However, the two candidates' proposals concerning the London underground were quite similar. Indeed, both proposed considerable investments to improve infrastructure and services, notably an all-night tube service at weekends.

The pricing of public transport was one of the categories that received most emphasis from the candidates. The Green Party candidate openly proposed a five-year freeze on tariffs. The Labour Party candidate did not refer to this aspect and chose to concentrate on proposals concerning the maintenance of privileges, such as the Freedom Pass, which allowed elderly and handicapped persons to travel for free, and free bus services for those under 18.

Both candidates were in favour of maintaining the congestion charge. The Green Party candidate, however, proposed that it be extended to Greater London as a whole, with lower rates for peripheral areas. Labour's candidate focused on the modernisation of the payment system in the already established zone.

## 2008 Mayoral Election

### Context

- Presence of a European project: "Saving lives with Daytime Running Lights" which was part of the European Road Safety Charter
- The setting up of the London Organising Committee of the Olympic and Paralympic Games - LOCOG) in 2005
- Joint venture (London Overground rail operation under the control of TfL) in 2007
- A considerable reduction in the tax on conventional fuel (Taxation of conventional fuel) from 71% in 2007 to 63% in 2008 (8 percentage points)
- The establishment of low-emission zones in 2008
- A £3 increase in the congestion charge (from £5 to £8)
- Expansion of the congestion charge zone (from 22 km<sup>2</sup> to 42Km<sup>2</sup>) in 2007

The candidates in 2008 decided to favour proposals concerning modes of transport. While the Conservatives focused on car use, the Greens emphasised walking and cycling. Labour continued to concentrate on the development of the tram and the London underground. The Conservative Party candidate favoured car use and dedicated much of his program to showing how the congestion charge was ineffective in reducing congestion problems. He also highlighted the pointlessness of the measure in reducing CO2 emissions. The candidate based his arguments on studies undertaken by TfL which found that congestion in London had increased in recent years; this allowed the Conservative candidate, Boris Johnson, to advocate measures to reduce traffic instead of increasing prices or extending congestion charge zones. He argued that the largest source of CO2 emissions was traffic congestion because cars blocked in traffic polluted more than those that were driven normally. Opposed to an increase in the congestion charge, he proposed that urban congestion be addressed by measures to regulate traffic, for instance, by reducing the time motorists had to spend waiting at red lights. It is worth noting, however, that Johnson did not at any time propose the abolition of this system of urban taxation.

In contrast, the other candidates favoured the congestion charge and proposed even more restrictive measures on car use. Labour's Ken Livingstone, who introduced the congestion charge, defended the positive outcomes of his initiative. He decided to maintain the general conditions of taxation at the time and proposed the introduction of a £25 per day charge for high-powered sports cars and 4x4s entering the congestion charging zone and free access for the most environmentally-friendly cars. Among his proposals were the improvement and modernisation of the tax payment system. The Green Party candidate proposed to fix the new congestion charge at a higher level for the least environmentally-friendly cars and develop a more specific urban traffic pricing to target London's most congested streets.

The development of public transport continued to receive great focus in candidates' electoral programs. Issues such as accessibility and safety that had been important in 2004 received less attention. Indeed, in 2004, accessibility was the second category that received the greatest attention from the Green Party, and the fifth in the Labour Party. In 2008, it dropped to tenth position in the Green Party and to eighth in Labour. Among the Conservatives, accessibility occupied the 18th position.

The "public transport pricing" category did not attract the same attention, nor was it addressed in a similar manner by candidates. Indeed, while it was placed eighth by the Green Party, it was second for the Conservatives. The Green Party proposed a fare freeze on the tube and a reduction in bus fares during non-peak hours. The other candidates placed more emphasis on maintaining free public transport benefits (for children, the elderly and the disabled - Freedom Pass) or avoided taking firm positions by using phrases such as "rates shouldn't rise higher than they currently are", which left much room for voters' interpretations.

Candidates' proposals relative to the development of means of transport such as walking and cycling focused, broadly speaking, on the same initiatives. All candidates proposed the creation of the London bike hire scheme and the expansion, in the British capital, of initiatives such as the pedestrianisation of streets, especially in the city centre.

Lastly, the scant attention paid by the candidates to the Olympic Games is worth mentioning. Interestingly, given that the games were to be held in London in 2012, barely four years after the election, and that the preparation for this mega-event was actually to take place during the period 2008-2012, the candidates did not take advantage of this subject. This might be explained by the fact that this type of event provokes

controversy and even multiple protests. Candidates may have consciously decided to avoid this subject in their electoral programs to avoid controversy.

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## 2012 Mayoral Election

### Context

- Drastic rise in the taxation of conventional fuel (from 63% in 2008 to 74% in 2009)
- Incentives for electric cars: Plug-in car grant. Offers buyers 25% of the buying price up to £5,000, and exempts electric cars from VED since 2011
- Increase in the congestion charge (from £8 to £10) in 2011
- Reduction of the congestion charge zone (from 42km<sup>2</sup> to 22km<sup>2</sup>)
- Installation of a bike-share system in 2010
- Uber begins service in London in 2009

The electoral programs of 2012 largely focused on the pricing of public transport. Indeed, while this category was the first priority for Labour and the Liberal Democrats, the Green Party placed it second, immediately after the “development of public transport”. With regard to transport pricing, the Green Party candidate pledged to keep fares below the rate of inflation during the next four-year term. Labour’s candidate proposed a 7% reduction in fares in the first year of office (2012), a freeze in 2013, and maintenance of fares below the rate of inflation from 2014. The Liberal Democrat candidate pledged that he would “keep fares as low as possible and ... not increase fares by more than the rate of inflation” but failed to give more precise information. He chose to focus his proposals and initiatives on the development of new products adjusted to people’s need for mobility and on the protection of existing exemption or reduction schemes (Freedom Pass). He thus proposed the creation of a “part-time” card, which would allow people working three days a week to access reduced travel rates (Part-timers’ Travelcards), lower fares for employees taking the tube before 7:30 am, and the creation of a One Day Outer London Travelcard.

The development of public transport was a category that continued to receive much attention from the candidates. Although the concepts of transport accessibility and safety continued to be addressed, the candidates of 2012 focused on initiatives to increase transport capacity, particularly in the most frequently used tube, train and bus routes. With regard to preferred modes of transport, all candidates emphasised the development of cycling. Even Labour, which is often in favour of developing the London underground and trains, placed greater emphasis on cycling in this year. Green and Liberal Democrat party candidates largely supported the installation of self-service bicycles and even proposed the reinforcement and expansion of the system. Labour’s candidate did not evoke this initiative and focused instead on his proposals for road safety to encourage the use of bicycles.

A distinctive feature of the electoral programs of 2012 is that the congestion charge, which had been a highly-mobilised issue in the past, was not present among the ten issues that received most attention. Candidates, however, continued to give their opinions about this tax. The Green Party candidate, strongly in favour of the congestion charge, proposed an increase in the charges, the introduction of a new tax for the least environmentally-friendly vehicles (“gas guzzler” charge) and a new congestion charge for Heathrow Airport. The Liberal Democrat candidate proposed the modification of the congestion charge and the introduction of variable charges depending on the time of travel. His objective was to discourage car use during peak hours by charging higher rates and to reduce charges during off-peak hours. Lastly, the Labour Party candidate pledged to keep charges and the congestion charge zone unchanged during the four-year term.

Candidates focused on different aspects with respect to “regulatory measures” within the London transport department. The Green Party emphasised the need to make all rail services public. Indeed, the candidate proposed to exert pressure on the government to bring all rail services under its control, by ensuring that commuter train services were controlled directly by TfL. The Liberal Democrat candidate was also in favour of this initiative and proposed a restructuring of TfL to reduce spending and optimise assets, and to create new sources of investment from the private sector. Labour’s candidate strongly criticised TfL’s spending policy, which focused on investing in projects that had little impact on people’s lives. He proposed to redirect these investments to projects that were essential for the city.

All candidates proposed the gradual introduction of transport infrastructures with zero CO<sub>2</sub> emissions. Notably, they proposed the introduction of electric buses priced the same as conventional buses. These proposals were in response to the global pressure on governments to trigger investments in “Green infrastructure”

but also reflected decision-makers' awareness of the urgency of switching to cleaner technologies. This was exemplified by incentives put in place by the government in 2011 to purchase electric cars, and by candidates' commitment to a new fleet of fully electric-powered buses.

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## 2016 Mayoral Election

### Context

- London 2012 Olympic Games
- End of LOCOG
- Joint venture (KeolisAmey Docklands) in 2014
- Increase in the congestion charge in 2014 (from £10 to £11.50)
- Establishment of car-sharing schemes: Club-car Coalition

In 2016, candidates focused on public transport fares. This was one of the five most popular categories for all candidates. However, the proposals hardly differed from those made in previous years. The Green Party candidate proposed to reduce and freeze fares for areas outside London and allow other fares to increase in line with inflation to ensure uniform rates within Greater London. He also proposed the creation of one ticket allowing passengers to pay just once to reach their destinations by developing intermodal passenger transport, i.e., the ability to change between buses, trains and the tube in the course of their journey. The Labour Party candidate, Sadiq Khan, also proposed a four-year freeze on fares, protection of the Freedom Pass and the card for the over-60s, and for all other existing exemption or reduction schemes. The Liberal Democrat candidate proposed to reduce tube and train rates by differentiating time schedules (for instance, it would cost half as much to use public transport before 7:30 am). She also proposed to introduce flexible travel cards to allow passengers to purchase a specified number of tickets each month and receive discounts equivalent to monthly travel card discounts. She also proposed to protect the Freedom Pass and extend it to those aged 60 and above. The other candidates were less specific on the issue; the Conservatives proposed to protect existing preferential benefits and fares, and UKIP proposed the reduction of fares for zones 4, 5 and 6.

Another category that received much attention in the elections of 2016 was "regulatory measures". Indeed, this category came first for the Green party and second for the Liberal Democrats, UKIP and the Conservatives. It was, however, absent from the top ten issues addressed by the Labour party. This category encompassed issues related to traffic regulation, road plans, necessary adjustments to improve road sign visibility, increased safety at road junctions, etc.

The "development of public transport" category continued to be among candidates' top five priorities. The notion of accessibility, however, lost the place it had occupied in previous elections. It was maintained by the Labour Party alone. The candidates' public transport proposals were very similar. With regard to the London underground, they proposed the extension of the Bakerloo line and of the night tube network. They were all in favour of the construction of Crossrail 2 and some even proposed the building of Crossrail 3.

The proposals to develop cycling were also very similar; candidates proposed the expansion of the self-service bike-hire scheme (Santander) and an increase in the budget devoted to the development of cycling, notably in terms of the number of bikes and cycling routes. With regard to walking, proposals continued to focus on the pedestrianisation of streets in the city centre but candidates were also in favour of the transformation of certain streets to encourage walking.

In 2016, candidates fully mobilised the "car use" category. Indeed, this category was among the ten most prominent categories. Candidates' proposals were largely unfavourable to car use. They all proposed even more restrictive measures. For instance, they proposed to increase parking prices, introduce a tax on parking spaces in workplaces, and increase the number of low and ultra-low emission zones.

Lastly, the "congestion charge" category lost its significance in the 2016 elections and failed to appear in the ten most frequently mentioned categories. Candidates, however, continued to speak out on this measure, proposing, for instance, the renewal of the payment system and the maintenance of charges.

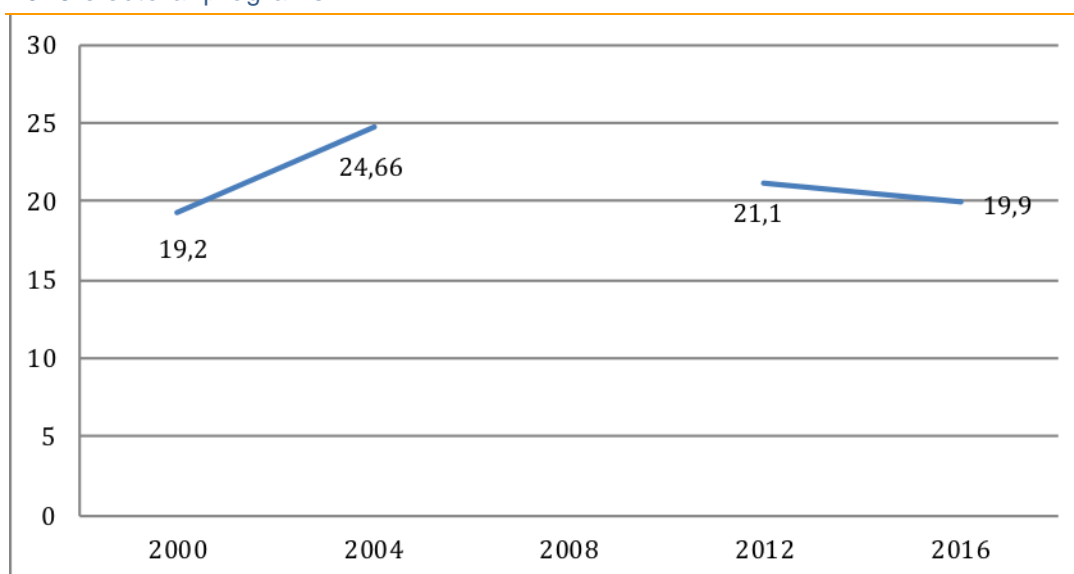
## 8.2.6 Results by party

### Labour Party

- Saliency

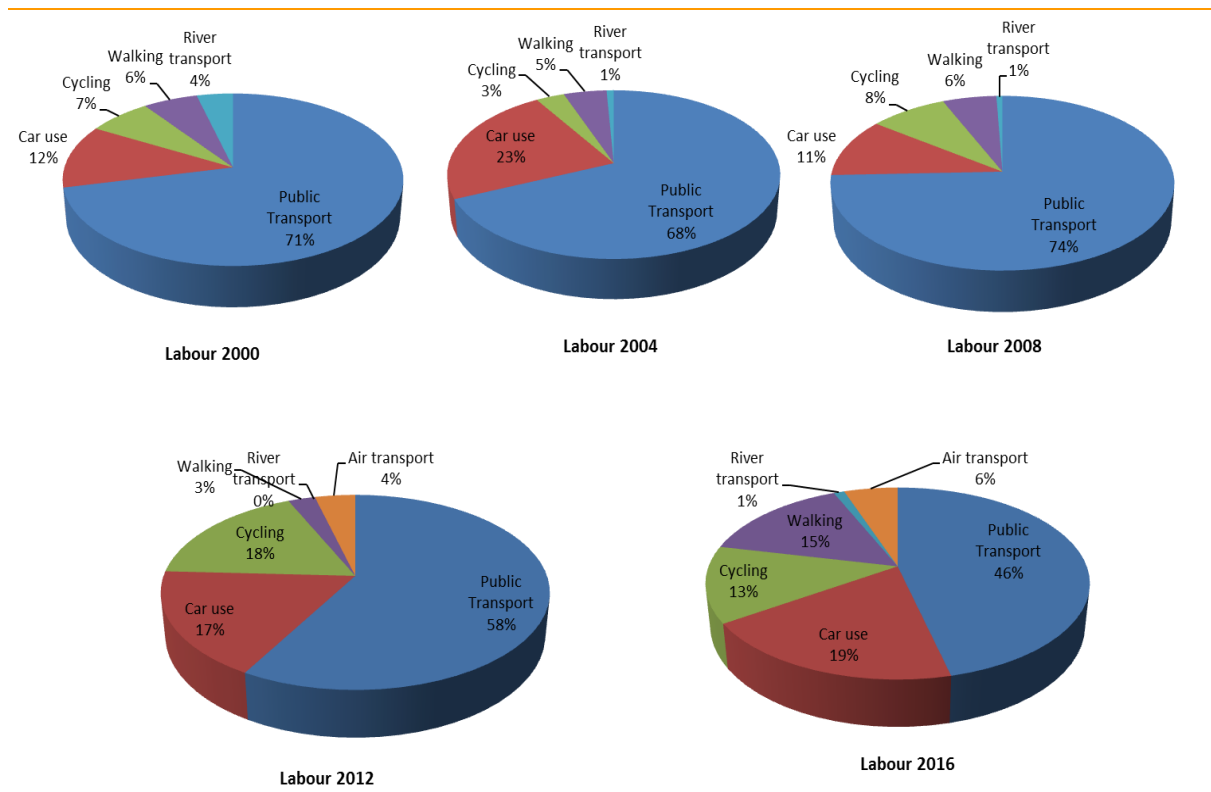
To determine the significance of transport policies in electoral programs, the saliency of these policies was calculated. After coding the sections of the electoral programs referring to transport policies, we determined their weight (as percentages) in the entire electoral program.

Figure 11: Evolution of the visibility of transport policies within the Labour Party's 2000-2016 electoral programs



In this respect, we observed that, among Labour candidates, the proportion devoted to transport policies in electoral programs has remained “stable” over the years. It has remained constantly at between 19% and 25%. While the priority given to transport modes within the programs varied across the years, the Labour Party paid a more or less similar amount of attention to the issue. This suggests that transport is a fundamental theme in Labour’s electoral programs, appearing at the very beginning of the documents or in the top five positions. The five-point variation between the highest and lowest percentage does not appear to be highly significant if one takes into account the fact that, among the other candidates, only 10% to 15% of the programs focused on the issue.

Figure 12. Distribution of references to the modes of transport in the Labour Party from 2000-2016



- Evolution by mode of transport

In the Labour Party, there have always been greater allusions to public transport than to other means of transport. However, this public transport “hegemony” diminished over time, making way for soft mobility. Indeed, the focus on bicycles rose from 7% in 2000 to 13% in 2016. This evolution was even greater with regard to walking, rising from 6% in the 2000s to 15% in 2016. However, proposals relative to car use did not follow a clear trajectory but varied widely from one year to the next.

Proposals referring to air transport have never featured prominently in the electoral programs of Labour Party candidates. Moreover, results show that there has been a gradual decrease in references to air travel. The development of river services and the use of the Thames as a transport route are not among the key proposals of the Labour Party.

Unlike river transport, references to air transport became more frequent in Labour’s discourse from 2010 onwards. Non-existent in 2000, they rose to 6% in 2016. This change was perfectly in line with the economic situation of the time; indeed, in 2009-2010 the government and the Heathrow Airport management team announced an airport expansion plan based on the construction of a sixth terminal and a third runway at the airport. Although the new coalition government cancelled the expansion in May 2010, several interest groups continued to put pressure on the government for the airport’s expansion. Ken Livingstone, Labour’s candidate in 2012, thus devoted a section of his electoral program to expressing why he opposed this expansion. On July 1, 2015, the Airport Commission ruled that Heathrow Airport needed a third runway and a sixth terminal, eventually



approving the expansion. In 2016, Sadiq Khan continued to oppose this expansion in his program and proposed an alternative new runway at Gatwick Airport.

- Evolution of proposals

How have the main Labour Party proposals evolved over time? To respond to this question, we will focus on the changes in the ten categories that have occurred most frequently in each electoral program.

Our first observation relates to public transport, a category to which Labour has devoted much attention. Public transport is among the five categories most frequently addressed by candidates in the four Mayoral elections for which the programs were available. The candidates are highly receptive to the development of the rail network and promote all types of initiatives in support of this means of transport. They notably propose the extension and creation of new tube lines, an all-night tube service, and the renovation of equipment.

The pricing of transport is linked to the “development of public transport” category. This category has always been among the five categories to which candidates refer most frequently in their electoral programs and it has also become increasingly important in more recent elections. Indeed, transport fares were in third position in the 2000 elections, first in the 2012 elections and third in the 2016 elections. Labour’s candidates placed emphasis on the protection of existing reductions for the elderly, the handicapped and students, and proposed new initiatives such as a rate reduction during off-peak hours and the introduction of a fare deal adapted to part-time workers.

Accessibility and safety was the third category identified. Labour’s candidates strongly emphasised the association between the development of public transport and people’s right to travel freely and peacefully. This gave way to proposals such as the renovation of stations to make them more accessible, the construction of new stations under the same conditions, and 24-hour vigilance through the use of CCTV cameras.

Alongside the hegemony of the rail system, soft mobility gained importance in Labour candidates’ electoral programs. In the elections of 2000 and 2004, walking and cycling were not among the ten categories most frequently referred to. In 2008, walking was in ninth position, but cycling was not among the top ten categories. The opposite was observed in the 2012 electoral program: while the development of cycling was fourth, walking was not among the top ten categories. In 2016, these two categories were among the ten categories most frequently referred to by the Labour candidate, with walking placed fourth and cycling sixth.

Another category to which Labour candidates frequently referred was the development of buses. Buses, icons of transport in London, were a means of transport that drew much attention from candidates. The Labour Party proposed the expansion of the bus fleet, its modernisation in terms of green technology, passenger safety using CCTV cameras, the setting up of an all-night service, and the guarantee of full accessibility for disabled persons, persons with reduced mobility, and families with children and pushchairs.

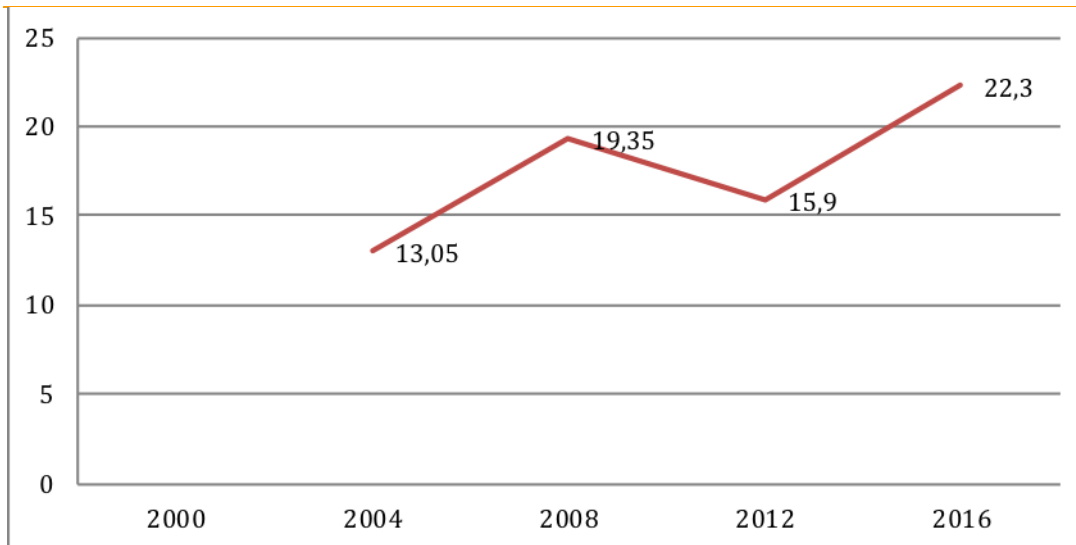
Lastly, certain categories emerged in each election; these were the themes to which candidates referred in a given electoral year, but which did not feature in other electoral years. Examples include the “transport privatisation/municipalisation” and “socio-spatial equity” categories in 2000, “climate change” in 2004, “technological innovation” in 2008, “freight transport” in 2012 and “urban development” in 2016

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## Green Party

- Saliency

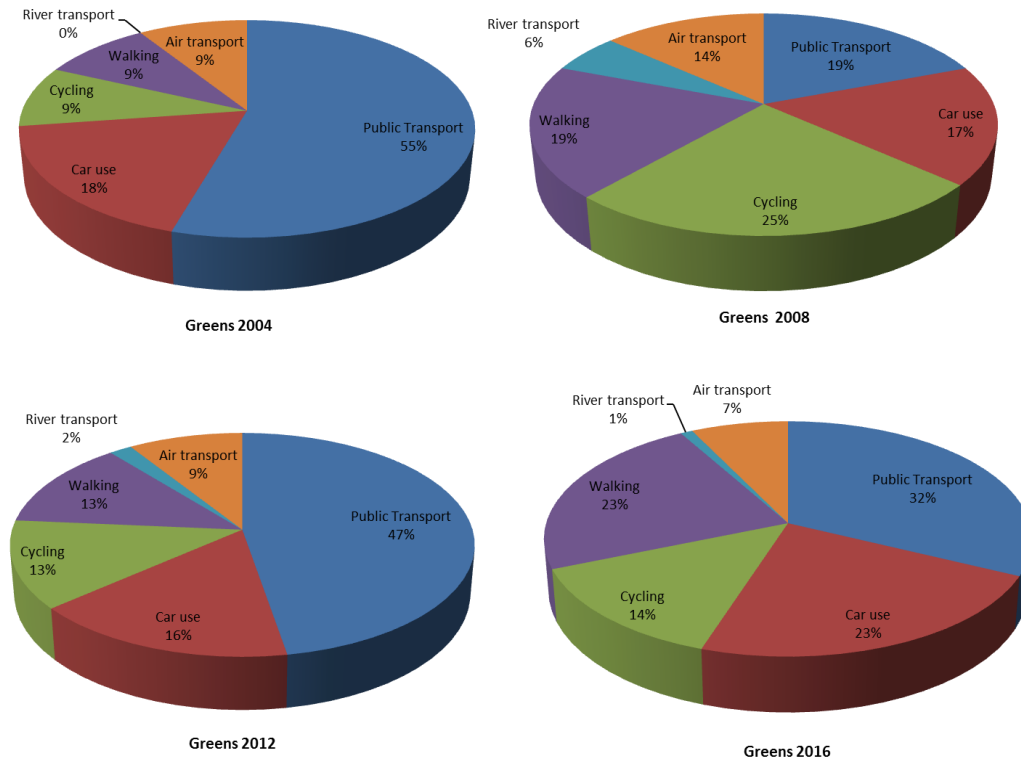
Figure 13: Evolution of the visibility of transport policies within the Green Party's 2000-2016 electoral programs



The evolution of the salience of transport and mobility issues within the electoral programs of the Green Party does not follow a linear evolution over time. The graph above shows strong variations. However, we managed to establish a relationship between the percentages of the graph and the order in which themes were presented in the electoral programs. Indeed, the year 2004, in which the least attention was paid to transport, corresponded with the year when the electoral program of the Greens did not follow a specific and thematic plan. On the contrary, there was little coherence in the manner in which subjects were referred to in the document. In 2008, transport and mobility represented 19.35% of the issues prioritised and was placed fourth in the electoral program. It came after issues such as climate change, the local economy and urban food supply. In 2012, there was a decline in the salience of transport and mobility issues, and a drop in position of these issues in the electoral program. Transport and mobility came in fifth position after equity and diversity, economy, employment, and the environment. The percentage rose to 22.3% in 2016, placing transport in second place, immediately after housing.

- Evolution by mode of transport

Figure 14: Distribution of references to the modes of transport in the Green Party from 2000-2016



The Green Party had a more balanced distribution of references to different means of transport but this varied from one year to another. The most balanced distribution of references to means of transport was observed in 2008 and 2016. In 2004 and 2012, the candidates decided to focus on the development of public transport, inevitably reducing the space allocated to other means of transport.

The Green Party has always defended and been a strong advocate of soft mobility. A large (ever-increasing) section of their electoral programs was devoted to the development of cycling and walking. The proportion devoted to the development of cycling rose from 9% in 2004 to 14% in 2016, and it attained 25% in 2008. Walking followed the same trajectory within the electoral programs; it rose from 9% in 2004 to 23% in 2016. Air transport also featured prominently in electoral programs, notably because the Green Party has always been strongly opposed to the expansion of London's airports and to the construction of highways leading to airports. The development of river transport has never been a fundamental issue in the Green Party's proposals, which explains the low visibility of this means of transport in electoral programs, with percentages never exceeding 6%.

Lastly, the "car use" category received the same amount of attention as other means of transport. It represented between 16% and 23% of the total references. These references, however, do not mean that the party favoured car use. On the contrary, it strongly opposed this means of transport and focused on measures and initiatives to highly restrict its use. These measures ranged from increasing the price of the congestion charge, restricting the movement of the least environmentally-friendly cars, establishing low-emission zones and pedestrianising streets.

- Evolution of proposals

The Green Party's candidates also placed great emphasis on the development of public transport. However, unlike the Labour Party, this Party always placed the development of cycling and walking among its top ten categories. As observed with the other parties, these two categories gained prominence over the years. Indeed, placed seventh and eighth in 2004, they quickly rose to first and second positions in the following

electoral year. At the same time, the notion of accessibility featured strongly until 2016, when it disappeared from the ten categories most frequently referred to, giving way to categories such as climate change, the environment and the quality of London city life.

However, the “transport fares” category gained prominence over time. Indeed, placed tenth in 2004, this category moved up to ninth position in 2008, and then to second and fifth positions in 2012 and 2016 respectively. In this regard, the Green Party has always proposed public transport fare freezes, the protection of reduced fares for certain groups of people, and the introduction of more suitable Travelcards for part-time workers and for residents from the suburbs who regularly commute to the city centre.

The Green Party has always been very unsympathetic to car use. Their programs have emphasised the negative outcomes of traffic congestion and urban traffic, notably in terms of the environment and of the quality of life of inhabitants. This explains why they have always proposed the maintenance of high congestion charges, the introduction of new taxes for the least environmentally-friendly cars, the creation of new low and ultra-low emission zones, the taxation of parking spaces at work and the use of other means of transport such as cycling, walking and public transport. Labour’s candidates have also largely focused on freight transport because this form of transport is a leading cause of traffic growth and should be regulated to allow better traffic flow in London and improve the quality of life.

Lastly, the environmental issue has received much attention from the Green Party’s candidates. Beyond the support for soft mobility, the environmental prism has allowed the Green Party to advocate a sustainable transformation of mobility in London and fight against climate change, obesity and pollution. For instance, these candidates have proposed the renovation of the fleet of motorised vehicles and the introduction of electric, hybrids or low emission vehicles.

### 8.2.7 Conclusion

One of the first conclusions we can draw from this analysis is that electoral programs are documents which make it possible to evaluate the evolution of the content of public and political debate on transport and mobility. These documents enabled us to reflect on the role of transport policies within London’s local policies and highlight the changes in the conflicting nature of transport policies and the discrepancy between the proposals and the strategies implemented.

An analysis of the electoral programs of the London Mayoral elections has revealed, from a purely formal perspective, that these programs’ structures are very similar. They all feature a descriptive part, in which candidates expose the current issues facing the city, and a part dedicated to the proposals where the candidates highlight their initiatives, policies and strategies for each of the subjects mentioned. Beyond this similarity, it is worth mentioning that London’s Mayoral electoral programs have become increasingly complex. Indeed, an assessment of the documents produced for the first Mayoral elections held in the year 2000 and those produced in subsequent elections until the last elections held in May 2016 clearly reveals that these documents have developed considerably. Initially simple, easy to read, and similar to political propaganda, these documents have become more analytical, mobilising graphics, statistics and scientific information featuring in-depth reflections and analyses.

Although London Mayoral electoral programs are all similar in structure and have all become more complex over time, there are distinct differences between the documents produced by each political party. One of these differences concerns their availability and accessibility. Indeed, while most of the electoral programs of recent years (2008 to 2016) were freely and easily accessible online, the same was not true for the programs of 2000 and 2004. Accessibility differed according to each political party, with the Labour Party’s electoral programs being the most accessible. In contrast, UKIP’s documents were the least accessible. The only electoral program that was freely accessible online was the program of 2016. The four previous programs were unavailable and the party never responded to our requests on the issue.

A second difference concerned the specific impact of each candidate in his/her electoral program. Indeed, each candidate presented the issues in a specific manner, privileging, for instance, graphics and thus inserting photographs, diagrams and graphics, or more formal documents, producing a simple structure comprising chapters and sub-chapters. Candidates seeking re-election dedicated a large part of the electoral programs to highlighting their management results and proposing measures and initiatives in line with the progress made. Opponents highlighted the weaknesses in the management of the outgoing Mayor and promoted initiatives they believed would turn the situation around and improve outcomes.

An analysis of the content of the London Mayoral candidates' electoral programs allows us to assert that transport and mobility policies have always figured prominently in these documents. Since the year 2000, transport has been at the forefront of the manifestos, placed even above proposals concerning housing, economic development, employment or the environment. Transport's position, however, varied according to the year and the political party studied. In 2016, for instance, given London's housing crisis, the candidates chose to begin their electoral programs with the housing theme, relegating transport to a lower rank in their priorities.

Lastly, the analysis of the references to the different means of transport also allowed us to draw a few conclusions. First, the reference to the various means of transport differed in the candidates' political discourses. In the year 2000, public transport was a fundamental issue for candidates; in subsequent years, other means of transport (such as cycling and walking) gained in importance. Walking and cycling featured most prominently in candidates' discourses for the period 2000-2016. References to car use remained stable overall (between 15% and 23%), varying according to the political party. The reference to river transport (the use of the Thames as a means of transport and the development of river services) decreased considerably over time. The candidates no longer referred to this means of transport.

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