

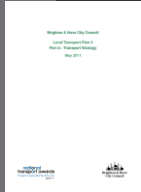
# Comparing urban policy discourses in different political and linguistic contexts with the use of textometry

An application to PDUs and LTPs

Thomas Buhler & Richard Stephenson

Université Bourgogne Franche-Comté

ThéMA UMR 6049



18 PDU  
(2nd generation)  
between 2010 and 2015



17 LTP  
(3rd generation)  
2011

# Textometry & planning documents



## PURPOSE

- Analysing urban policy discourses on several political and linguistic contexts
- ... with larger data sets (> 2 cases for comparison)
- ... with a replicable method



## METHOD

- exclusive focus on planning documents [~~proceedings, press releases...~~]
- exclusive focus on textual data [~~maps illustrations charts...~~]
- Textometry = computer assisted method of Textual Data Analysis  
    {software used: TXM (cf <http://textometrie.ens-lyon.fr> )
  - analysing the nuances with robust statistical tools  
    | (i.e. *specificity* of lexicons used in a group of document within the corpus)  
    | allowing a return at the text (the use context, the 'real' sentences)

# Textometry & planning documents



WE ARE CLEARLY AWARE THAT ...

... planning documents discourses are « **institutional discourses** »

[Krieg-Planque & Oger, 2013]

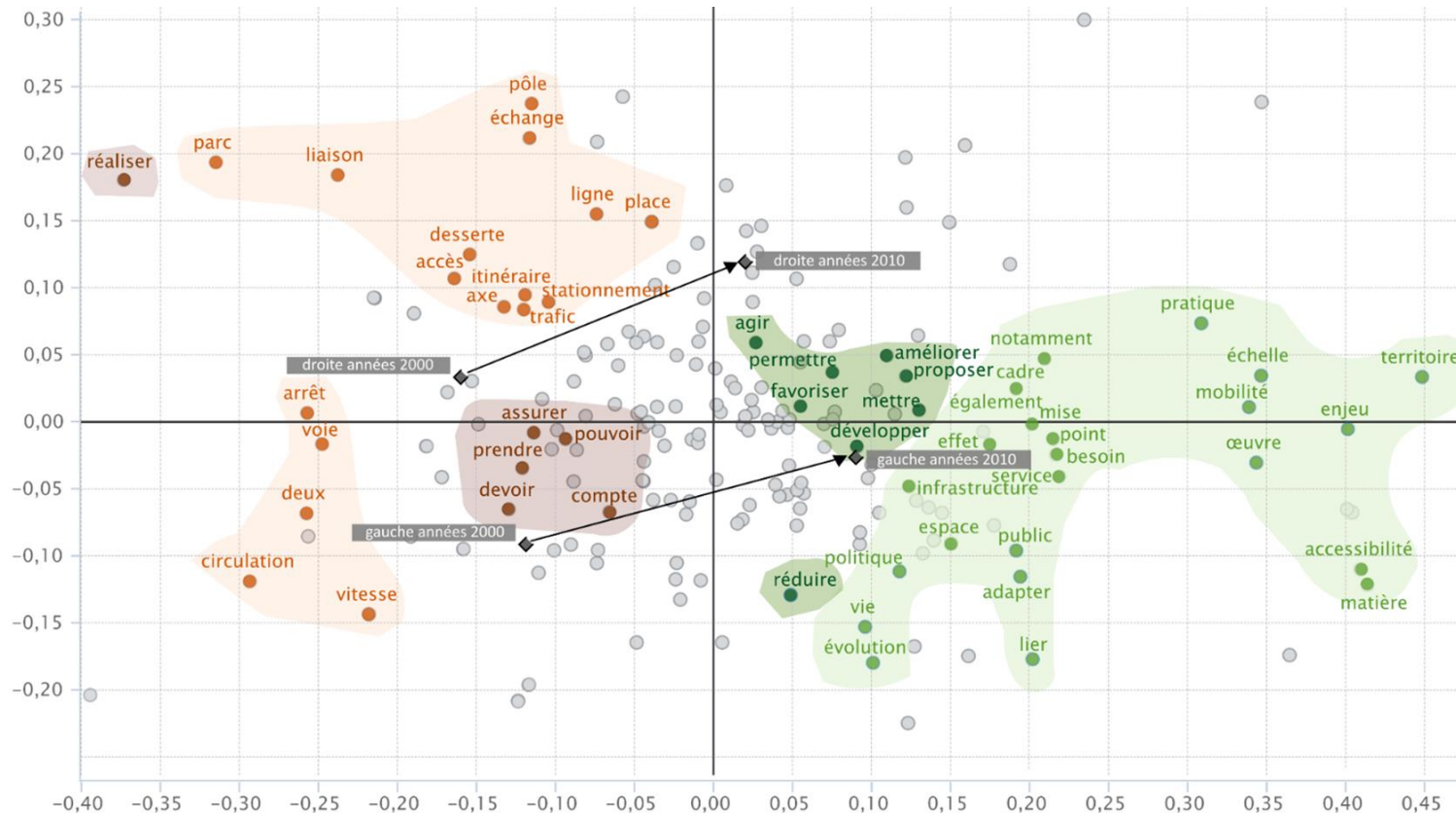
- strong and *performative* dimension
- emanating from a collective entity *presented as indivisible*
- ... while being the product of *negociation* between various points of view
- ... guided by a dual principle of statements' stabilization (stereotypical writings) and erasure of conflict

Offner (2006: 15) described PDUs from 1st generation as *tarte à la crème* (= “polished”, “non conflictual”, “uncontroversial”, “lowest common denominator”)

# Textometry & planning documents



TEXTOMETRY HAS ALREADY BEEN USED ON PDU<sub>s</sub> [2000-2015]



[Buhler et al., 2018]

➔ is textometry useful for **comparative analysis** ?



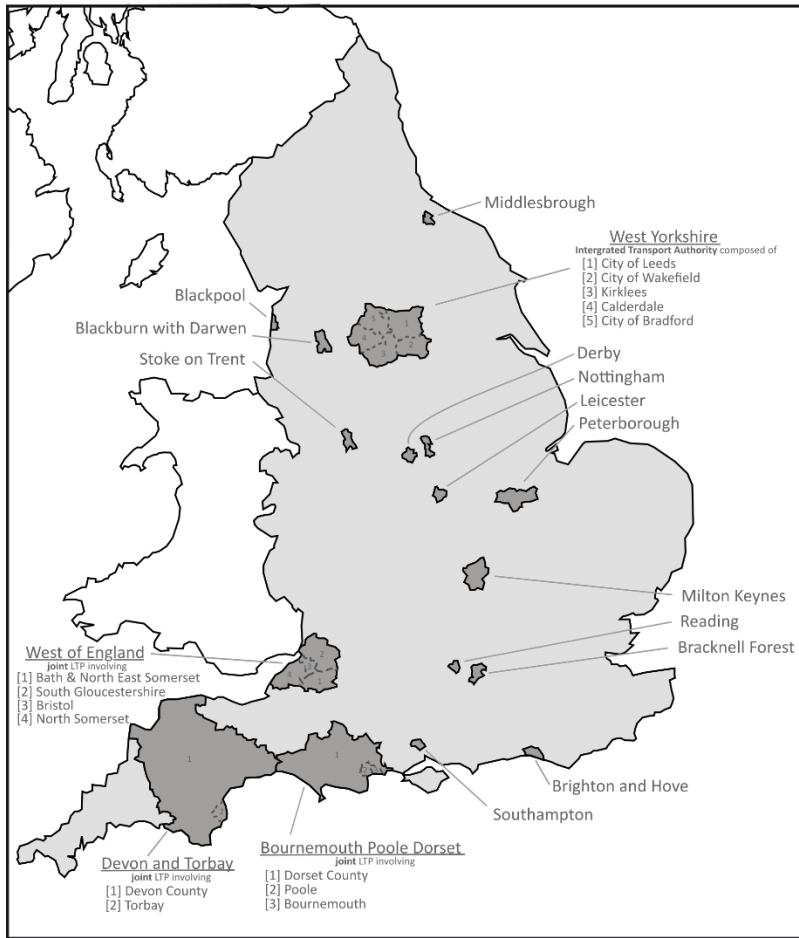
# Are PDUs and LTPs comparable ?

|  | PDU <sub>s</sub>   | LTP <sub>s</sub>  |
|--|--|---|
| <b>Timing</b>                            | 1982 LOTI Act (voluntary)<br>1996 LAURE Act (obligatory)<br>2000 SRU (mandatory when request<br>Central Gov. for funding new<br>infrastructure)<br><b>Revised every 10 years</b> | 2000 Transport Act<br><br><b>Frequency of the review at the<br/>           discretion of the LTA</b>  |
| <b>Geography</b>                         | all ' <i>agglomérations</i> ' (>100 000)   | all parts of England  |
| <b>Bodies</b> drawing up<br>the plans    | 'AOM' are either:<br>- ' <i>Intercommunalités</i> '<br>- ' <i>Syndicat Mixtes</i> '  | 'LTAs' are either:<br>- 'unitary authorities' /or/<br>'counties' /or/ 'ITA'                           |
| <b>Aims</b>                              | Equivalent   |   |
| <b>Power relations</b><br>between actors | 'AOM' + financial autonomy<br>(' <i>versement-transport</i> ')<br><br>'AOM' can franchise the service with one<br>operator   | LTAs need for Central Gov. subsidies<br><br>LTAs licence self-financing operators (in<br>competition) |
| <b>Length</b>                            | approx. 62 000 words / doc.  | approx. 40 000 words / doc.   |

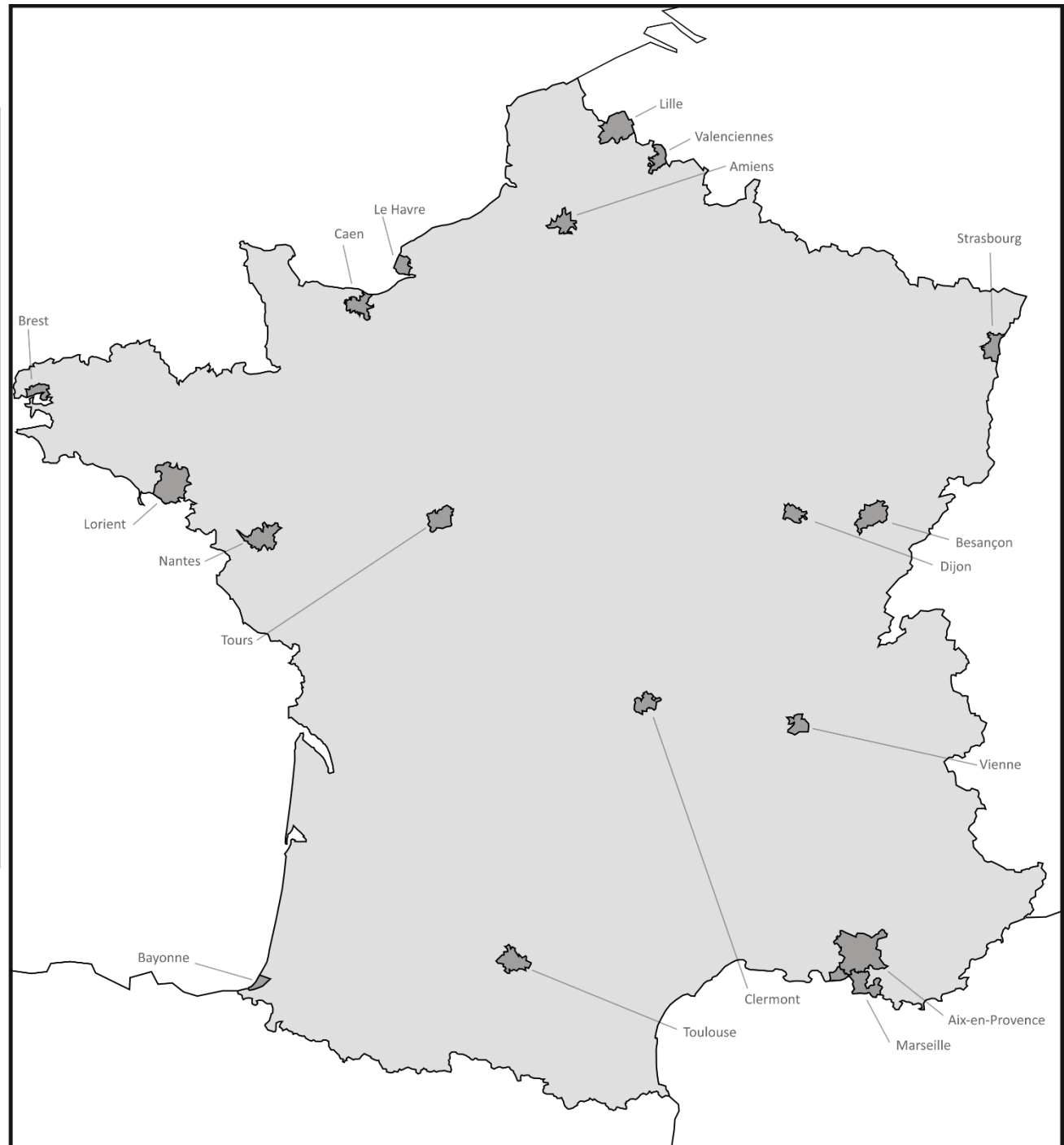
Comparable in **form**, **size** and **purpose** / ... but fairly different **configurations** of **actors** / an '**ideal situation**' for discourse analysis

# Representativity

[corpus  $\approx$  25% of total documents]



100 km

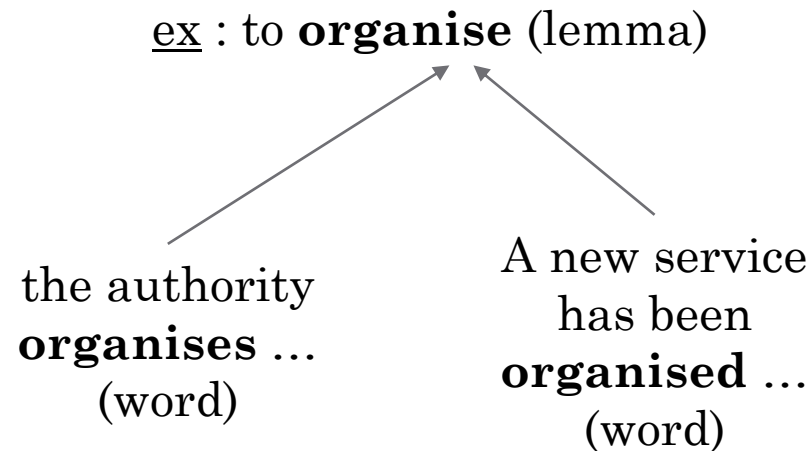


in terms of :  
resident **population**  
type of local **authority**  
political **colour**

# Lemmatisation

A lemma is a conventional lexical form allowing us to group under the same entity the dispersions of graphic forms related to conjugation and to plural and gender forms.

➔ statistical analysis easier to read and interpret





# Disambiguisation / ex: 'communes'

'sur les communes' ❌

|                      |   |          |  |
|----------------------|---|----------|--|
| Aix en Provence 2015 | de l'Étang de Berre (sur les                    | communes | de Vitrolles et les Pennes-Mirabeau), avec des performances contrastées. |
| Aix en Provence 2015 | Niveau de Service (BHNS) sur les                | communes | d'Aix-en-Provence, des Pennes-Mirabeau et de Vitrolles ; Des lignes de   |
| Vienne 2011          | et d'Eyzin-Pinet ; 10 accidents sur les         | communes | de Seyssuel et de Pont-Evêque ; 7 accidents sur les communes de          |
| Vienne 2011          | commune de Serpaize ; 13 accidents sur les      | communes | de Chuzelles et d'Eyzin-Pinet ; 10 accidents sur les communes de         |
| Vienne 2011          | et de Pont-Evêque ; 7 accidents sur les         | communes | de Jardin, Villette-de-Vienne et Septème ; 6 accidents sur la commune    |
| Besançon 2015        | communes avec une précision plus accrue sur les | communes | de l'armature urbaine SCoT. Pour chaque voie, place,                     |
| Aix en Provence 2015 | km aménagés dans les 5 ans sur les              | communes | de la CPA ; Les parcs relais et pôles d'échanges du                      |

|               |  |          |  |
|---------------|--|----------|--|
| Dijon 2012    | aux volumes, pris en charge par les                        | communes | . Stations vélos : Propositions d'implantation Pour atteindre une augmentation |
| Dijon 2012    | sera réalisée et prise en charge par les                   | communes | . INDICATEURS Suivi Nombre d'événements réalisés, Nombre de campagnes re       |
| Lorient 2013  | principes devant être pris en compte par les               | communes | lors de la révision de leurs PLU. D'autres fiches-actions du                   |
| Le Havre 2013 | définition de ces seuils sera définie par les              | communes | . Les périmètres concernés figurent sur la carte page suivante. Par            |
| Amiens 2013   | appliqueront ces densités minimales seront définis par les | communes | et / ou intercommunalités au regard notamment de critères d'accessibilité par  |
| Lorient 2013  | juridique des autorisations d'urbanisme délivrées par les  | communes | et pour une mise en oeuvre efficace, il est nécessaire d'                      |
| Lorient 2013  | ) sont en cours d'élaboration par les                      | communes | . Ils visent à programmer la mise en accessibilité de l'ensemble               |
| Besançon 2015 | or la compétence voirie est exercée par les                | communes | tandis que celle des transports relève de la Communauté d'agglomération.       |

'par les communes'



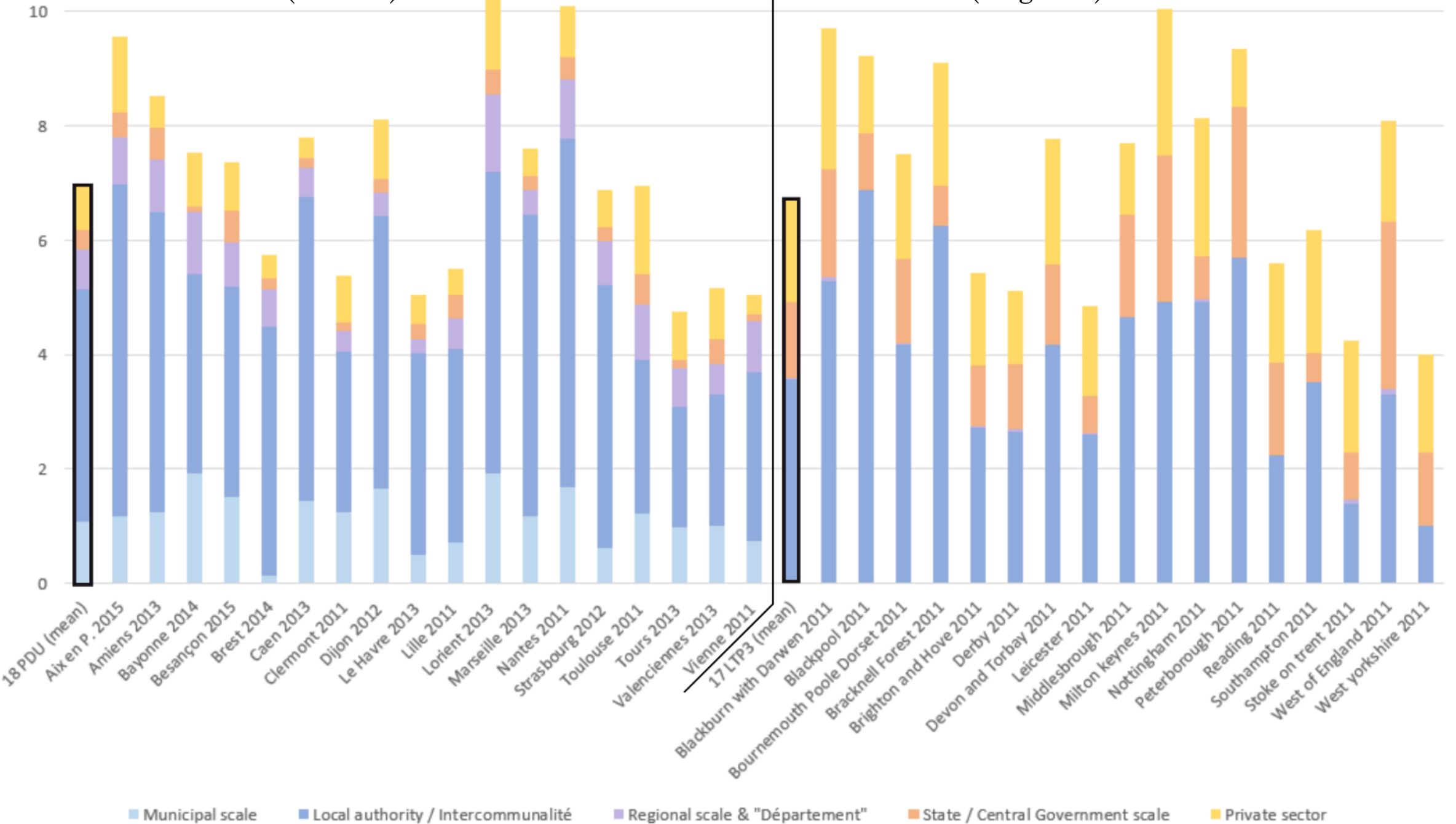
# Listing all the terms referring to the actors

+ sorting them [Municipal / Local / Regional / State / Private sector]

|   | PDU ("Plans de Déplacements Urbains")  |   |                                   | LTP ("Local Transport Plans")                                  |   |                                   |
|---|--|---|-----------------------------------|--|---|-----------------------------------|
|   | Lemmas (include plural and gender forms, words with capital letters etc.)  | Number of occurrences within the corpus | Frequency of use (for 1000 words) | Lemmas (include plural forms, words with capital letters etc.) | Number of occurrences within the corpus | Frequency of use (for 1000 words) |
| Municipal scale                           | "Commune" *  | 1110                                    | 0,99                              |  |   |                                   |
|   | "communal" *   | 102                                     | 0,09                              |  |   |                                   |
|   | "Ville (de) ..." *   | 27                                      | 0,02                              |  |   |                                   |
|   | "gestionnaire" (de voirie)   | 202                                     | 0,18                              |  |   |                                   |
|   | sub total MUNICIPAL  | 1239                                    | 1,10                              |  |   |                                   |
| Local authorities and "Intercommunalités" |  |   |                                   | (local, local transport, unitary, borough ...)                 |   |                                   |
|   | "Métropole" *  | 415                                     | 0,37                              | <b>Authority</b>   | 809                                     | 1,18                              |
|   | "intercommunalité"   | 4                                       | 0,00                              | (city, district, county, ...) <b>Council</b>                   | 1630                                    | 2,38                              |
|   | "communauté" (d'agglomération / urbaine...)  | 295                                     | 0,26                              | local government   | 11                                      | 0,02                              |
|   | "intercommunal"  | 129                                     | 0,11                              |  |   |                                   |
|   | "EPCI"   | 31                                      | 0,03                              |  |   |                                   |
|   | "Pays"   | 106                                     | 0,09                              |  |   |                                   |
|   | <b>Acronyms</b> for local authorities (ex : "LMCU" for "Lille Métropole Communauté Urbaine" ; "CPA" : "Communauté du Pays d'Aix" ; etc.) | 2288                                    | 2,03                              |  |   |                                   |
|   | Local authority specific name or <b>brand</b> ("Tour(s)plus", "Caen la mer", "Grand Dijon"...)   | 1198                                    | 1,07                              |  |   |                                   |
|   | sub total LOCAL  | 4466                                    | 3,97                              | sub total LOCAL  | 2450                                    | 3,57                              |

## PDU (France)

## LTP (England)



■ Municipal scale   
 ■ Local authority / Intercommunalité   
 ■ Regional scale & "Département"   
 ■ State / Central Government scale   
 ■ Private sector

# 'Partnership' vs *Partenariat*

## LTP (England)

## PDU (France)

|  | Lemma                                     | Cooccurrence Index | Frequency within the corpus | Co-frequency within - or + 10 words | Mean distance to the lemma |  | Lemma                                       | Cooccurrence Index | Frequency within the corpus | Co-frequency within - or + 10 words | Mean distance to the lemma |
|--|---|--------------------|-----------------------------|-------------------------------------|----------------------------|--|---|--------------------|-----------------------------|-------------------------------------|----------------------------|
|  | with                                      | 71,14              | 4135                        | 240                                 | 1,57                       |  | ouvrage                                     | 233,23             | 550                         | 167                                 | 1,63                       |
|  | work                                      | 69,06              | 1682                        | 151                                 | 1,50                       |  | Maître                                      | 161,34             | 98                          | 80                                  | 0,00                       |
|  | working                                   | 45,12              | 121                         | 42                                  | 0,95                       |  | maîtrise                                    | 138,51             | 326                         | 99                                  | 3,60                       |
|  | operator                                  | 39,20              | 338                         | 55                                  | 4,02                       |  | MPM   | 90,62              | 317                         | 72                                  | 5,92                       |
|  | local (authority)                         | 24,06              | 2325                        | 107                                 | 3,58                       |  | Partenaires                                 | 90,11              | 197                         | 63                                  | 7,84                       |
|  | enterprise                                | 18,89              | 48                          | 17                                  | 1,82                       |  | communauté                                  | 72,93              | 326                         | 62                                  | 4,15                       |
|  | council                                   | 18,51              | 561                         | 44                                  | 4,98                       |  | avec  | 42,89              | 3742                        | 110                                 | 1,25                       |
|  | LEPs                                      | 17,07              | 20                          | 12                                  | 1,42                       |  | Partenariat                                 | 41,73              | 38                          | 23                                  | 6,70                       |
|  | authority                                 | 12,77              | 712                         | 41                                  | 4,29                       |  | pilotage                                    | 37,89              | 120                         | 29                                  | 1,14                       |
|  | Partnership                               | 12,51              | 343                         | 28                                  | 5,82                       |  | SITURV                                      | 34,84              | 75                          | 24                                  | 4,00                       |
|  | through                                   | 12,50              | 1523                        | 63                                  | 3,29                       |  | CAVM  | 32,65              | 37                          | 19                                  | 5,21                       |
|  | (different) agency (and councils)         | 12,42              | 64                          | 14                                  | 5,64                       |  | Pilote                                      | 31,09              | 52                          | 20                                  | 2,00                       |
|  | Council                                   | 12,39              | 1077                        | 51                                  | 4,80                       |  | HT  | 31,05              | 222                         |                                     |                            |
|  | community                                 | 11,79              | 832                         | 43                                  | 4,26                       |  | Phasage                                     | 30,25              | 19                          |                                     |                            |
|  | in  | 10,95              | 11297                       | 253                                 | 2,81                       |  | CAPH  | 30,12              | 38                          |                                     |                            |
|  | partnership                               | 10,71              | 467                         | 30                                  | 5,40                       |  | compétence                                  | 27,30              | 165                         |                                     |                            |
|  | bus (operators)                           | 10,70              | 2283                        | 77                                  | 4,36                       |  | commune                                     | 23,88              | 1827                        |                                     |                            |
|  | organisation                              | 10,33              | 145                         | 17                                  | 4,29                       |  | Conseil                                     | 22,02              | 369                         |                                     |                            |
|  | voluntary                                 | 10,10              | 93                          | 14                                  | 4,71                       |  | €   | 21,32              | 964                         |                                     |                            |
|  | Quality                                   | 9,91               | 354                         | 25                                  | 3,20                       |  | environ                                     | 18,39              | 417                         |                                     |                            |
|  | deliver                                   | 9,64               | 899                         | 41                                  | 4,51                       |  | Général                                     | 18,05              | 149                         |                                     |                            |
|  | Police (*)                                | 9,45               | 55                          | 11                                  | 3,91                       |  | financement                                 | 16,56              | 151                         |                                     |                            |
|  | Community                                 | 9,44               | 236                         | 20                                  | 3,70                       |  | collectivité                                | 16,05              | 472                         |                                     |                            |
|  | develop                                   | 9,43               | 952                         | 42                                  | 3,81                       |  | (communauté) urbain                         | 14,47              | 3708                        |                                     |                            |
|  | Rail (Network Rail and Community Rail P.) | 9,11               | 273                         | 21                                  | 3,33                       |  | acteur                                      | 12,48              | 742                         |                                     |                            |
|  | Enterprise                                | 8,65               | 50                          | 10                                  | 2,60                       |  | département                                 | 10,79              | 291                         |                                     |                            |
|  | (private) sector                          | 8,53               | 294                         | 21                                  | 5,19                       |  | convention                                  | 10,13              | 41                          |                                     |                            |
|  | City                                      | 8,53               | 1022                        | 42                                  | 4,45                       |  | RFF   | 8,36               | 131                         |                                     |                            |
|  | arrangement                               | 8,08               | 73                          | 11                                  | 3,09                       |  | AOT   | 8,14               | 138                         |                                     |                            |
|  | continue                                  | 7,58               | 673                         | 31                                  | 4,35                       |  | Nord (Départemen t)                         | 7,85               | 345                         | 14                                  | 5,57                       |
|  | between                                   | 7,54               | 789                         | 34                                  | 1,94                       |  | coût  | 7,58               | 696                         | 19                                  | 5,84                       |
|  | (Highway) Agency                          | 6,89               | 189                         | 15                                  | 5,80                       |  | concerner                                   | 7,24               | 1227                        | 25                                  | 5,32                       |
|  | will                                      | 6,77               | 5012                        | 119                                 | 4,70                       |  | région                                      | 7,10               | 461                         | 15                                  | 5,67                       |
|  | private                                   | 5,98               | 348                         | 19                                  | 3,47                       |  | État  | 6,58               | 438                         | 14                                  | 6,21                       |
|  | (Regional, local) Development             | 5,94               | 285                         | 17                                  | 6,12                       |  | Communes                                    | 6,37               | 267                         | 11                                  | 2,82                       |
|  | partner                                   | 5,41               | 346                         | 18                                  | 4,78                       |  | CCI   | 6,17               | 55                          | 6                                   | 5,83                       |
|  | company                                   | 5,40               | 108                         | 10                                  | 4,80                       |  | Transvilles (local transport authority )    | 5,89               | 34                          | 5                                   | 8,00                       |
|  | interested                                | 5,35               | 18                          | 5                                   | 5,40                       |  | interentreprises                            | 5,78               | 16                          | 4                                   | 7,25                       |
|  | commit                                    | 5,26               | 67                          | 8                                   | 4,50                       |  | FINANCEMENT                                 | 5,77               | 5                           | 3                                   | 1,00                       |
|  | stamp ("it out", Leicester)               | 4,93               | 4                           | 3                                   | 5,33                       |  | gestionnaire                                | 5,60               | 202                         | 9                                   | 6,00                       |
|  | District                                  | 4,89               | 75                          | 8                                   | 3,63                       |  | exploitant                                  | 5,58               | 69                          | 6                                   | 9,83                       |
|  | business                                  | 4,81               | 658                         | 25                                  | 4,80                       |  | baillieur                                   | 5,37               | 20                          | 4                                   | 7,25                       |
|  | strong                                    | 4,79               | 183                         | 12                                  | 3,25                       |  | local (collectivités, initiatives, acteurs) | 5,34               | 721                         | 16                                  | 4,94                       |
|  | established (record)                      | 4,72               | 12                          | 4                                   | 4,75                       |  | association                                 | 5,27               | 282                         | 10                                  | 6,40                       |
|  | Voluntary                                 | 4,72               | 12                          | 4                                   | 5,00                       |  | instance                                    | 5,21               | 80                          | 6                                   | 1,00                       |
|  | Nottingham (City Council and University)  | 4,61               | 435                         | 19                                  | 3,84                       |  | partenariat                                 | 5,15               | 291                         | 10                                  | 2,80                       |
|  | Ramblers                                  | 4,54               | 5                           | 3                                   | 5,67                       |  | AirPACA                                     | 5,03               | 8                           | 3                                   | 8,33                       |
|  | British (Cycling)                         | 4,51               | 26                          | 5                                   | 2,20                       |  | ADEME                                       | 5,02               | 86                          | 6                                   | 4,67                       |
|  | Strategies                                | 4,42               | 64                          | 7                                   | 5,43                       |  | budget                                      | 5,01               | 239                         | 9                                   | 7,78                       |
|  | initiative                                | 4,41               | 301                         | 15                                  | 4,67                       |  | Tour(s)plus (Local authority in Tours )     | 4,96               | 25                          | 4                                   | 3,75                       |


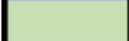



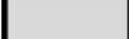
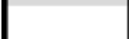
## Legend

|   |  |
|---|--|
|  | Municipal and local authorities                |
|  | Private sector stakeholders                    |
|  | State and Departments                          |
|  | Regional authorities                           |
|  | Community, voluntary groups ...                |
|  | synonyms of "partnership" + prepositions + ver |

# 'Public' (adj.) / 'Public' (adj.)

| LTP (England) "Public" <i>adj.</i> |                    |                             |                                     |                            | PDU (France) "Public" (adj.) |                    |                             |                                     |                            |
|------------------------------------|--------------------|-----------------------------|-------------------------------------|----------------------------|------------------------------|--------------------|-----------------------------|-------------------------------------|----------------------------|
| Lemma                              | Cooccurrence Index | Frequency within the corpus | Co-frequency within - or + 10 words | Mean distance to the lemma | Lemma                        | Cooccurrence Index | Frequency within the corpus | Co-frequency within - or + 10 words | Mean distance to the lemma |
| transport                          | 1000,00            | 5565                        | 1359                                | 0,96                       | espace                       | 1000,00            | 2267                        | 1115                                | 0,15                       |
| realm                              | 196,64             | 165                         | 161                                 | 0,35                       | voirie                       | 120,75             | 1576                        | 242                                 | 3,72                       |
| walk                               | 51,48              | 759                         | 164                                 | 4,29                       | accessibilité                | 102,15             | 1354                        | 206                                 | 5,66                       |
| walking                            | 43,87              | 271                         | 89                                  | 3,84                       | transport                    | 97,95              | 6246                        | 447                                 | 1,26                       |
| cycling                            | 42,80              | 524                         | 123                                 | 3,38                       | aménagement                  | 71,92              | 2092                        | 212                                 | 3,54                       |
| private                            | 34,30              | 348                         | 89                                  | 4,08                       | le                           | 40,96              | 99169                       | 2844                                | 4,68                       |
| and                                | 33,30              | 27739                       | 1969                                | 4,61                       | privé                        | 38,51              | 146                         | 46                                  | 2,54                       |
| cycle                              | 29,86              | 1211                        | 173                                 | 4,40                       | stationnement                | 34,14              | 3101                        | 192                                 | 4,34                       |
| sector                             | 27,43              | 294                         | 73                                  | 2,40                       | de                           | 29,42              | 86501                       | 2429                                | 4,91                       |
| space                              | 26,16              | 389                         | 83                                  | 2,61                       | délégation                   | 28,58              | 41                          | 24                                  | 2,00                       |
| use (public transport)             | 25,40              | 2291                        | 253                                 | 3,32                       | du                           | 28,39              | 43644                       | 1333                                | 3,91                       |
| improve                            | 24,93              | 2082                        | 235                                 | 4,10                       | ergonomie (de l'espace p.)   | 27,44              | 23                          | 19                                  | 2,95                       |
| service                            | 20,75              | 2100                        | 224                                 | 3,79                       | équipement                   | 25,54              | 536                         | 63                                  | 1,25                       |
| access                             | 19,31              | 1205                        | 148                                 | 4,63                       | charte (usage et ergonomie)  | 22,72              | 245                         | 41                                  | 4,76                       |
| car                                | 15,15              | 1485                        | 159                                 | 5,06                       | partage (de l'espace p.)     | 21,41              | 223                         | 38                                  | 3,18                       |
| right (of way)                     | 14,72              | 201                         | 44                                  | 1,68                       | domaine                      | 19,65              | 194                         | 34                                  | 0,62                       |
| mode                               | 13,98              | 646                         | 87                                  | 5,06                       | service                      | 19,61              | 2140                        | 123                                 | 2,04                       |
| improvement                        | 13,53              | 1089                        | 123                                 | 3,54                       | Indicateur                   | 18,56              | 35                          | 17                                  | 5,00                       |
| (public transport) provision       | 12,35              | 519                         | 72                                  | 3,72                       | Globa                        | 18,03              | 37                          | 17                                  | 4,00                       |
| informatior                        | 10,08              | 900                         | 98                                  | 4,10                       | mise (en accessibilité)      | 17,64              | 2214                        | 121                                 | 8,04                       |
| encourage                          | 10,00              | 666                         | 79                                  | 5,86                       | qualité                      | 16,36              | 992                         | 71                                  | 4,08                       |
| (active) travel                    | 9,81               | 2436                        | 208                                 | 5,27                       | Aménageurs                   | 16,27              | 13                          | 11                                  | 0,00                       |
| way                                | 9,53               | 467                         | 61                                  | 3,84                       | traitement                   | 14,97              | 194                         | 29                                  | 3,28                       |
| accessible                         | 9,46               | 222                         | 38                                  | 5,05                       | établissement                | 13,79              | 264                         | 32                                  | 0,88                       |
| facility                           | 9,13               | 658                         | 76                                  | 4,75                       | déléguataire                 | 12,24              | 29                          | 12                                  | 2,17                       |
| street                             | 8,47               | 392                         | 52                                  | 4,40                       | conception                   | 12,20              | 110                         | 20                                  | 4,80                       |
| (public transport) alternative     | 7,84               | 421                         | 53                                  | 5,28                       | reconquête                   | 11,09              | 35                          | 12                                  | 2,83                       |
| high-quality                       | 7,83               | 15                          | 9                                   | 3,00                       | requalificatio               | 10,85              | 144                         | 21                                  | 3,00                       |
| easy                               | 7,82               | 153                         | 28                                  | 5,61                       | SUIVI                        | 10,29              | 96                          | 17                                  | 9,00                       |
| (public transport) network         | 7,63               | 2325                        | 190                                 | 3,76                       | et                           | 9,71               | 26795                       | 756                                 | 4,60                       |
| ticket                             | 7,42               | 199                         | 32                                  | 4,91                       | priver                       | 9,63               | 201                         | 23                                  | 5,13                       |
| mainstream (public transpo)        | 7,35               | 9                           | 7                                   | 1,00                       | matière                      | 9,29               | 1037                        | 58                                  | 5,12                       |
| integrated                         | 7,14               | 184                         | 30                                  | 2,10                       | structuration                | 9,28               | 48                          | 12                                  | 2,17                       |
| more                               | 7,12               | 1697                        | 145                                 | 5,68                       | plan                         | 8,91               | 1551                        | 75                                  | 8,32                       |
| or                                 | 6,82               | 1455                        | 127                                 | 4,31                       | parc (publics de             | 8,87               | 821                         | 49                                  | 2,12                       |
| (p. transport) provide             | 6,76               | 63                          | 16                                  | 2,50                       | associer                     | 8,26               | 318                         | 27                                  | 1,22                       |
| by                                 | 6,70               | 3418                        | 256                                 | 3,87                       | libérer                      | 8,07               | 38                          | 10                                  | 2,60                       |
| weekend (and public holiday)       | 6,68               | 24                          | 10                                  | 5,20                       | cadre                        | 8,00               | 1330                        | 65                                  | 6,83                       |
| (people) unable (to use PT)        | 6,68               | 24                          | 10                                  | 3,50                       | occupation                   | 7,84               | 190                         | 20                                  | 4,20                       |
| pedestrian                         | 6,37               | 467                         | 53                                  | 4,26                       | Voirie                       | 7,35               | 17                          | 7                                   | 3,00                       |
| (ecourage) people (to adopt)       | 6,26               | 1535                        | 130                                 | 5,58                       | Accessibilité                | 7,02               | 104                         | 14                                  | 5,88                       |
| enhance                            | 6,05               | 296                         | 38                                  | 4,18                       | tous                         | 6,94               | 7                           | 5                                   | 1,60                       |
| interchange                        | 6,03               | 262                         | 35                                  | 4,09                       | insécurité                   | 6,84               | 50                          | 10                                  | 5,20                       |
| frequent                           | 6,00               | 88                          | 18                                  | 3,33                       | éclairage                    | 6,79               | 39                          | 9                                   | 1,67                       |
| integrate                          | 5,81               | 148                         | 24                                  | 3,00                       | meilleu                      | 6,56               | 292                         | 23                                  | 5,30                       |
| quality                            | 5,67               | 1210                        | 105                                 | 4,30                       | partager                     | 6,19               | 284                         | 22                                  | 3,41                       |
| smart                              | 5,52               | 164                         | 25                                  | 5,44                       | améliorer                    | 6,08               | 956                         | 47                                  | 5,62                       |
| wel                                | 5,00               | 699                         | 68                                  | 3,90                       | réappropriatior              | 5,91               | 5                           | 4                                   | 2,25                       |

**Legend**

-  Transportation mode
-  Public space
-  Public realm, sector, general ideas of p. servic
-  Public facilitie
-  Accessibility / disabili
-  Verbs and terms of action (idea of improvement, tools, goa
-  ideas and terms specific on one side

# Conclusions: textometric analysis of planning documents as “institutional discourse”

- Select comparable (and representative) documents [PDU / LTP in our case]
- Useful tool (textometry with TXM)
- Actor identification through textual analysis
- Analysis of large corpus(es): observe variation within and between
- Choices of researcher: a certain transparency
- Exploration through “co-occurrence”: *guilt by association* (qualitative and quantitative assessment)
- Limits: “hidden” actors; “manual” process (barrier for scaling up analysis)
- Future developments:
  - Identification and analysis of “passive” tenses
  - Natural language processing (NLP) tools to “automate” disambiguation
  - Exploration of the “force” of discourse using verb analysis