Smoothing out demand at peak hours
An experiment at La Défense Business district

Etudes générales, développement et territoires — January 2020
CONTEXT
Public transport in Ile-de-France

Constant increase in traffic

- Demography
- Development of transport supply

Peak hours

- Peak periods represent 71% of daily traffic
- In the morning peak, 90% of travels are linked to work or studies
Public transport in Ile-de-France

Constant increase in traffic

- Overcrowding
- Irregularity
- Incidents
- Discomfort

How to cope with this situation?

- **Increasing supply**: investments in infrastructures, rolling stock and services
- **Managing demand**

Several experiments initiated by Région Ile-de-France, including La Défense Business district
La Défense
Business district
(180,000 employees)

District in constant development ➞ Without scheme: traffic will carry on increasing

Infrastructure projects will **unload existing lines** ➞ mid-to long-term (RER E, Grand Paris new metro)

In the meantime ➞ need to control overcrowding at peak hours by **regulating demand**

**Smoothing out demand**

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**Served by:**

- RER A (RATP/SNCF): 1.3 million trips/day
- Metro M1 (RATP): ≈ 800,000 trips/day
- Tramway T2 (RATP): 220,000 trips/day
- Transilien L (SNCF): 160,000 trips/day
- Transilien U (SNCF): 55,000 trips/day
EXPERIMENT
Smoothing out demand at peak hours

Target: **5% to 10% traffic decrease** in the morning peak hour

**Commitment charter** signed by:

- Région Ile-de-France
- 15 big firms (e.g. AXA, EDF, Société Générale, Allianz…) representing 55,000 employees
- Ile-de-France Mobilités (Transport authority)
- Paris La Défense (local public institution)
- Operators: RATP and SNCF
Smoothing out demand at peak hours

Levers

**Incentives to change habits**: working from home, changing departure time, changing mode (bike…), …

- Workshops for managers,
- “Challenge mobilités” (incentive programme with rewards)
- Awareness campaigns,
- Specific events (“Working-from-home Day”,…)

Need to **evaluate the experiment’s effects** with objective indicators
Evaluation of the experiment

Measure the effects: detect **a slight mitigation of demand at peak hours** (a 5% to 10% decrease in the number of travellers exiting transport spaces in the morning peak hour)

- **Precise and continuous measures, over a long period** to erase the inherent variability of traffic (e.g. from one day to another, from one month to another…)

![Graph showing traffic data]

**Solution**

- **Exhaustive counting** of travellers entering and exiting transport spaces, continuously, over (at least) a two-year period ➔ RATP in charge
Counting system

Sensors

Funding:

14 counting positions (access to the transport spaces)
Evaluation indicators

- Peak hour traffic (≈ 50,000 travellers exiting transport spaces in the morning)
- Position of the peak hour (≈ 9:05 am)
- Peak weight => ratio of peak hour over peak period* (≈ 53%)

Target: decrease in traffic and in the peak weight

* AM peak period: 7:00/10:30 – PM peak period: 16:00/20:30
FIRST OBSERVATIONS
First observations

Still too soon to evaluate the experiment ➔ Need more time to observe a decreasing trend

However, counting allows for a better understanding of the traffic in La Défense transport spaces ➔ Useful input to determine effective levers

Peak between 8:45 am and 9:25