PPP for urban road network: motorways and urban mobility
sanef’s view
Overview of sanef groupe

- **sanef** and **sapn** have a stable, financially-sound shareholder structure led by **abertis**, industrial reference shareholder
- Turnover 2009 = m€ 1 414
- Network of 1 743 km

**sanef groupe** has 4 activities
- Concessions’ operation and management
- Concessions’ development
- ETC toll system development and operation
- Commercializing interoperable toll products for Cars & Trucks

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Overview of sanef groupe

- **sanef** and **sapn** are operating 5 of the 7 main urban motorways irrigating the Paris area
  - A4 Eastward of Paris, including the Marne-la-Vallée area (Disneyland, …)
  - A1 Northward of Paris to the Charles de Gaulle Airport
  - A14 and A13 Westward of Paris, to La Défense business district
  - A16 Northward
PPP for urban road network

- **Urban particular constraints**
  - Urban planning and land acquisition
  - Construction costs (tunnels, viaducts), mitigation measures
  - High traffic volume, commuters’ traffic with rush hours
    - Importance of traffic and incident management
    - High level of service required

- **Urban motorways are not only several lanes of asphalt**
  - Must be integrated in a complex transportation system
  - Must serve the diverse mobility

- **PPP is part of the answer for a sustainable urban road network**

- *sanef* and *sapn* are promoting and implementing several initiatives for a sustainable urban mobility
A14 Paris: typical urban motorway

- **Urban motorway**
  - 15.6 km-long, 2 long tunnels (5km)
  - 24h traffic supervision
- **First urban toll motorway around Paris**
- *sapn* is the concessionaire and the operator
- **Tolled alternative to the A13**
  - A13 with regular traffic jams
  - A14 direct connection to the West of Paris and the business district of La Défense
A14: perfect urban integration

• A14 is an urban motorway
  – 30,000 v/day (Working day 35,000 v/day)
  – 2/3 during peak-time – up to 4,000 v/hr
  – Heavy traffic leaving Paris on Friday evening and returning on Sunday afternoon/evening

• A14 is a toll motorway
  – Toll is a perfect tool for traffic flow management
  – Peak and off-peak tariffs
  – Non stop toll system for ETC subscribers
  – Commuters special tariff

• 100% integrated in the network
A14: developing Bus Rapid Transit (BRT)

- **Dedicated BRT service implemented since’97, branded *Express A14***
  - 4 main bus lines travel using exclusively the A14
  - Managed by private operators (Veolia and Keolis), under contract from the regional mass transit authority (STIF)
  - Connecting residential areas to La Défense business district
  - Same cost as a regular mass transit tickets

- **210 commercial trips are scheduled daily**
- **6,000 passengers/day (bus filling 60% av.)**
- **Very good results:**
  - over 15% of the people on the A14 are travelling by regular transit bus!
  - urban motorway infrastructure efficiently used by different transportation modes
  - provide a cost effective and efficient solution for mass transit
A14: promoting carpooling

• **sapn** promotes carpooling on the A14
  – Registered carpooling (3+) are travelling for free
  – Dedicated carpooling website to encourage people to share their cars
  – New carpooling carparks are envisaged
M50 Dublin: a PPP for a ring road

- NRA (Irish public body for roads) developed the Dublin ring road with PPP
  - A toll bridge was built with a manual toll plaza
  - NRA wanted to upgrade the system without losing the benefits a PPP approach

- **Bet’eire Flow** *(sanef subsidiary)* supplied and now operates the new M50 free-flow ETC system
  - Free-flow ETC system replacing the manual toll plaza
  - AADT nearly 100,000 veh/d
  - Most efficient and modern solution
  - Total payment flexibility
    - DSRC tags
    - License plate recognition
    - Pre or post payment
M50: Free-flow tolling on a ring road

• **Benefits:**
  – Free-Flow ETC reduced CO2 emission
  – Increased level of service for the drivers (no time lost at the toll plaza)
  – Secured revenues for the NRA to finance necessary upgrades to the M50 Ring Road

• **100% successful**

• **NRA plans for more**
  – More toll points, congestion management …

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Variable toll rates

- Implemented by *sanef* on the A1 motorway, north of Paris (since 1992) – Still in operation

- On Sundays afternoon and evening (weekend rush hours) for the traffic returning to Paris
  - «Red hours» (4:30-8:30 pm) tariff +25%
  - «Green hours» (2:30-4:30pm and 8:30-11:30 pm) tariff -25%

- Very good traffic management
  - Traffic decrease of 10% (about 2,000 vehicles) during the red hours
  - Less traffic congestion
  - Peak rush hours spread to “shoulder” hours
  - Neutral in terms of revenues as the lower incomes for off-peak offset the increase in the peaks

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Dynamic speed management

- A4 near Strasbourg and A13 west of Paris
  - Area with heavy traffic up to 120,000 v/day
  - Frequent traffic problems, especially toward Paris at rush hour (weekday mornings) and Sunday evening (weekend return)

- Speed management implemented on A13 (25 km-long section)

- How the system works
  - Real-time traffic data analysis based on an algorithm, when traffic will likely exceed a critical threshold, the signage speed signs decrease 20km/h (max down to 70km/h)
  - Information relayed to customers on the 10 dynamic variable message signs and dedicated traffic radio 107.7 FM.

- Keep traffic free flowing as long as possible, close to the optimal capacity
Urban PPPs are efficient

• Beside from the classical PPPs advantages, urban PPPs can bring a little more
  – Integrated urban mobility

• PPP are feasible in urban areas with possible implementation in various forms (A14 in Paris, Dublin M50, Atiiki Odos in Athen, 91 Express Lanes in California, Melbourne CityLink, etc.)

• PPP solution clearly provide benefits:
  – Better efficiency and utilization of the public infrastructures
  – Foster innovation
Thank you for your time

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