Economic threats to interurban passenger railways

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Ecole des ponts ParisTech
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Birmingham University Railways System conference

French context

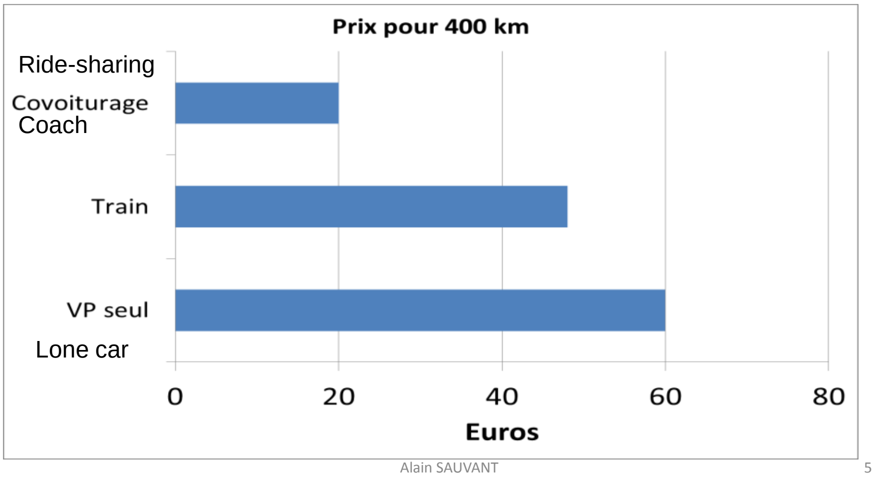
- Two new interurban (> 100 km) modes
- Ride-sharing
- Coaches

Google search results in France

Inter-urban ride-sharing

- More than 70% annual growth in France
- Worldwide extension underway (> 100% annual growth)

Price attractiveness
Paris Nantes 400 km
(average price Euros one way)



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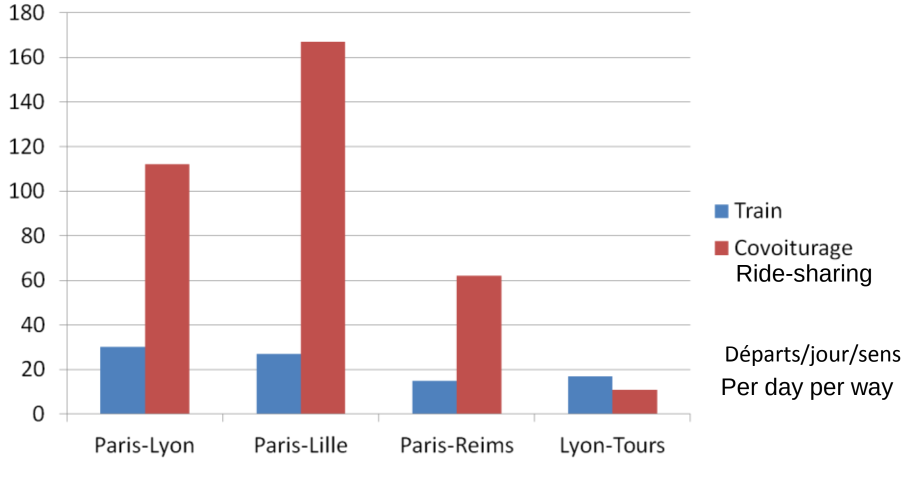
But frequency too (mid-2015)



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Departure points
(may 2015 8h-10h Paris Reims)

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Departure points
(may 2018 8h-10h Paris Reims)

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Worth a detour

- Is a 15 mn detour negociable ?
- Train, coach : Non 0%
- Ride-share : Yes for 6/8
- Proximity + detour → possible « door to door service » for large flow city pairs in the future

Ride-share and coach are different

- Ride-share
- **100 km/h**
- 5 cents per km
- **Much more frequency**
- **Detour possible**
- **Medium size towns too**
- No yield management
- Big Luggage issue
- Bill

- Coach
- 70 km/h
- 5 cents per km but
- **Down to 3** if double-decker on main routes
- Small frequency
- No detour
- Large towns
- Yield management
- **No luggage issue**
- Bill

Pivot time value

- Time value (euros/pass.hour) when generalized costs are equal
- Generalised cost = Cost + total time * time value
- Total time =
- 1st leg + Wait + Main Travel + Last leg

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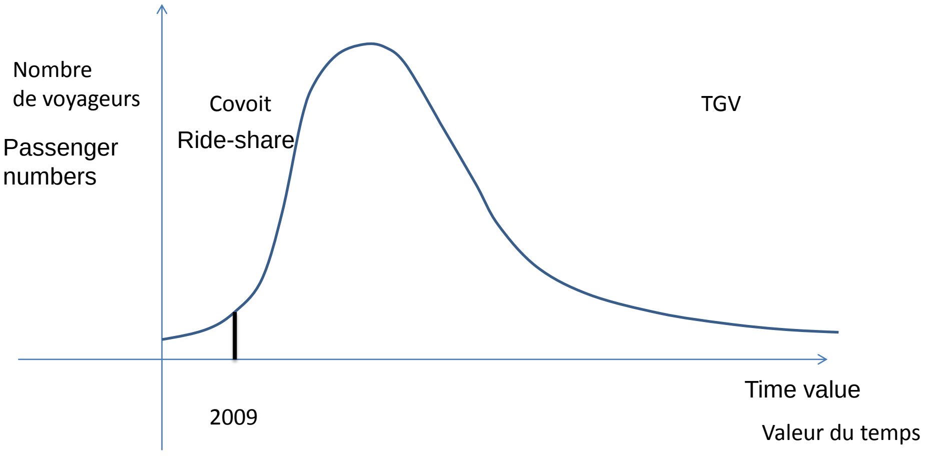
A market for poors in the beginning (Paris Reims (150 km) 2009)



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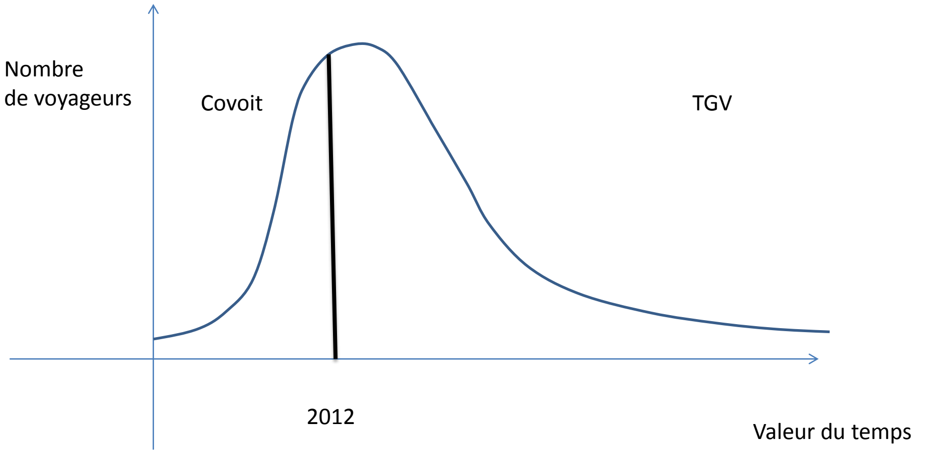
Paris Reims 2012



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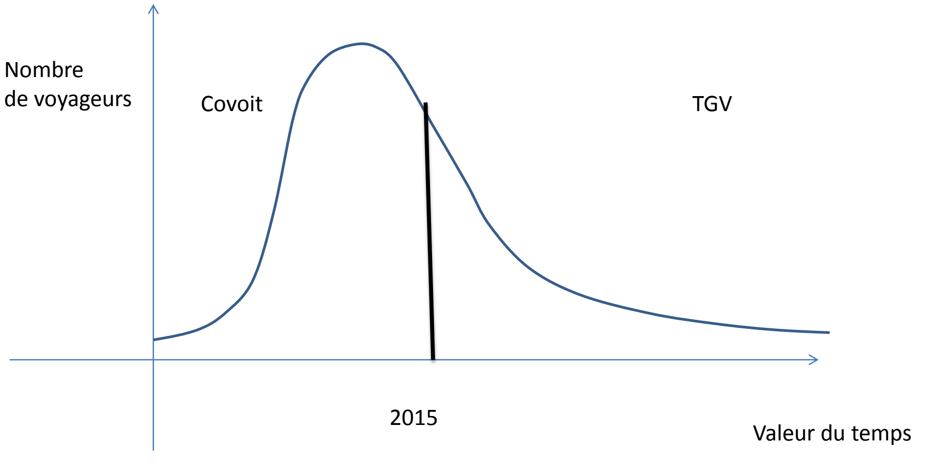
Paris Reims 2015



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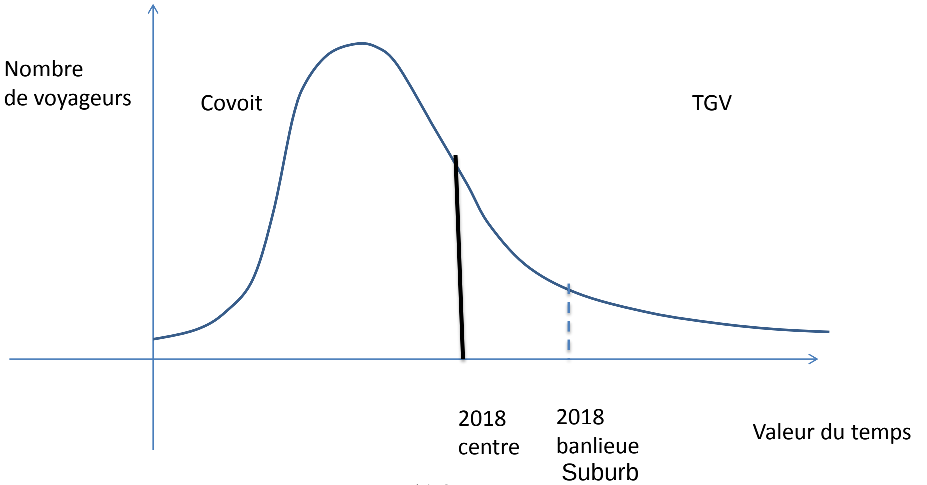
Towards a mass market ?
(Paris Reims 2018)



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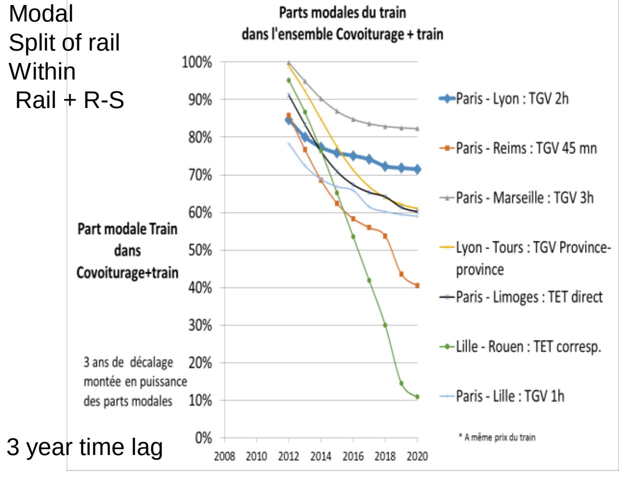
Modal split loss



Loosing interurban
Revenue of 15% to
30% for rail
Due to both Coaches
And ride-sharing
Seems possible

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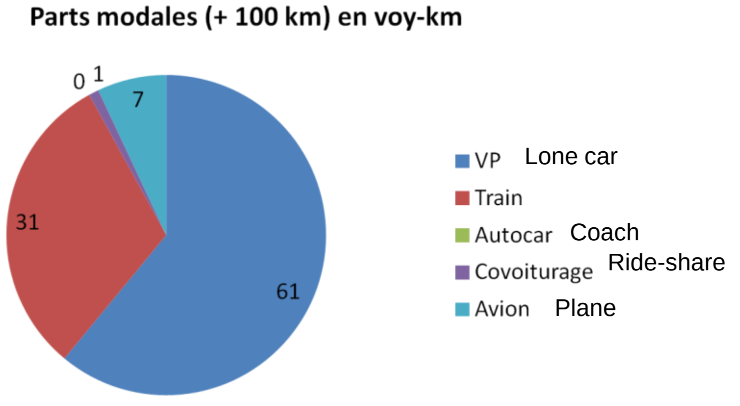
French long distance mobility (pass-km)(+ 100 km) 2014

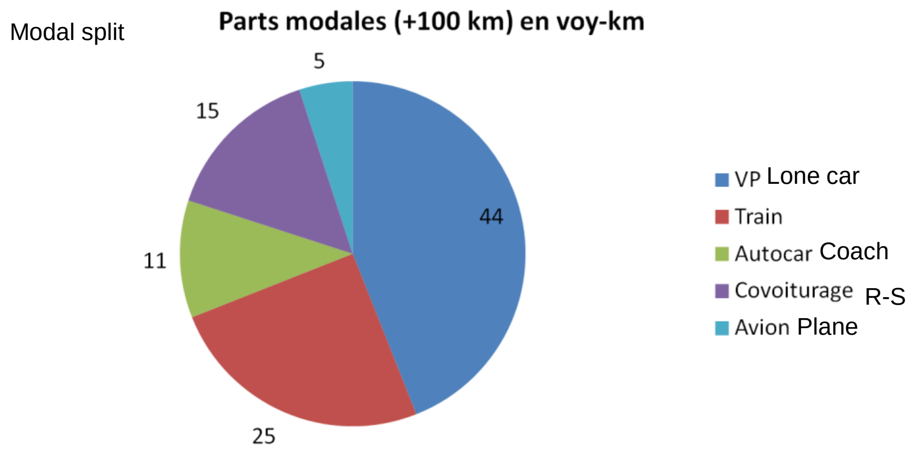
Modal split



Estimating long term future

- Logit 5 mode 2 motives (pro, leisure) long term demand model (over 100 km)
- Data used
- Coach : flow, time, price frequency in Spain
- Main hypothesis
- Ride-share ; same attractivity as coach for same price travel time and frequency

Long term 2025 (+100 km)
(no frequency proximity loop)



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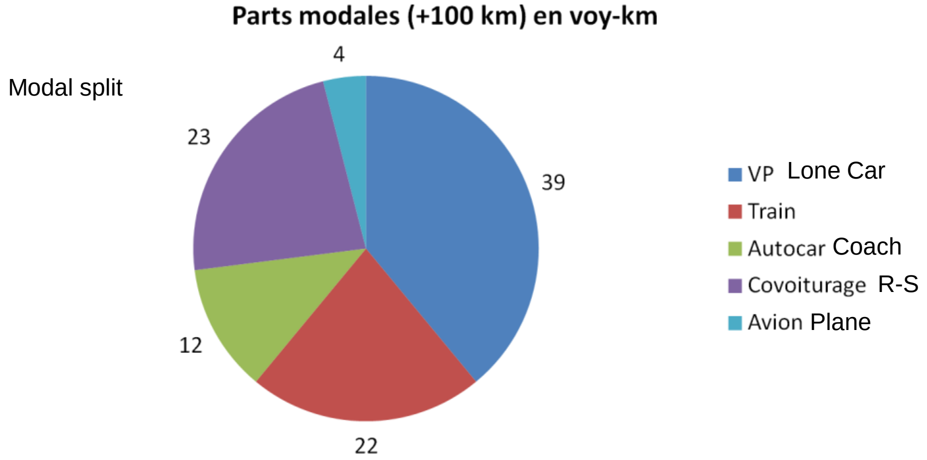
Potential modal split (+100 km) 2035
(if ride-sharing becomes door to door)



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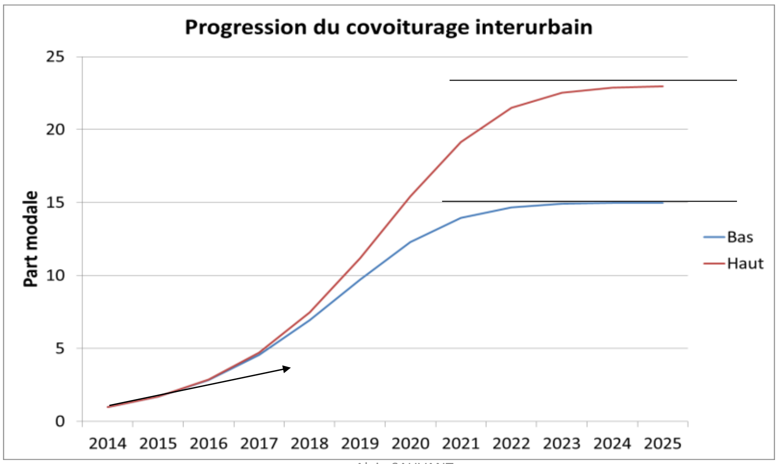
Rapid growth likely

-> No need for new infrastructure



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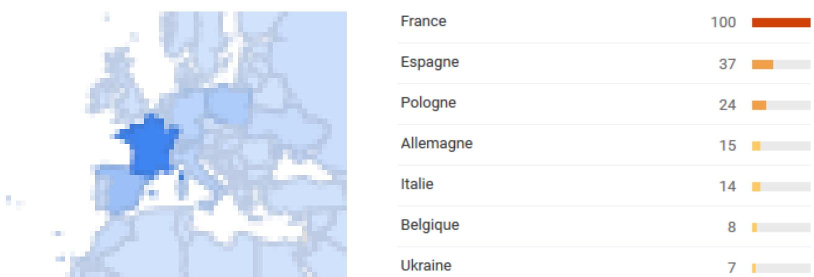
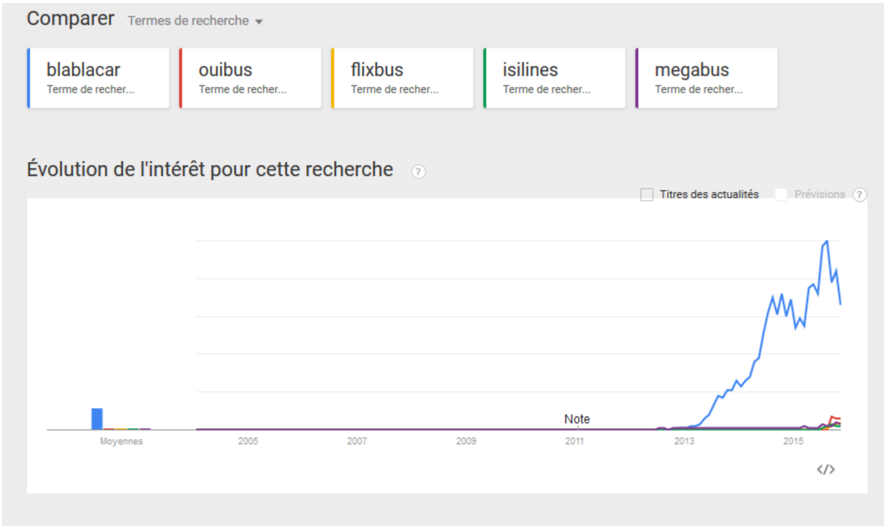
Ride sharing in Europe

France = base 100



Google trends search index results for BlaBlaCar (november 2015)

Ride-share >>> coaches in France



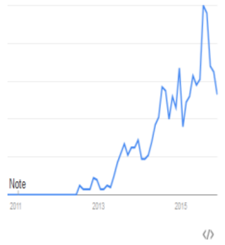
Ride-share < coaches in Germany

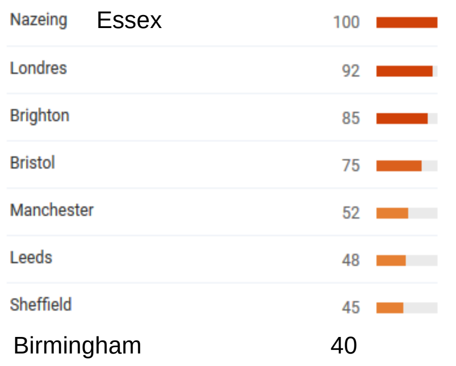
Ride-share   Coaches

Ride-share < coaches in Spain

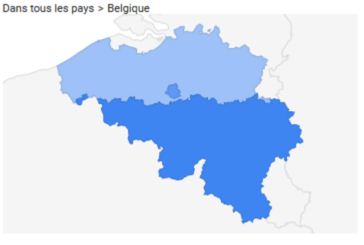
Ride-share <<< coaches in England

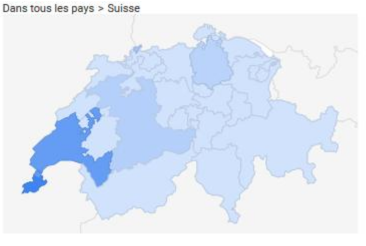
BlaBlaCar is growing in England (nov 15)





Parlez-vous français ?





BlaBlacar
Search
Index
Nov 2015

Railway reactions

- <u>Targeted price reductions</u>

- Example 1 : SNCF : « Happy hour » price
- Sold on Day D-5 à D-2
- Example Paris Vichy (400 km)
- Normal train price : 52 euros 3h
- Happy Hour train price: 27 euros 3h
- Ride-sharing : 20-25 euros 4h

- Example 2 : Thalys « tick-up » offer 29 euros if group of 4

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Railway reactions

- Improving last mile (cheap easy cab in urban leg)
- Low-cost TGV : exemple TGV « Ouigo » (high seat density, running on high speed lines only, internet sales only,…)
- Is there a market from central stations for some coaches « à la Ouigo » (high seat density, maybe standing at peak hours ?)
- Maybe better 1 h standing in a TGV than 2h ride-sharing or 3 h in a coach ?

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Conclusions

- New competitor(s) for interurban rail including high-speed
- Will widen the overall market but probably reduce rail income (volume and/or price)
- Rail can (and should) come up with new commercial offers and improve productivity
- Impact may differ across countries and regions