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Mobility chain: positioning of tram systems and concrete examples of successful intermodality



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Mobility Chain and positioning of tram systems

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- ✓ *A Mobility Chain built on intermodal solutions*
- ✓ *Positioning of tram within the Mobility Chain*



A Mobility Chain... built on Intermodal solutions (I)

Definitions...

The Mobility Chain encompasses all transportation modes, going from walking to Heavy Rail.

Intermodality is about organizing the interconnection between those modes in a way that minimizes the impact of having to transfer from one to another.



A Mobilty Chain built on Intermodal solutions (II)

Therefore the key elements in designing a multimodal hub are:

- ✓ Is it operationaly relevant ?
- ✓ Is the location adequate ?
- ✓ Are there possible extensions to other modes or services ?
- ✓ Is there a smooth platform to platform connection ?
- ✓ Is there an integrated ticketing system ?
- ✓ Are effective correspondence patterns insured ?
- ✓ Is the connection between modes relevant to their respective function and capacity within the Mobility Chain...?



Mobility chain: a hierarchy defined by capacity features (I)

Capacity (passengers/hour/direction)



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Mobility chain: a hierarchy defined by capacity features (II)

Capacity (passengers/hour/direction)

Therefore a tram line can be used as :

- *Main transport system and landmark in medium size cities*
- *Mass transit feeder in big cities ideally with clever connection to intermodal hub(s)*
- *Backbone for new development areas*



Bus

Guided bus / BRT

Tramway

LRT / Metro

Towards soft modes

Towards heavy rail



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A few concrete
examples of
successful
intermodality
projects

**Nantes,
Montpellier,
...and
tomorrow**



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A standard multimodal hub in Nantes (I)

- ✓ 1 BRT line
- ✓ 1 Express bus line
- ✓ 10 Normal bus lines
- ✓ Bikes rental station
- ✓ Large P & R area



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A standard multimodal hub in Nantes (II)



An extensive P&R policy :

- ✓ 28 Park and Ride facilities, out of which 12 tram P & R at the gateways to the town
- ✓ 4500 parking spaces



A standard multimodal hub in Nantes (III)

...with some concrete results :

- ✓ 2000 – 2011: Ridership  32%
- ✓ Car traffic  12%
- ✓ 2011 P&R occupancy rate > 80%



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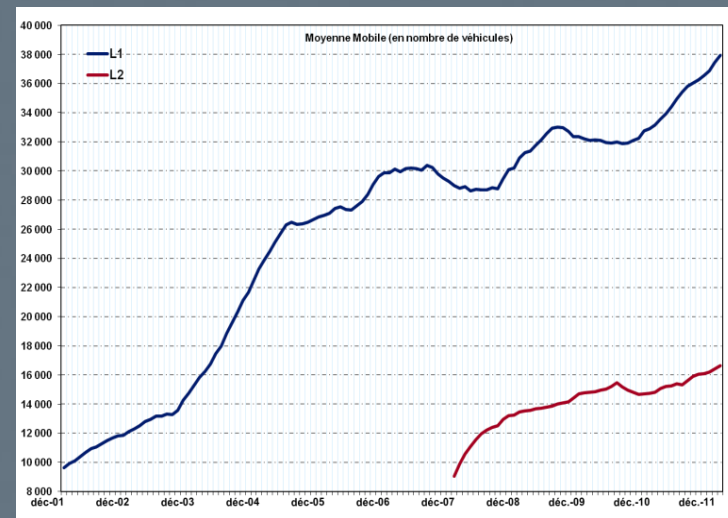


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The Montpellier example (I)

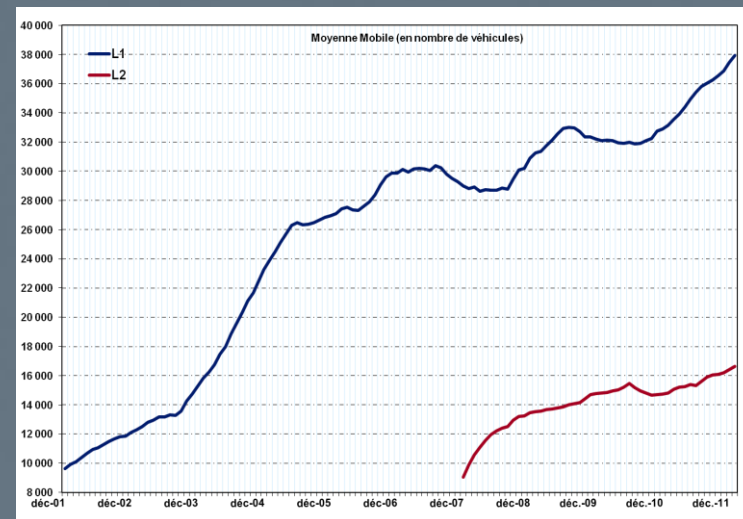
Facts :

- ✓ Proactive parking policy to alleviate congestion
- ✓ 5,000 P & R parking spaces in a total of 10 P & R areas connected to the tram network
- ✓ Attractive P & R fare policy, highly competitive / downtown car parks
 - Free for all public transport pass holders
 - Incentive = cost of parking included in a round-trip ticket for all car passengers (up to 9 persons)
 - P & R free on Sundays & Bank Holidays



The Montpellier example (II)

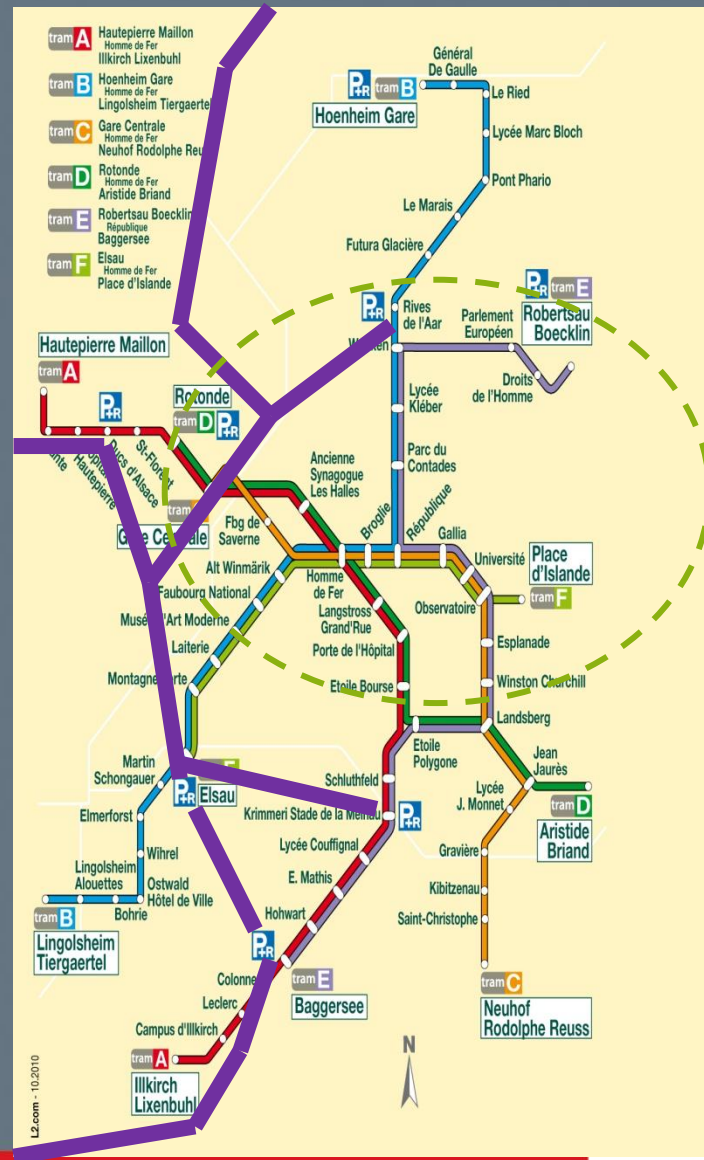
- ✓ 2003-2011: P & R occupation rate → 150%
- ✓ New tram users → 80%
- ✓ 50% regulars users (weekdays)
- ✓ 50% occasional riders (Wednesdays & Saturdays - shopping & leisure)



General considerations (I)

P&R areas should :

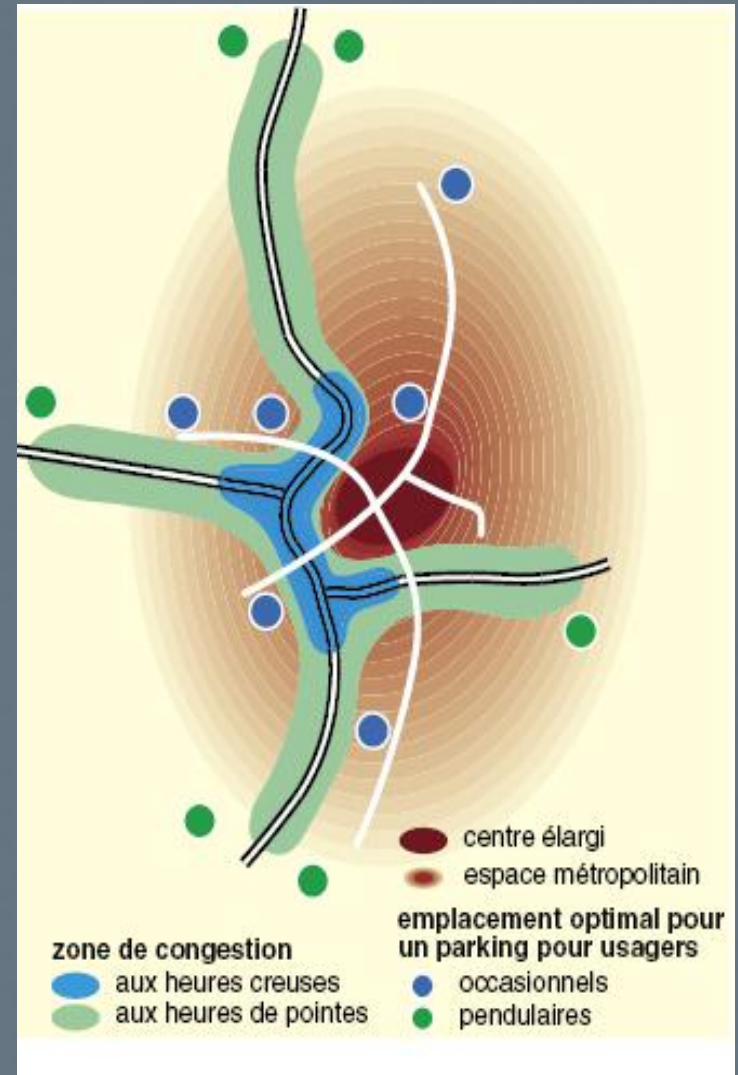
- ✓ Be located as close as possible to major **motorways / highways** leading to the town centre
- ✓ Be connected to a rail mode (commuter train, metro, tram) or to a BRT
- ✓ Be adequately signposted downstream



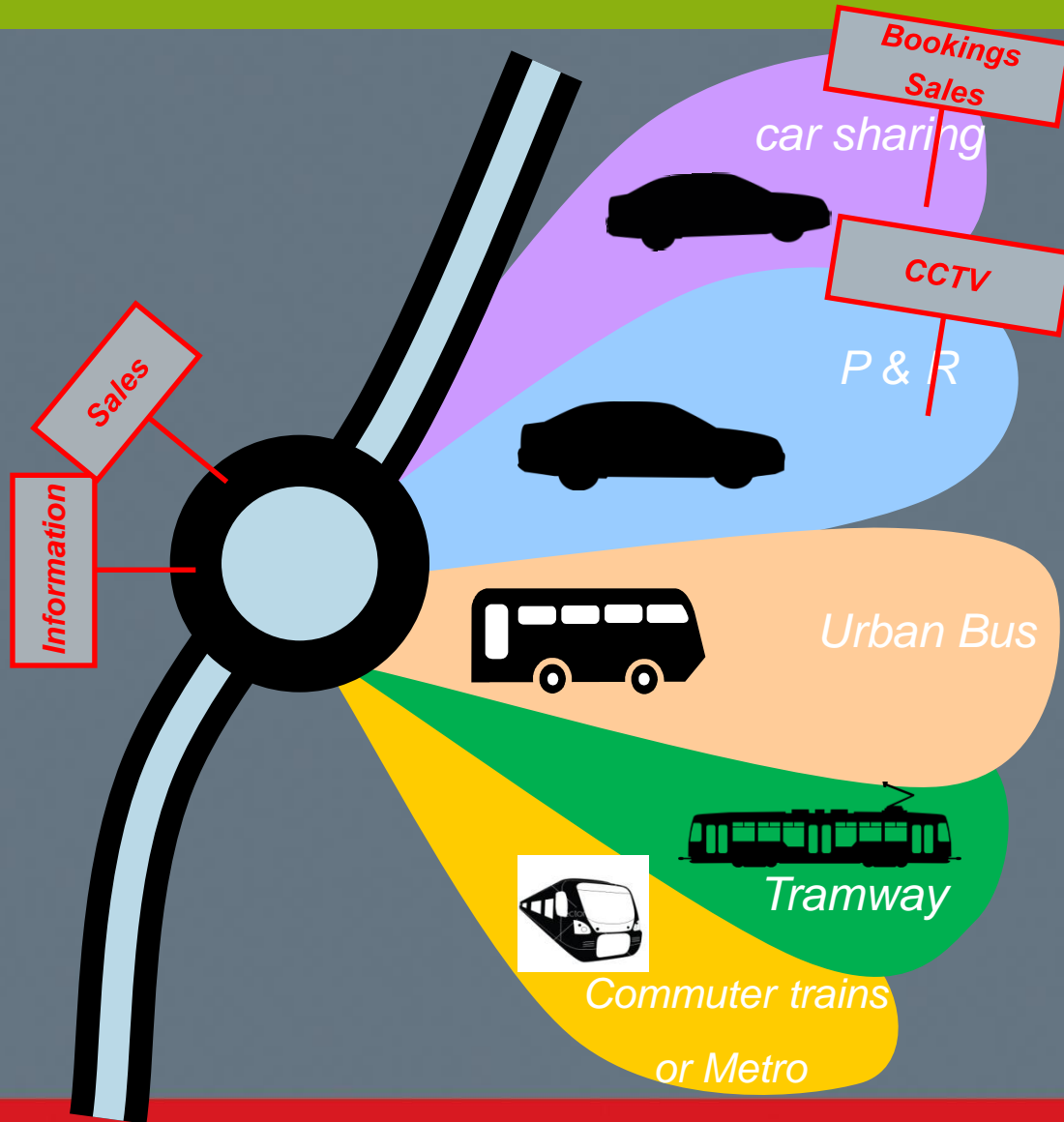
General considerations (II)

Thus they will target both commuters and occasional users

And tomorrow ?



Towards multiservices intermodal hubs



- ✓ Shopping outlets
- ✓ Real estate
- ✓ Bikes rental
- ✓ Urban walk itineraries
- ✓ Playgrounds...





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Thanks for your attention

