

KVU OSLO- NAVET

Oslo Benchmarking update

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Ruter#



Jernbaneverket

Vehicle-kms or train-kms or seat-kms?

Vehicle-kms = train-kms for classic urban PT (tram, bus)

Big differences are apparent for modes using “trains” consisting of several vehicles (metro, railway, sometimes light rail...)

T-BANE	2013	2012	2011	2010
Operasjonelle nøkkeltall				
Reiser (milL)	85	82	81	76
Personkm (milL)	508	492	484	456
Vognkm (milL)	33,2	30,2	28,9	25,1
Togkm (milL)	6,8	6,1	6,1	5,7
Plasskm (milL)	4411	4022	3842	3341
Beleggsprosent (plass)	12 %	12 %	13 %	14 %
Avganger (i 1000)	288	289	287	257
Togtimer (i 1000)**	279	260	246	222

Vehicle-kms or train-kms or seat-kms?

Seat-kms give indication of capacity offered but are not easily available for all systems!

Vehicle- or train-kms give a good indication of “PT-availability” in the sense of “departures offered” ...

Compare: 2x 300m trains/hour – 20km
6x 100m trains/hour – 20km
40 <> 120 train-kms

Passengers or passenger-km?

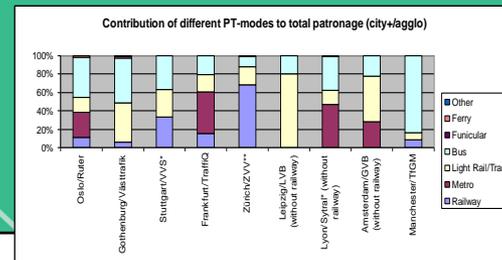
Use of passengers (or trips) neglects the distance travelled; passenger-kms takes such into account...

Railway and metro thus will create more passenger-kms per trip than tram and bus.

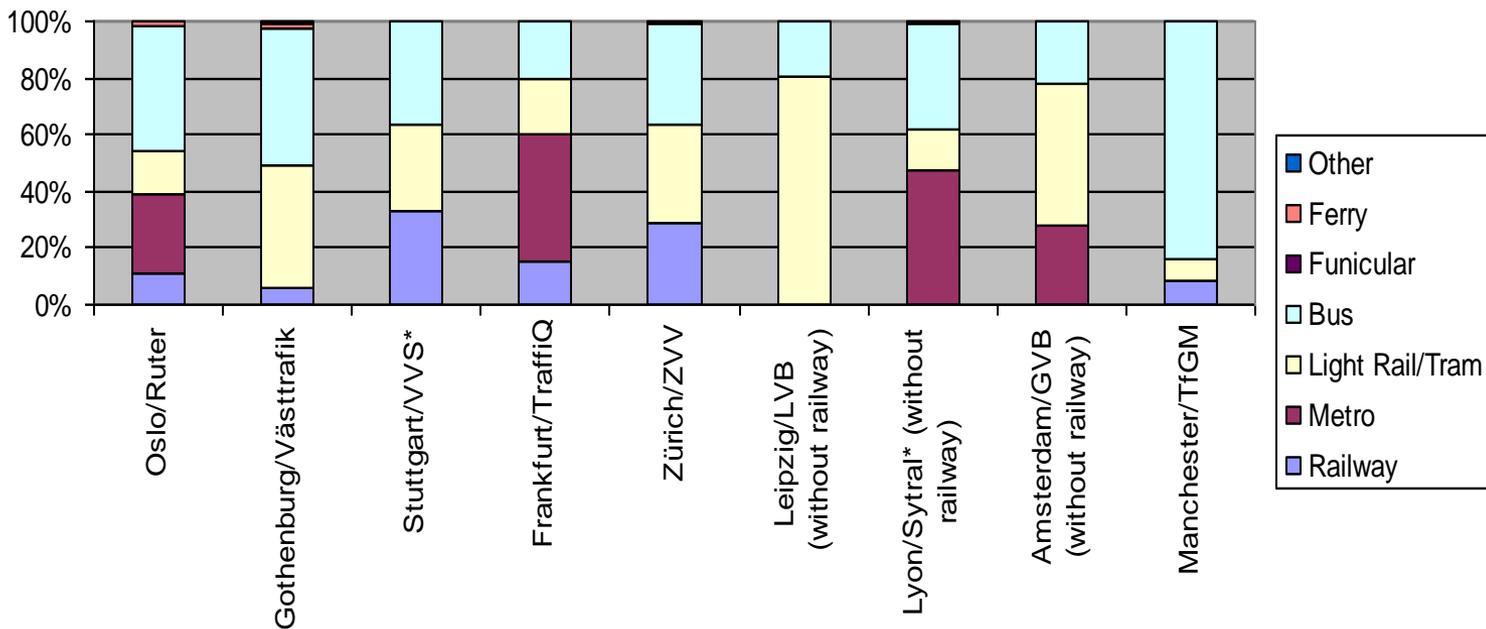
Passenger data easier available than passenger-km data...



Updated benchmarking results

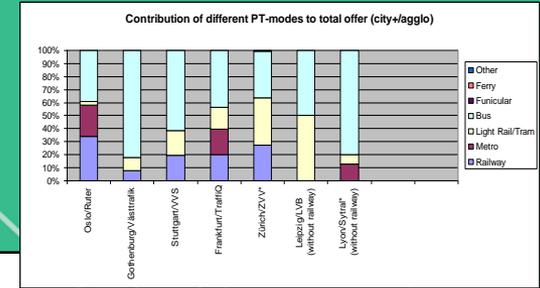


Contribution of different PT-modes to total patronage (passengers; city+agglo)

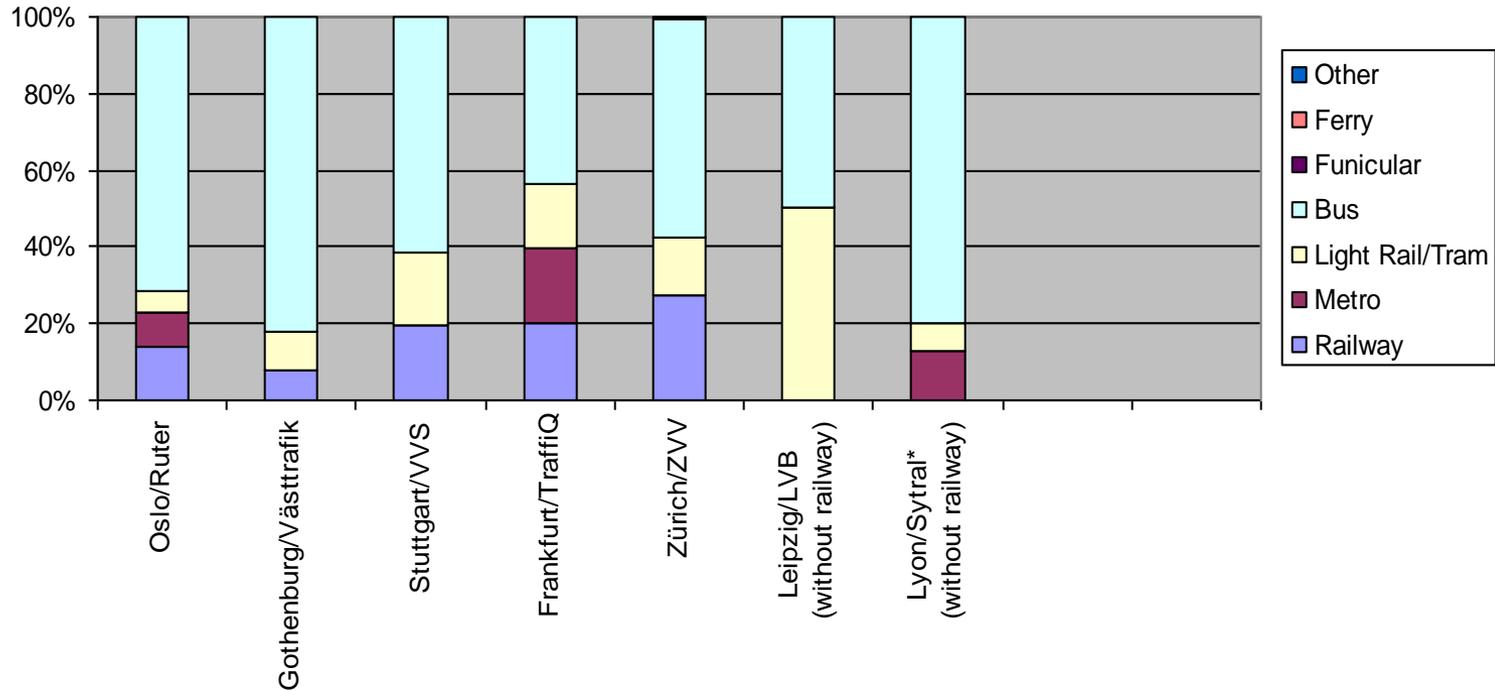


Updated benchmarking results

Oslo: now train kms Railway/Metro



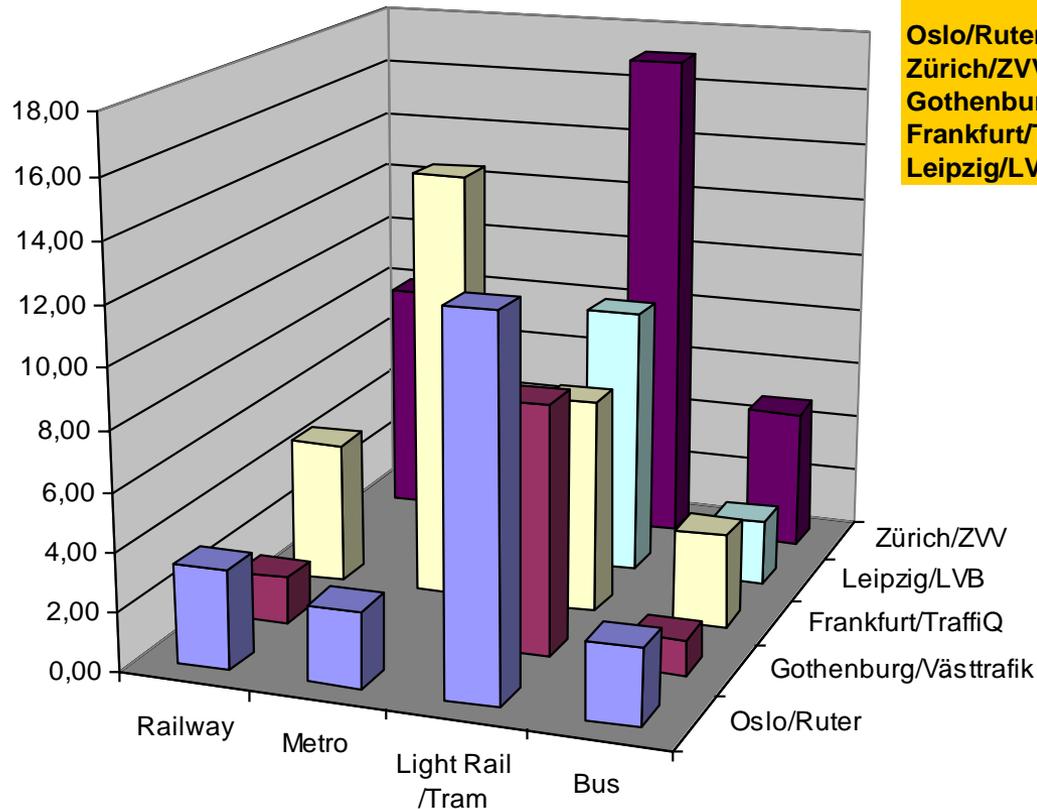
Contribution of different PT-modes to total offer (train/vehicle-kms; city+agglo)



Updated benchmarking results

Zurich added ...

Efficiency of different PT-modes (Passengers/vehicle-kms - year)



	Railway	Metro	Light Rail /Tram	Bus
Oslo/Ruter	3,36	2,56	12,56	2,55
Zürich/ZVV	8,00		17,10	4,79
Gothenburg/Västtrafik	1,59		8,43	1,18
Frankfurt/TraffiQ	4,82	14,48	7,23	3,19
Leipzig/LVB			9,12	2,20

Updated: Conclusions – questions – PT-impression Oslo

Input/output ratio of Oslo PT-modes is still telling something ...

Railway: less dramatic picture but still scope for better role/use

Metro: outside peak-hours likely lots of surplus capacity – operational patterns to be checked

Tram: appears to be popular and promising for playing a better role

Bus: too dominant role

Updated recommendations:

Railway:

- ▶ More passengers from East need to be brought directly to stops West of Oslo S – any new infrastructure to concentrate on this task.
- ▶ Turning facilities West and East of Oslo centre required to allow operational balancing of differing East/West demand.

Metro:

- ▶ Today's lines are already rather long and serving non-Metro environments (one would likely not plan them in a new scheme!).
- ▶ Avoid further regional extensions in low-density areas.
- ▶ Any new infrastructure to concentrate on improving operational patterns and system efficiency of existing lines!
- ▶ Create turning and de-centralised vehicle storage facilities.

Tram:

- ▶ Enable segregated alignments and signal priority (requires some good-bye from car-free flow philosophy! Unsignalled roundabouts?)
- ▶ Use not only in centre orientated corridors but also for feeders.
- ▶ Convert strong bus corridors to tramway.

Bus:

- ▶ Reduce direct parallel services to centre – more feeders.